Strengthening health systems through nursing: Evidence from 14 European countries

52
Health Policy Series

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Anne Marie Rafferty
Reinhard Busse
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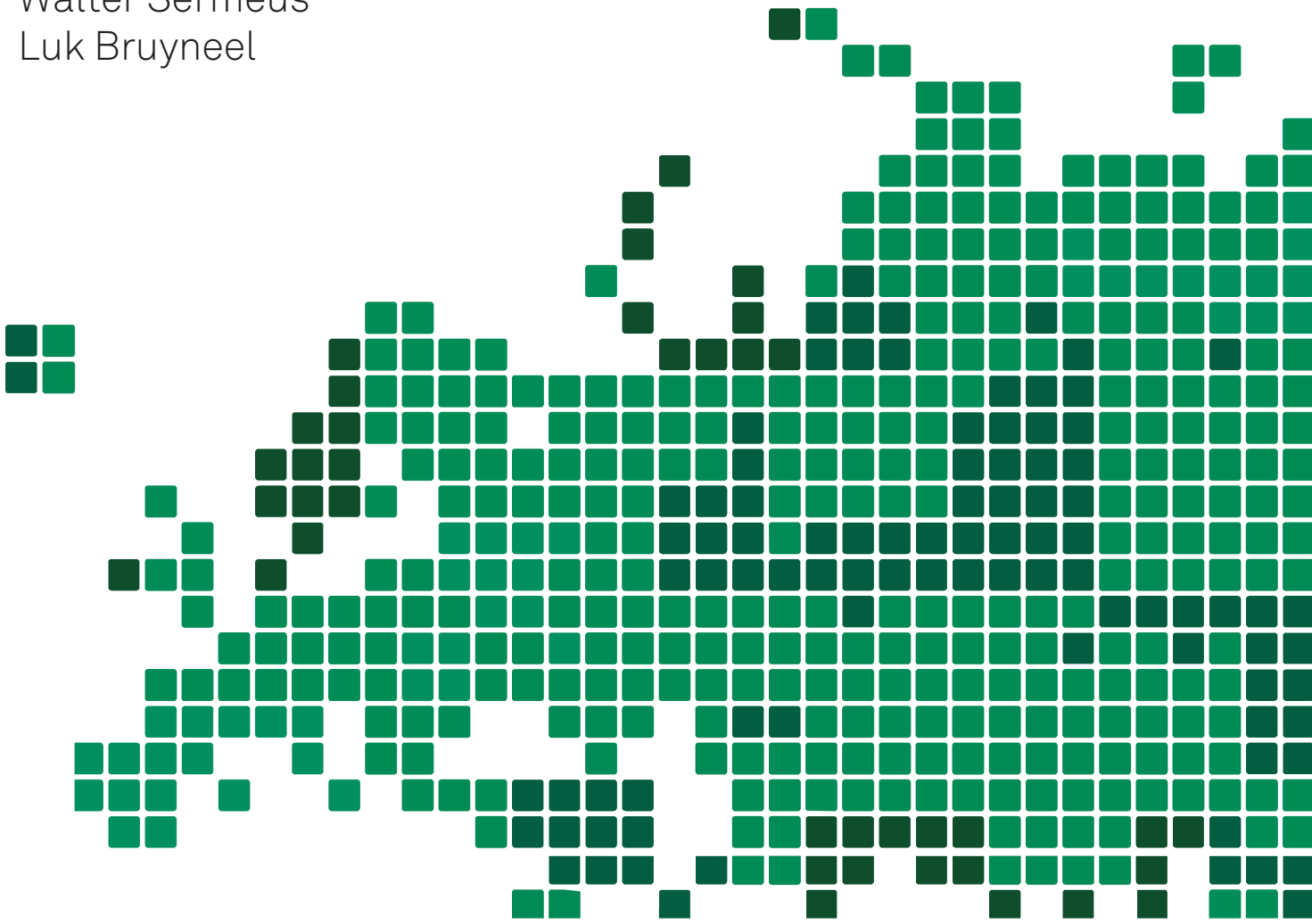
Luk Bruyneel



European Observatory on Health Systems and Policies
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RN4CAST nurse forecasting in Europe

Strengthening health systems through nursing: Evidence from 14 European countries

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Technische Universität Berlin
berlin
KING'S College LONDON
KU LEUVEN
European Observatory on Health Systems and Policies
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For Linda Aiken

Keywords:
NURSING
HEALTH, MANPOWER
INTERNATIONAL COOPERATION
COOPERATIVE BEHAVIOR
HEALTH SERVICES ACCESSIBILITY
HEALTH SERVICES NEEDS AND DEMAND
DELIVERY OF HEALTH CARE
EUROPE

Please address requests about the publication to:
Publications, WHO Regional Office for Europe, UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office web site (http://www.euro.who.int/en/what-we-publish/publication-request-forms).

ISBN 978 92 890 5174 3

Printed in the United Kingdom

Cover design by M2M

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Foreword

Ideas for projects originate from many sources. This book gives me particular pleasure, not only since the idea was invented in my kitchen, but also because it reflects a commitment and investment of teamwork from our RN4CAST collaborators over a number of years. The intention of the book was to complement the papers and other outputs produced by the team to showcase a cross-sectional view of the nursing workforce based on the different countries of Europe within our RN4CAST project. That geography has extended eastwards to include Slovenia and Lithuania and provides a unique comparative perspective across countries. The result, I hope you will find, is a valuable snapshot of the structure and process dynamics driving quality of care for patients in Europe. We know that nurses make a difference in everything they do, and, as importantly, what they do not manage to do. Drilling down into these country case studies provides a compelling reference point for comparison and, I hope, a trigger for broader contextual and policy questions that clinicians, researchers and policy-makers might have. The other reason I am pleased to support this book is that it is the culmination of many years of collaboration, pulling together different strands of data and analysis. We have been extremely fortunate in forging a superb set of collaborations in the course of our RN4CAST project of which I am immensely proud. That these have stood the test of time is no mean feat. One of those relationships has been with the European Observatory on Health Systems and Policies in Brussels, as well as in Berlin. We are tremendously grateful for the Observatory's support in sponsoring the production and dissemination of this publication. But notwithstanding the papers and outputs, it is ultimately people who make projects and teams work producing the 'teamwork'. I know there is a second volume in the offing which will adopt a more thematic approach. I look forward to seeing that in print too. Meanwhile let's take a moment to celebrate nursing in Europe and this signal achievement, especially in these challenging times!

Linda H. Aiken
Center for Health Outcomes and Policy Research
University of Pennsylvania School of Nursing

Author affiliations

Belgium

Luk Bruyneel, Researcher, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

Koen Van den Heede, Senior Expert Health Services Research, Belgian Health Care Knowledge Centre, Belgium, and Researcher, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

Walter Sermeus, Professor, Leuven Institute for Healthcare Policy, KU Leuven, Belgium

England

Jane Ball, Professor, Faculty of Health Sciences, University of Southampton, England

Anne Marie Rafferty, Professor, Florence Nightingale Faculty of Nursing, Midwifery & Palliative Care, King's College London, England

Julia Philippou, Senior Lecturer, Florence Nightingale Faculty of Nursing, Midwifery & Palliative Care, King's College London, England

Finland

Anneli Ensio, Research Director (Emerita), Department of Health and Social Management, University of Eastern Finland, Finland

Johanna Lammintakanen, Professor, Department of Health and Social Management, University of Eastern Finland, Finland

Mikko Härkönen, Development Manager, Information Structures Unit, National Institute for Health and Welfare (THL), Finland

Juha Kinnunen, Director of Health Care, Central Finland Health Care District, Finland

Germany

Britta Zander-Jentsch, Researcher, Berlin University of Technology, Germany, and National Institute for Quality and Transparency in Healthcare IQTIG, Germany

Franz Wagner, Managing Director, German Nurses Association DBfK, Germany

Nargiz Rzayeva, Researcher, Berlin University of Technology, Germany

Reinhard Busse, Professor, Berlin University of Technology, Germany, and Co-Director, European Observatory on Health Systems and Policies

Greece

Dimitrios Zikos, Assistant Professor, College of Health Professions, Central Michigan University, United States

Marianna Diomidous, Assistant Professor, University of Athens, Greece

John Mantas, Professor Emeritus, University of Athens, Greece

Daphne Kaitelidou, Associate Professor, National and Kapodistrian University of Athens

Marina Karanikolos, Research Fellow, European Observatory on Health Systems and Policies based at the London School of Hygiene and Tropical Medicine, United Kingdom

Ireland

Roisin Morris, Medical Workforce Planning Lead, National Doctors Training & Planning, Health Service Executive, Ireland

Anne Matthews, Professor, School of Nursing & Human Sciences, Dublin City University, Ireland

P. Anne Scott, Professor and Vice President for Equality and Diversity, NUI Galway, Ireland

Lithuania

Olga Riklikienė, Professor, Lithuanian University of Health Sciences, Kaunas, Lithuania

Liudvika Starkienė, Market Access Manager, Novartis Baltics

Jūratė Macijauskienė, Professor, Lithuanian University of Health Sciences, Kaunas, Lithuania

The Netherlands

Getty Huisman-de Waal, Senior Researcher, Radboud University Medical Center, Radboud Institute for Health Sciences, IQ Healthcare, Nijmegen, The Netherlands

Theo van Achterberg, Professor, KU Leuven, Department of Public Health and Primary Care, Academic Centre for Nursing and Midwifery, Leuven, Belgium

Lisette Schoonhoven, Professor, University Medical Center Utrecht, Julius Center, Nursing Science, Utrecht, The Netherlands

Maud Heinen, Senior Researcher, Radboud University Medical Center, Radboud Institute for Health Sciences, IQ Healthcare, Nijmegen, The Netherlands

Norway

Ingeborg Strømseng Sjetne, Senior Researcher, Norwegian Institute of Public Health, Oslo, Norway

Christine Raaen Tvedt, Associate Professor, Lovisenberg Diaconal University College, Oslo, Norway

Ånen Ringard, Partner & Health Care Director, Rud Pedersen Public Affairs, Oslo, Norway

Poland

Maria Kózka, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Tomasz Brzostek, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Anna Ksykiewicz-Dorota, Professor, Medical University of Lublin, Poland

Teresa Gabryś, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Dorota Kilańska, Professor, Medical University of Lodz, Poland

Maria Ogarek, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Maria Cisek, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Lucyna Przewoźniak, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Piotr Brzyski, Professor, Faculty of Health Sciences, Jagiellonian University Medical College, Poland

Slovenia

Eva Turk, Director Research, Development and Innovation, Alma Mater Europaea, and Assistant Professor Medical Faculty, University of Maribor, Slovenia

Ana Habjanič, Assistant Professor, Faculty of Health Sciences, University of Maribor, Slovenia *(Now deceased)*

Spain

Cristina Hernández-Quevedo, Research Fellow, European Observatory on Health Systems and Policies, LSE Health

María Teresa Moreno Casbas, Senior Expert Nursing and Healthcare Services Research, Nursing and Healthcare Research Unit (Investén-isciii), Instituto de Salud Carlos III, Spain

Sweden

Lisa Smeds Alenius, PhD, Division of Innovative Care Research, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Sweden

Rikard Lindqvist, PhD, Division of Innovative Care Research, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Sweden, and Stockholm Health Care Services (SLSO), Stockholm County Council (SLL), Sweden

Carol Tishelman, Professor, Division of Innovative Care Research, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Sweden, and The Center for Rural Medicine (Glesbygdsmedicinsk Centrum GMC), Storuman, Västerbottens County Council (VLL) & Stockholm Health Care Services (SLSO), Stockholm County Council (SLL), Sweden

Switzerland

René Schwendimann, Chief Patient Safety Officer, University Hospital Basel, and Institute of Nursing Science, Department of Public Health, University of Basel, Switzerland

Dietmar Ausserhofer, Researcher, Institute of Nursing Science, Department of Public Health, University of Basel, Switzerland, and College of Health Care Professions Claudiana, Bolzano, Italy

Maria Schubert, Co-Director, Nursing Science Research Unit, Zurich University of Applied Sciences, Switzerland

Marcel Widmer, Deputy Director, Swiss Health Observatory, Neuchâtel, Switzerland

Veronique Addor, Project Director, Public Health Department, Canton Vaud, Switzerland

Mario Desmedt, Chief Nursing Officer, Foundation Asile des Aveugles, Hôpital ophtalmique Jules-Gonin, Lausanne, Switzerland

Sabina De Geest, Professor of Nursing, Director, Institute of Nursing Science, Department of Public Health, University of Basel, Switzerland, and Academic Center for Nursing and Midwifery, Department of Public Health and Primary Care, KU Leuven, Belgium

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AC	Autonomous Communities (Spain)
AMP	Advanced midwife practitioner
ANP	Advanced nurse practitioner
APN	Advanced practice nurse
ATEI	Higher technological education institute
ATS	Health care technical assistant (Spain)
BIG	Individual Health Care Professions Act (Netherlands)
CMS	Clinical midwife specialist
CNS	Clinical nurse specialist
CPD	Continuous professional development
DBfK	German Nurses Association
DRG	Diagnosis related group
ECTS	European Credit Transfer System
EFN	European Federation of Nurses Associations
EHEA	European Higher Education Area
EQF	European Qualifications Framework
FNA	Finnish Nurses Association
FTE	Full-time equivalents
GDP	Gross domestic product
GP	General practitioner
HCA	Health care assistant
HRBN	Hellenic Regulatory Board of Nurses
HSE	Health Service Executive
ICM	International Confederation of Midwives
ICN	International Council of Nurses
INMO	Irish Nurses and Midwives Organisation
ITL	Intention to leave
LNA	Lithuanian Nurses Association
MANP	Master's (degree) in Advanced Nursing Practice
MoES	Ministry of Education and Science (Lithuania)
MoH	Ministry of Health
NARIC	(Hellenic) National Academic Recognition and Information Centre
NARIQ	National Academic Recognition Information Centres (Belgium)
NAS	Nurses Association of Slovenia
NBHW	National Board of Health and Welfare (Sweden)
NHF	National Healthcare Fund (Poland)
NHS	National Health Service
NICE	National Institute of Clinical Excellence
NMBI	Nursing and Midwifery Board of Ireland
NMC	Nursing and Midwifery Council (UK)
NNO	Norwegian Nurses Organization
NP	Nurse practitioner
OBSAN	Swiss Health Observatory
PN	Practical nurse
PNA	Polish Nurses Association
RCN	Royal College of Nursing
RN	Registered nurse
SAK	Norwegian Registration Authority for Health Personnel
SALAR	Swedish Association of Local Authorities and Regions
SATSE	Spanish Union of Nursing
SBK-ASI	Swiss Nurses Association
SERI	State Secretariat for Education, Research and Innovation
SHI	Statutory health insurance
SNS	Spanish National Health System
V&VN	Dutch Association of Nurses and Carers
VAR	(Dutch) Nurse Advisory Council
VET	Professional Education and Training

Acknowledgements

This book was literally 'cooked up' in Linda Aiken's kitchen in Philadelphia when we were discussing what Anne Marie would do for her sabbatical. It was a natural extension of the work we were doing as part of the FP7 EU-funded RN4CAST study but one which offered the opportunity to extend the reach of the study and the depth of analysis to include different countries. The book would not have happened were it not for the support of Josep Figueras and the European Observatory on Health Systems and Policies in Brussels in sponsoring the book within the Observatory series. Josep also hosted part of Anne Marie's sabbatical in Brussels, for which many thanks. Colleagues within the Observatory in Brussels also helped to 'nudge' the book along its path, including Matthias Wismar, Willy Palm, Irene Glinos and Suszy Lessof.

But the book began its life in Berlin under the leadership of Reinhard Busse, who not only provided hosting arrangements at the European Observatory and WHO Collaborating Centre at the Technische Universität in Berlin but also co-led the editorial process. Thanks also to fellow Berlin co-editor Britta Zander (now Zander-Jentsch). We were especially fortunate to have the support of Ewout Van Ginneken, who helped to shepherd the book to a successful conclusion, cajoling us along the way. A big thanks to Ewout. We are also thankful to Maximilien Hjortland of Technische Universität Berlin, whose comprehensive data updates and checks provided the necessary momentum to finish the book chapters.

The work on which many of the chapters are based (with the exception of Slovenia and Lithuania) could not have proceeded were it not for funding support from the EU FP7 programme Grant No. 223468. Special thanks go to our authors, who have been patient beyond reasonable expectation in responding to our editorial queries. Our heartfelt thanks in sticking with us over the long haul. Thank you Luk Bruyneel for your technical finesse and input and seeing the process through. Caroline White and Jonathan North provided expert editorial support. Thanks also to Gary Bellamy (editorial support), Sarah Cook (copy-editing), and Nick Gorman (typesetting).

Finally, we wish to thank Linda Aiken and Walter Sermeus for your leadership and steadfast support throughout the gestation and birth of this book. The book would not have happened without your inspiration and the community of scholars you have helped to foster. Our sincere thanks to you both for that and more.

Anne Marie Rafferty and Reinhard Busse,
on behalf of the editorial team

Introduction

Anne Marie Rafferty

The purpose of this introduction is to provide a road map to introduce readers to some of the broader trends and forces impacting nursing in a range of country case studies across the EU. These snapshots in time are part of a deeper dive into the broader forces shaping nursing work and practices within the countries studied. In doing so we provide an overview of the key variables, structural and organizational, that inform the dynamics of the nursing workforce in a sample of European countries. While these were originally drawn from a major EU-funded study on forecasting the nursing workforce (RN4CAST), we have expanded beyond the original countries (Belgium, England, Finland, Germany, Greece, Ireland, the Netherlands, Norway, Poland, Spain, Sweden and Switzerland) to include Lithuania and Slovenia, adding geographical and jurisdictional diversity to our case study mix. Where the focus of the RN4CAST study was the experience of nurses in acute medical and surgical hospital care and the impact of staffing dynamics on nurse and patient outcomes and quality of care, the current volume looks up and out into the health system within which those nurses work, exploring where they receive their education, their conditions of service, how they are regulated, and the policy context in which they work and care is delivered.

Each chapter has been written to an agreed template focusing on the compositional and policy features of the nursing workforce situated within an analysis of policy trends and transitions. The narrative is embedded in a broader contextual description and analysis of the structure, organization and funding of the health system, looking at nurses' work and the forces which

shape that, such as education and training, as well as regulation, with a concluding summary drawing together the strands into a policy synthesis and implications for the health system. We have encouraged authors, wherever possible, to draw on data from a common set of secondary and routinely available data and sources. While the stimulus for producing this volume owes its inspiration to the RN4CAST study, it covers a broader canvas, adding depth of detail to understanding the drivers and forces that shape the nursing workforce over time and at system level. Data collected for RN4CAST were drawn predominantly from the meso- and micro-levels of the system via local acute care providers and clinical micro-systems of individual nurses and patients. The focus of the current volume is to provide a more macro view to further explain the similarities and differences across countries. As will be all too evident, health care is a rapidly changing landscape which rarely stands still. These chapters build on the legacy of the RN4CAST study but bring the story, as far as possible, up to date. A more extensive comparative analysis and synthesis of trends and points of convergence and divergence across chapters is provided in the introduction to the companion thematic volume to this book. To our knowledge this is one of the most comprehensive analyses of nursing within Europe. We hope that this compendium of country case studies complements the thematic volume and contributes to the evidence base and policy challenges and responses confronting nursing across Europe.

1 Belgium

Luk Bruyneel, Koen Van den Heede, Walter Sermeus

1.1 Context-organization of the health system, education and regulation

1.1.1 Belgium and its health system

Belgium is a Western European country with a population of 11.4 million (Eurostat, 2017). It is a federal state, composed of three Communities (Flemish, French and German-speaking) and three Regions (Flemish, Walloon and Brussels-Capital), which are so-called federated entities. The Flemish and Walloon Regions have five provinces each (Government of Belgium, 2009a). Driven by cultural pluralism in the various parts of the country, Belgium evolved into a federal structure, redistributing power between the federal state and the federated entities. The federal authorities oversee the regulation and financing of national health insurance; the financing of hospitals and larger medical care units; legislation of professional qualifications; and the registration of pharmaceuticals and their price control. The responsibilities of the federated entities include health promotion and disease prevention; maternity and child care and social services; community care; coordination and collaboration in primary health care and palliative care; the determination of minimum standards for the accreditation of hospitals; as well as the financing of hospital investments (Gerkens & Merkur, 2010). Belgium has a steady, comparably high health expenditure. Healthcare spending totals 10.4% of gross domestic product, or USD 4 840 per capita (OECD, 2017).

1.1.2 Regulation and legislation of the nursing profession

The nursing profession is regulated by the coordinated law on the Practice of the Healthcare Professions (Government of Belgium, 2015a). Within this federal legal framework, entry into the profession is restricted to persons holding a diploma degree or bachelor of nursing degree after a minimum of three years' study. In addition to entry to the nursing profession, the law specifies the scope of practice of nurses in terms of providing patient care. A classification system defining different levels of practice and tasks is set out in the decree. These include how nursing is defined using the nursing process (assessment, planning, intervention and evaluation) (*A-category nursing interventions*). Secondly, a list of technical nursing interventions (*B-category nursing interventions*) and interventions that can be delegated by a physician (*C-category nursing interventions*) are outlined (Government of Belgium, 1990). B-category nursing interventions can either be based on standard care plans or procedures (B1-category nursing interventions), or are directly prescribed by a physician (B2-category nursing interventions). These interventions relate to treatments, administration of food and liquids, mobility, hygiene, physical protection, activities with regard to medical diagnosis and treatment, and assistance in medical procedures. Examples of C-category nursing interventions include the preparation and administration of chemotherapeutic drugs and isotopes, the preparation and administration of vaccines, and arterial puncture phlebotomy. For nurses holding an advanced professional title in intensive care and emergency care (see Section 1.1.3) and working in that setting, additional B-category (e.g. cardiopulmonary resuscitation by invasive means) and C-category (intraosseous catheterization) nursing interventions are listed.

In defining the boundary between unregistered and qualified nursing practice, clear differentiation is made in the scope of practice between nurses, nursing auxiliaries and logistic personnel. Nursing auxiliaries are defined as care givers who are supervised by a nurse and support the nursing team in providing care, education and in logistics. Whilst there are duties that can be delegated to nursing auxiliaries (e.g. stoma care, oral fluid administration), these must be supervised by a trained nurse (Government of Belgium, 2006a, 2019). Many educational pathways can lead to working as an auxiliary. These include having completed the first year of the nursing education path diploma degree or professional bachelor degree. Transitional measures were introduced for those already working in auxiliary roles before the adoption of the Royal Decree defining their recognition (Government of Belgium, 2006b). In contrast to nurses and nursing auxiliaries, logistic personnel do not directly participate in patient care. Their tasks include, among others, the transporting of patients, cleaning patient rooms and equipment, obtaining supplies and clerical duties (Sociaal-Economische Raad van Vlaanderen, 2007). Various educational pathways enable an individual to practise as a logistic assistant. Depending on previous work experience and educational background, applicants must complete 80 to 500 hours of training, including practical and theoretical courses (Government of Belgium, 1997a).

All health professionals must register with the Provincial Medical Commission. Registration leads to a licence to practise in the province applied for, conferred by the Recognition Commission of the Federal Council of Nursing Practitioners.

1.1.3 Nurse education

1.1.3.1 *Pre-registration nursing education*

Belgium has two levels of nurse education: a diploma degree and a bachelor degree. The learning outcomes of the diploma degree and the bachelor degree correspond to levels five and six of the European Qualifications Framework (EQF) for lifelong learning (European Parliament and Council of the European Union, 2008). The provision of education is not identical for different language groups, as each Community's education department holds competence in this area. The Bologna Process has been separately implemented in Flanders (Government of Belgium, 2003a) and in Wallonia (Government of Belgium, 2004).

In the Flemish community the diploma degree programme (EQF level 5) is organized through a three-year vocational training programme following secondary level education. The programme is organized into five chronological modules: 1) introduction to nursing; 2) basic nursing care; 3) general health care orientation (elderly care and mental health care); 4) orientation to elderly care and mental health care (general health care); and 5) applied nursing (Government of Belgium, 2002a, 2009a). In the French and German-speaking Communities the curriculum is organized through a three and a half-year vocational training programme (Government of Belgium, 1995, 1997b). The legislation now meets (Government of Belgium, 2011a) the criteria set out in Directive 2005/36/EC on the recognition of

professional qualifications (European Parliament and Council of the European Union, 2005).

The learning outcomes of the professional bachelor degree programme correspond to the descriptor for the first cycle in the Framework of Qualifications of the European Higher Education Area (EQF level 6) agreed in the framework of the Bologna Process (European Higher Education Area, 2005). The programme is organized at university college level and for a long period comprised three years of training for a minimum of 180 European Credit Transfer System (ECTS) units. To meet Directive 2013/55/EU on the recognition of professional qualifications and include 4600 hours with a balance of theory and practical training, starting from the academic year 2016–2017 the 180 ECTS credits three-year programme was reformed to a 240 ECTS credits four-year programme (Government of Belgium, 2016). Whereas the previous programme on average only included 1400 hours of practical training, the current programme will cover the required 2300 hours of practical training. Diploma degree nurses can obtain the professional bachelor degree through a shortened educational pathway (Government of Belgium, 2004), which currently covers 150 ECTS credits.

"License-to-practice" for diploma and bachelor degree nurses is granted by the Recognition Commission of the Federal Council of Nursing Practitioners and the Provincial Medical Commission. Officially it is given for five years, but in reality it is granted for an indefinite period. Whilst midwives must take 75 hours of training every five years to stay up to date (Government of Belgium, 2007a), no continuous education is mandatory for nurses. Nursing auxiliaries must take 8 hours of continuous education per year (Government of Belgium, 2006c).

1.1.3.2 *Post-registration nursing education*

The university colleges in the Flemish Community offer advanced bachelor programmes in intensive and emergency care, coaching the elderly, care management, mental health nursing, oncology, arts therapy, paediatric nursing, social nursing, home nursing, operating room nursing, geriatric nursing, palliative care, nursing in private or social enterprises, paediatric and neonatal care, and maternal intensive care and neonatal care (Onderwijskiezer, 2018). The previously mentioned reform to a four-year bachelor degree means that certain courses of the advanced bachelor programmes can be embedded in the bachelor programme. The university colleges in the French Community offer advanced bachelor programmes in anaesthesia, medical imaging and radiotherapy, oncology, paediatrics, operating department nursing, public health, mental health care and psychiatry, and intensive and emergency care. Both offer numerous postgraduate programmes. In addition to the advanced bachelor and postgraduate programmes that specialize in nursing, the French Community offers a one-year interdisciplinary programme for bachelor degree nurses and other allied health professionals. Specializations exist for the domains of psychotherapeutics, arts therapy, geriatrics and psychogeriatrics, disability nursing and rehabilitation. All these programmes are within the first cycle of the Framework of Qualifications of the European Higher Education Area.

Despite the lack of advanced clinical practice roles for nurses, advanced professional titles and advanced professional qualifications can be acquired for a range of specialist areas of nursing (Government of Belgium, 2006d). Both diploma degree and bachelor degree nurses can acquire advanced professional qualifications. Advanced professional titles can only be acquired by bachelor degree nurses. The organization of the various educational pathways within the advanced bachelor programme corresponds closely, but not completely, to these advanced professional titles. The procedure for applying for recognition to hold an advanced professional title or professional qualification is described by the Royal Decree of 21 April 2007 (Government of Belgium, 2007b, 2014a). At present, the criteria for the recognition of an advanced professional title or qualification have been defined for advanced professional titles in intensive and emergency care (Government of Belgium, 2007c), geriatrics (Government of Belgium, 2007d), oncology (Government of Belgium, 2009b), paediatrics and neonatology (Government of Belgium, 2012a) mental health care and psychiatry (Government of Belgium, 2013a) and peri-operative care (Government of Belgium, 2014b) and for advanced professional qualifications in geriatrics (Government of Belgium, 2007e), diabetes (Government of Belgium, 2012b), mental health care and psychiatry (Government of Belgium, 2013b) and palliative care (Government of Belgium, 2013c). To obtain the advanced professional titles, bachelor degree nurses have to complete a programme with a minimum of 30 ECTS credits, and 30 additional ECTS credits must be obtained from practising within the domain of their title. The recognition can be granted for an indefinite period. However, persons laying claim to retaining an advanced professional title must work a minimum of 1500 hours in the domain of the title

and take 60 hours' continuous education courses every four years. The advanced professional qualification in geriatrics can be obtained after 150 hours of theoretical training. The criteria for retaining advanced professional qualifications are identical to those for retaining advanced professional titles.

Through a preparatory programme of 60 ECTS credits at university level, the professional bachelor degree in nursing (as well as the professional bachelor degree in midwifery) gives access to a 60 ECTS credits master degree (second cycle of the Framework, EQF level 7). In the Flemish Community this can be obtained in nursing and midwifery, health care management and policy, or health promotion and education, with different admission criteria across universities. Three Flemish universities offer the master in nursing and midwifery in collaboration with university colleges. In 2008 the Flemish Inter-university Council evaluated the quality of all programmes as positive (Vlaamse Interuniversitaire Raad, 2008). The French Community offers within the master degree in public health the opportunity to specialize in health promotion, health management, health education, health policy, environmental health, organization of hospital and nursing care, intensive and emergency care, and cardiovascular expertise. The latter, for example, is at the postgraduate level in the Flemish Community. After successfully obtaining a master degree, admission to a doctoral programme (third cycle of the Framework, EQF level 8) is possible.

Various funding regimes apply to different qualifications across the provinces of Belgium. Advanced bachelor programmes cover at least 60 ECTS credits and are organized by university colleges. In Flanders these programmes are only partly (50%) financed, whilst in Wallonia they are fully financed.

1.1.3.3 *Enrolees in nursing*

In 2018, 8 541 nursing bachelor degree students were enrolled in the Flemish Community (Vlaams Agenthschap Hoger Onderwijs, Volwassenenonderwijs, Kwalificaties & Studietoelagen, 2018). From 2007 to 2014 the number of first year diploma degree students in the Flemish Community increased from 1 777 to 3 181. Likewise, the number of bachelor degree students rose from 2 665 to 4 088. However, between 2015 and 2017 the numbers decreased from 4 512 to 3 436 for bachelor students, and from 3 240 to 2 785 for diploma degree students. In 2013, through the Flemish Service for Employment and Vocational Training, 4 109 unemployed young and middle-aged people enrolled in nurse education. This is about twice the number of students who enrolled in 2009. These students in general account for about one fifth of all first year nursing students. However, between 2015 and 2017 a 35% decrease in the number of first year diploma degree students of this type was seen, as well as a 44% decrease in the number of first year bachelor students of this type. There are a number of nurses keen to upgrade their current nursing qualifications and train to bachelor degree levels. In 2011, for example, 580 nurses enrolled in a programme to bridge the gap between the diploma degree and the bachelor degree. From 2006 to 2011 the number of first year diploma degree and bachelor degree students in the French Community rose from 2 100 to 2 672 and from 3 062 to 3 504 respectively (Hertogen, 2011, 2013, 2018).

The number of students enrolled in the Flemish master programme in nursing and midwifery increased from 214 students in 2007 to 371 students in 2014, and has remained stable since, with 369 students enrolled in 2017. About the same number of students are enrolled in the preparatory programme (Vlaams Agenthschap Hoger Onderwijs, Volwassenenonderwijs, Kwalificaties & Studietoelagen, 2018).

1.2 The Belgian nurse workforce

1.2.1 Composition and configuration

According to OECD (2016), in 2014 the number of practising nurses per 1 000 population was 10.6, and the ratio of nurses to physicians was 3.6. Linkages between existing databases at the Belgian federal government allow for refined analyses on the supply side resulting in better workforce projections. For nurses registered with the Provincial Medical Commission, detailed data are currently available on qualification levels, their type of employment, social status and the economic sector in which they are active. In December 2017, 191 460 nurses were registered and lived in Belgium, compared to 181 121 nurses in December 2015. Of these 191 460 nurses, about nine out of ten nurses (86.8%) were female; 11 241 nurses held an advanced professional title in intensive and emergency care, 2 203 in geriatrics, 3 027 in oncology, 4 740 in paediatrics and neonatology, 2 644 in mental health care and psychiatry, and 2 143 in peri-operative care. In addition, 3 511 nurses held an advanced professional qualification in geriatrics, 870 in diabetes, 2 246 in mental health care and psychiatry, and 952 in palliative care (Federal Public Service Health, Food Chain Safety and Environment, 2017).

1.2.2 Deployment and skill-mix models

Staffing levels in Belgian acute hospitals are determined by financial resources. The budget is composed of a fixed and a variable budget (Government of Belgium, 2002b). The fixed budget is calculated by setting minimum nurse staffing ratios per speciality. For 30 surgical or medical beds, for example, the minimum is set at 12 full-time equivalent (FTE) care personnel. Financing is subsequently based on points given to the number of beds per unit. For surgical and medical units, 1 point corresponds to 1 bed, which equals 0.4 full-time equivalents (12 FTE/30 points). The budget for the hospital equals the total number of points times the value (in €) of one point (labour cost adjustments are made). The largest part of the variable budget is allocated on the basis of nursing care intensity information (only for general internal medicine, surgical, paediatric and intensive care units). The mechanism for the variable budget allows for providing hospitals with an extra budget if the intensity of nursing care is higher than the national benchmark. This is a unique feature of the Belgian hospital financing system for nursing (Sermeus et al., 2007).

A Royal Decree issued in 1964 required all hospitals to provide a standard level of service and called for adequate numbers of staff to care for patients (Government of Belgium, 1964). For surgical day care units, one registered nurse is required during opening hours. If 800 patients or more are admitted on an annual basis, that translates to 1 FTE. For each 800 additional admissions, one nurse must be contracted. Operating theatres in surgical day care units must be staffed by at least two nurses. If surgical procedures exceed 1 500 annually, for each 750 additional operations, one additional nurse must be contracted (Government of Belgium, 1997c). Intensive care and emergency care units operate similar practices that require two permanent nurses per six beds to provide 24 hour care. At least one nurse must hold the advanced professional award in intensive and emergency care or have worked for at least five years in an intensive care or emergency unit. It is also mandated that the nursing team must be adjusted to the activity level of the unit (Government of Belgium, 1998a, 1998b). Specific skill-mix models exist for burns units, where the nursing team must consist of three full-time equivalent nurses and half must possess the title of nurse specialized in intensive and emergency care (Government of Belgium, 2007f). Units that provide care for older adults must be managed by a specialist geriatric nurse. Each elderly care unit must have at least 14.13 full-time equivalent nurses, paramedics or health care assistants per 24 beds. These include one head nurse with a specialist qualification in in geriatrics, five FTE nurses, four FTE nurses with the particular profession title or qualification of nurse specialized in geriatrics and 1.33 FTE paramedics. At least one nurse must be present at the unit at all times (Government of Belgium, 2007g). Recommended staffing levels also exist for the nursing team for infection control (Government of Belgium, 1964) and for oncology (Government of Belgium, 2003b), specialized breast cancer (Government of Belgium, 2007h), cardiology (Government of Belgium, 2000), and paediatrics (Government of Belgium, 2006e).

1.2.3 Career structures

The attractiveness of the nursing profession and efficiency of nursing care are influenced by how nurses view the opportunities they have for career progression, both managerially and clinically (Berckmans et al., 2008). Managerial roles have been defined within the legal framework set for the organization of the nursing department (see Section 1.3.2). Clinical career opportunities require redesigning clinical nursing practice through task shifting (the reassignment of tasks between types of profession) and differentiated nursing practice (the creation of functions with different tasks, responsibilities and competences within the nursing profession).

In Belgium advanced practice nurse (APN) roles are so far not formally recognized. A bill changing the Law of May 10, 2015 has been accepted in Parliament to define the role of Nurse Specialists (Chamber of Representatives, 2019). An OECD study examined the experience of advanced practice nurses in twelve countries, reviewing the literature and using a policy and data questionnaire (Delamaire & Lafortune, 2010). Factors hindering the development of advanced practice nurse roles in Belgium included the remuneration methods for doctors (doctors mainly work in solo practices paid on a fee-for-service basis), government legislation and the position of medical associations. The latter is counteracted by the demand from nurse associations as the major driving force facilitating development. Key factors driving the development of more advanced roles for nurses in Belgium were the shortage of doctors and promoting quality and continuity of care. Cost-containment was seen as the least important factor. Although in 2019 the advanced practice nurse role has not been formally recognized, advanced practice nurse education is currently offered in nursing education. De Geest et al. (2008) identified these educational programmes as the

prime driver for the introduction of advanced practice nurse roles in some clinical settings.

1.2.4 Planning mechanisms

Since 1996 the Planning Commission for health professions at the Federal Public Service Health has examined the supply and demand for doctors, dentists, physiotherapists, nurses, midwives and speech therapists (Government of Belgium, 1999). Projections are made at the level of each of the groups. The current mathematical model is mainly supply-side oriented, taking into account the current supply, expected new entrants in the profession, exits from the profession, the activity profile of the profession, and projected attrition. In 2006 the Research Institute for Work and Society (HIVA), in collaboration with the Planning Commission, projected the supply and demand for nurses until the year 2050. These projections showed the need to connect workforce planning efforts to ongoing policy initiatives. Depending on whether a dynamic (five-year observed activity rate projections) or a projected (activity rate is raised and retirement age increases) scenario was used, the total supply was projected to vary from 112 000 to 143 000 in 2020, and from 102 000 and 186 000 in 2050. The main conclusion was that there is no indication of undersupply, but there is a need to keep a sufficient margin to maintain flexibility in the supply from schools of nursing (Pacolet & Merckx, 2006).

1.2.5 Mobility

For internationally educated nurses to gain employment as registered nurses in Belgium three steps are necessary. First, they must have access to the labour market through the mutual recognition of qualifications. Second, they must be able to apply for access to the profession. For immigrants who obtained their degree within the European Economic Area (EEA), Directive 2005/36/EC is applied. These applications for recognition are handled by the International Mobility Cell of Health Professions. For nurses with degrees obtained outside the EEA, the Flemish and French Communities handle individual cases, with both Communities having National Academic Recognition Information Centre (NARIQ) offices with Community-specific authority to provide academic and/or professional recognition. NARIQ provides information and issues equivalence certificates for Belgian health care professionals planning to practise abroad. There is also the possibility of receiving special approval to practise as a nurse in Belgium for a very short period. Third, like all Belgian nurses, internationally educated nurses must register with the Provincial Medical Commission.

OECD figures for the year 2008 point to Belgium having 1.5% of its nursing workforce recruited from abroad. Data from the Federal Public Service Health show, however, that the number of foreign-trained nurses was about 4.5%. In terms of trends the number of foreign-trained newly licensed nurses increased between 2005 and 2008 from almost 6% to 13.5% of the total number of newly licensed nurses. In the RN4CAST study, just over 3% of the nurses indicated that they were foreign trained, mainly emanating from Romania, France, the Netherlands and the Lebanon. A large variation in the numbers of foreign-trained nurses was observed between hospitals. A number of recruitment agencies have recently started to recruit nurses from Asia and Eastern and Southern Europe for the Belgian health care system (Wets, de Bruyn & Geets, 2011).

1.3 Structure of nurses' work

1.3.1 Working conditions

The remuneration level for nurses is a factor likely to affect nurse well-being (Hasselhorn, Müller & Tackenberg, 2005) and the attractiveness of the nursing profession (Buchan & Black, 2011). In many countries it is equal to or slightly above the average wage of all workers. This is also the case for Belgium, where the income of hospital-based nurses in 2005 was more than 10% higher compared to the average national salary. Expressed in common currency, Belgian nurses' wages are comparable to other western European countries (Eurostat, 2017). Findings from one study conducted in Belgium identified that in addition to the financial rewards of nursing, non-financial and psychological rewards were key factors in their job satisfaction. In the non-financial rewards category, they valued the opportunity to follow training, positive working schedules and opportunities for promotion. The main psychological rewards included an appreciation of one's work by others, and respect from patients and colleagues (De Gieter et al., 2010). Findings from the RN4CAST study highlighted room for improvement in all three of these areas. Three out of five nurses were dissatisfied with their salary. Whilst more than three out of four nurses agreed that there were opportunities for staff development or continuing education programmes, almost half disagreed that there were career development and clinical ladder opportunities.

On a more positive note, three out of four nurses were satisfied with work schedule flexibility. However, more than three out of five nurses expressed the view that they did not gain recognition for a job well done and seven out of ten felt that management did not listen and respond to their concerns. In addition, six out of ten felt that the physicians did not hold nurses in high esteem. In a previous study conducted with Belgian hospital nurses, concerns were expressed about the quality of leadership and management, insufficient staffing levels, time pressures and a stressful work environment (Milisen et al., 2006). This was confirmed in the RN4CAST study, with 62% of nurses claiming that the chief nursing officer was neither visible nor accessible. In addition, half of the nurses disagreed that managers were not supportive of nursing staff, almost seven out of ten saying that there were too few nurses to provide quality care, and half of the nurses rated their work environment as poor or fair. Consequently, 25% of the nurses showed signs of high emotional exhaustion and 30% of nurses reported their intention to leave the hospital within the next twelve months as a result of job dissatisfaction. It should be noted that findings were not uniform across all the hospitals that took part in the study.

To increase the attraction and retention of nursing personnel, specific measures and welfare agreements have been agreed, often after lengthy periods of conflict between the parties concerned.

Since 1997 a measure has been introduced to create additional employment to meet the needs of non-profit organizations in both the private and the public sector. The aim of this measure, the so-called Social Maribel, was to reduce workloads, especially for employees who are directly involved in care or services, to improve care and services and optimize comfort for patients and clients. The Social Maribel is a federal employment measure financed through reductions in employer contributions to social security granted for employees working at least part-time. The National Social Security Office adds these reductions to the Maribel and in turn distributes the budget to employers. This distribution is based on criteria specific to each sector, with the main requirement being an increase in the volume of labour in the sector (Government of Belgium, 2002c). Employer contribution reductions have been increased several times since (Government of Belgium, 2015b).

Since the non-profit agreement of 2000–2005, employees from the health sector are offered the possibility of completing their nursing studies – via either the diploma or the bachelor degree – while receiving salary support (known as 'project 600'). Eligible candidates must meet admission requirements for higher education, work at least half time, not have a nursing degree or any other bachelor or master degree, and have at least three years' work experience in a health care facility to qualify. They must also pass a test (general competence and motivation). Participants are not permitted to work in any other area during the course of their studies, must attend at least 90% of the classes, and must pass each year. The wages of replacement staff are covered by the Social Maribel (Government of Belgium, 2002d). In addition to this, back to nursing programmes have also been available for the past 20 years.

With the 2005–2010 social agreement between employers, trade unions representing workers in the federal health sector, and the federal government, measures were taken towards end-of-career working time reductions (Akkoord betreffende de federale gezondheidssectore: publieke sector, 2005). Nurses working full-time and aged 45 years, 50 years or 55 years can reduce the number of hours worked per week without any salary penalty by 2, 4 or 6 hours respectively. This amounts to 96, 192 or 288 hours annually. They can also choose to work full-time and obtain a salary bonus of 5.26%, 10.52% or 15.78% respectively. A combination of options is also possible. For nurses working part-time, these measures can be applied proportionally to their working time. The employers are entitled to an annual financial contribution to offset the relief of these measures (Government of Belgium, 2006f).

In 2008 the Health Minister announced a strategic plan to raise the attractiveness of the nursing profession (Government of Belgium, 2010). The four pillars of this plan were reducing workload and stress, social recognition and involvement in decision-making, remuneration and qualifications. The execution of this plan was announced by Royal Decree in the *Belgian Official Journal* on 7 July 2010. It foresees a yearly bonus of €1 113.80 for nurses holding a particular professional qualification and a yearly bonus of €3 341.50 for nurses holding an advanced professional title (but will no longer be given to new nurses obtaining these particular qualifications). The bonuses are calculated on a monthly basis. The Decree also foresees increased bonuses, individually calculated as a percentage of the salary, for evening and night shifts. This arrangement is valid for nurses as well as for health care assistants working in direct patient care in hospitals, nursing homes and home nursing (Government of Belgium, 2011b).

In 2011 a federal social mini-agreement was negotiated. The agreement foresaw job creation of at least 400 FTEs

to strengthen workforce stability and the replacement of absent staff. Priority for private hospitals was given to the recruitment of administrative and support staff within care units (125 FTE) (Akkoord betreffende de federale gezondheidssectoren: Privesector, 2011). For the public sector the hospitals were awarded 100 FTE in total (Sociaal akkoord betreffende de federale gezondheidssectoren van de openbare sector, 2011). Also on the agenda were salary increases for evening shifts, as well as the financing of the second pension pillar, which encompasses all the supplementary pension schemes linked to an occupational activity.

At the end of 2011, after a series of demonstrations by non-profit sector workers, the social partners and the Flemish government concluded an agreement for the non-profit sector for 2011–2015 (Vierde Vlaams Intersectoraal Akkoord voor de social-/non-profitsectoren voor de periode 2011 tot 2015, 2011). This agreement only covers the regional level, including youth care, care for the disabled, sociocultural work, welfare work, psychological care, sheltered workshops and local provision of services. At the federal level, which includes nursing homes, hospitals, childcare and homecare, no progress in the negotiations has been made (VandeKerckhove & Van Gyes, 2012).

Since 2002 an objective classification of functions has been developed by the Institute for Classification of Functions in Healthcare and Social Care (called IFIC). In total 218 functions, organised in 6 departments and 14 function families have been described: administration, hotel, technics & logistics, medical-technical and pharmacy, allied health & paramedical, psycho-social care and nursing & care. The aim was to base the salary of people working in healthcare and social care, on what they do and not only on their diploma. A new salary scheme has been introduced since 2018 in which the traditional salary structure is replaced by this IFIC classification structure. Eighteen different salary groups have been defined going from level 3 up to level 20. More than 68 different "nursing & care" functions have been described going from level 8 (logistics assistant in a hospital) up to level 19 (e.g. nurse middle manager). People can choose to keep their salary or enrol in the new IFIC salary system, dependent on the individual impact of the new scheme.

1.3.2 Governance and leadership

An important function of the federal state is the organization of nursing departments as an integrated part of hospital activities (Government of Belgium, 2008). Each hospital must have a head of nursing (chief nursing officer) who represents the hospital on all nursing matters, and has responsibility for general nursing care policy (Government of Belgium, 2007i). Nurse managers (middle management) are responsible for the organization, continuity and quality of nursing activities within a division. Their role can be either managerial or linked to frontline staff (Government of Belgium, 2007j). Head nurses are responsible for the organization, continuity and quality of nursing activities on a particular nursing unit (Government of Belgium, 2006g). The nurse manager and head nurse share responsibilities for achieving the strategic vision of the hospital, patient care, human resources, staff training and development, and communication and consultation. In general hospitals nursing middle management must consist of one nurse or midwife for every 150 beds. Chief nursing officers and nurse managers must be educated to master's level. Similar requirements are expected for head nurses, although specific training in nursing management instead of a master's degree is acceptable. Exceptions are made for heads of a nursing department, nurse managers and head nurses who were in post on or before 28 August 2006. Chief nursing officers, nurse managers and head nurses are required to take 60 hours' training relating to hospital legislation and financing, organization and management of personnel (including coaching skills), welfare legislation, principles of business management, epidemiology, management of hospital data and efficiency and quality of care (Nationaal Verbond van Katholieke Vlaamse Verpleegkundigen en Vroedvrouwen, 2007).

The Federal Public Service for Health oversees the administrative aspects associated with nursing councils and commissions. The role of the Federal Council of Nurses is to advise the Minister of Health on all nursing matters, and more specifically with regard to nursing practice and the qualification required for practice. Since 2000 the Council has made numerous recommendations with respect to the recognition of particular professional titles and qualifications, and the organization of the nursing department. The Recognition Commission of this Council gives advice on applications for recognition, verifies the conditions for retaining an advanced profession title or qualification, and gives advice on the registration of nursing auxiliaries. The Provincial Medical Commission evaluates entry to nursing practice based on professional qualifications. The Technical Council of Nursing advises the Health Minister on the list of technical nursing actions (B-category nursing

interventions), nursing actions that can be delegated by a physician (C-category nursing interventions), and the methods for carrying out these interventions as well as the nursing qualifications required to do so. The Federal Council for the Quality of Nursing Activities takes responsibility for quality improvement in nursing. The National Council for Hospital Affairs is responsible for hospital programming, accreditation and financing.

1.4 Synthesis and policy implications

Analysis from the RN4CAST data in Belgium showed that nurses expressed serious concerns regarding nurse staffing levels to provide high-quality care. Earlier research in 28 Belgian cardiac centres demonstrated that nurse staffing levels influenced mortality levels (Van den Heede et al., 2009). The Federal Public Service Health should therefore closely monitor nurse workforce developments, staffing levels in particular. In their workforce planning analysis, various scenarios should be proposed in terms of altering the baseline establishment of nursing staff to provide an adequate level of service. The planning models should also indicate costs of staffing under such scenarios. This should allow a rapid response to drivers for change and timely support when workforce issues impact hospital services and quality of patient care.

For hospitals to make the best use of their nursing workforce resources, an integrative strategy that aligns with the current challenging financial background should be implemented. Key strategies to be considered are the embedding of an effective staff retention policy and the provision of opportunities for professional development to maximize productivity.

With regards to the critical importance of effective strategies for nurse retention, some 30% of Belgian nurses reported the intention to leave their job. At the hospital level this varied from 13% to 56%. A mixed methods study was therefore undertaken in which chief nursing officers from high- and low-performing Belgian hospitals on the intention to leave were interviewed. This study showed that the themes identified by chief nursing officers of hospitals with low intention to leave rates mirror organizational features promoted by the Magnet Recognition programme (Van den Heede et al., 2013). Evidence from this follow-up study calls for improvements in the quality of nurse leadership and management styles. These two Magnet forces are the subject of the transformational leadership component of the American Nurses Credentialling Center (2008) evidence-based model of magnet recognition for transforming the nursing practice climate. In November 2017, the Antwerp University Hospital gained Magnet recognition.

Another Magnet force with much room for improvement in the Belgian context is that of professional development. The RN4CAST study showed that Belgian nurses in general were satisfied with available programmes for staff development and continuing education programmes, but at the same time indicated that more emphasis should be placed on career development and clinical ladder opportunities. The limited opportunities for advance practice nurse roles continues to be a key issue. Sufficient evidence is available for a larger proportion of hospitals to recognize the important part played by the advanced practice nurse in providing complex patient care, with the potential benefits of improving outcomes and reducing costs. The minimum educational requirements and job content for this role have been set out previously in a Belgian context (Zorgnet Vlaanderen, 2011). Contrary to clinical ladder opportunities, various managerial roles within the nursing department are imposed by law. With regard to the role of a head nurse, however, there is much ongoing debate regarding offering the right remuneration to reflect their skills and value for the organization. With the introduction of the professional titles and corresponding bonuses, the general feeling is that the wage differential between chief nurses and bedside nurses is too low. In addition, head nurses also indicate that too much of their time is spent on clinical care and that job autonomy is low. The national nursing federation therefore proposes a threefold solution. First, a lasting wage differential of 35% against bachelor-prepared nurses. Second, head nurses should be financed over and above financing for bedside nurse financing. Third, head nurses should be able to work autonomously as described in the function profile prescribed by law (Zorgnet Vlaanderen, 2012).

Lastly, implementing strategies that allow nurses to work to their maximum potential and capability presents an additional potential lever to align health workforce supply and demand. The Belgian Health Care Knowledge Centre recommends the implementation of pilot projects on differentiated nursing practice where the efficiency and quality of nursing care is closely monitored. Better differentiated nursing practice would also imply that nurses must be trained (either during the first cycle or in hospitals) to better delegate tasks and supervise lower qualified members of the team (Zorgnet Vlaanderen, 2011).

Currently, workforce initiatives are fragmented with the result that energy is dissipated and impact reduced overall. A combined initiative involving a common agenda united across all fronts would consolidate effort and enable a coherent strategy across the health system to operate with force. There is much to be gained from operating on a united front and confronting the workforce challenges in the health system together.

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2 England

Jane Ball, Anne Marie Rafferty, Julia Philippou

2.1 Context-organization of the health system, education and regulation

2.1.1 England and its health system

England is a constitutional monarchy that is part of the United Kingdom, which has a population of 65.8 million (Eurostat, 2017) and is situated in Northern Europe. The National Health Service (NHS) was founded in 1948 on the principle that health care should be available to all free at the point of delivery. It has become the world's largest publicly funded health service. With some exceptions, the NHS remains free at the point of use for anyone who is resident in the UK. It provides health services for a population of 65.8 million and employs more than 1.6 million people – about half of whom are clinical staff. The NHS in England is the largest part of the system by far, catering for a population of 55.3 million and employing about 1.2 million people, of whom 314 966 are qualified nurses and health visitors (Office of National Statistics, 2017; NHS Choices, 2016).

The Department of Health and Social Care has provided overall policy direction for the NHS since 2012. NHS England was formed in April 2013 and has been the commissioning arm of the NHS with Health Education England responsible for workforce planning and funding of education and training of all health professions. NHS Improvement, established in April 2016, acts as the regulator on finance for the provider arm and supports Trusts which require improvement (NHS Improvement, 2018a). The Secretary of State for Health and Social Care is the head of the Department of Health and Social Care

and reports to the Prime Minister. The Chief Executive of NHS England reports to the Secretary of State.

From 1991 NHS hospitals (and other health service providers, covering community health or mental health, for example) were given the opportunity to be governed by bodies known as Trusts. Although they were still part of the NHS, Trust status was conferred on hospitals during the 1990s to give hospitals greater operational freedom. It was part of a wider set of reforms that aimed to make more explicit the distinction between organizations that provide services, as opposed to those that purchase or commission services. Trusts may be made up of one or several hospitals, and may provide purely acute, mental health or community services, or, more commonly, a combination of these services. Achieving Foundation Trust status (first introduced in 2004) is an extension of the original Trust ideology, granting trusts greater financial and management freedoms than their peers.

Health care spending currently totals 9.7% of the UK's gross domestic product, which is around the mean of OECD countries, or US$4 192 per capita (OECD, 2017a); health care spending data are not available for England alone.

Following a change of government in May 2010 and the subsequent Health and Social Care Bill in 2011, the structure of the NHS has undergone major reforms, in the biggest reorganization since its inception in 1948. The legislative changes from the Health and Social Care Act 2012 came into being on 1 April 2013. One of the changes involved a move to clinically led commissioning. The 152 NHS primary care trusts, which between them held 80% of the total health budget and had responsibility for commissioning health services, were replaced with 211 clinical commissioning groups primarily led by general practitioners (GPs). The Department of Health and Social Care allocates about £99 billion per year to NHS England and approximately one third of this money (£30 billion) is retained by NHS England to pay for its running costs and the services it commissions directly, such as primary care, specialist services, offender and military health care. The rest is passed on to clinical commissioning groups to enable them to commission services for their populations (Lafond, Charlesworth & Roberts, 2016).

The reforms also brought major changes in governance and accountability. Since the reforms introduced in April 2013, three national bodies are responsible for commissioning (NHS England), financial regulation (NHS Improvement – though at the time of writing there is talk of merging NHS England and NHS Improvement so this is a constantly changing landscape), and monitoring of the quality of health care services (Care Quality Commission). All three organizations are accountable to the government through the Secretary of State as the Head of the Department of Health (Farebrother, 2014).

2.1.2 Regulation and legislation of the nursing profession

Registered nurses in the UK are regulated through the Nursing and Midwifery Council (formerly the United Kingdom Central Council) established through 'The Nursing and Midwifery Order 2001'.[1] The principal functions of the Council are to establish standards of education, training, conduct and performance for registered nurses and midwives and to ensure the maintenance of those standards. The register has three main parts: nursing, midwifery, and specialist community and public health nurses (e.g. health visitors, school nurses). The nursing part of the register is subdivided according to branch: adult nursing, children's nursing, learning disability nursing, and mental health nursing. There is also a separate section to allow qualifications, for example related to prescribing, to be recorded on the register. There is a single level of registration as a nurse which is achieved via a three-year degree or postgraduate diploma programme in a university. From 2013 onwards all nursing programmes are at degree level. Nurse education in the UK must also follow the legislative requirements of the European Union – stipulated in Directive 2005/36/EC, amended by Directive 2013/55/EU – which provides minimum training and competency requirements for nurses responsible for general care. These requirements are transposed into UK legislation through two statutory regulations, which have the force of law: the European Communities (Recognition of Professional Qualifications) Regulations 2007[2], and the European Qualifications (Health and Social Care Professions) Regulations 2007[3]. The UK government had until 18 January 2016 to transpose the rules of the new Directive 2013/55/EU into UK law.

Health care support workers are not currently registered or regulated. This has been an issue of contention (Prime Minister's Commission, 2010). There is no nationally

1 http://www.legislation.gov.uk/uksi/2002/253/pdfs/uksi_20020253_en.pdf

2 http://www.gmc uk.org/European_Communities__Recognition_of_Professional_Quals__Regs.pdf_25392267.pdf

3 http://www.gmc-uk.org/European_Quals__Health_and_Social_Care_Professions__Regs_2007.pdf_25407547.pdf

agreed training for health care support workers, or for the higher level of support staff typically termed 'Assistant Practitioners'. In December 2015 a new role as 'Nursing Associates' was announced as a bridge between health care assistants and registered nurses (House of Commons Health Committee, 2018). This was the outcome of recommendations made by the Shape of Caring Review chaired by Lord Phillip Willis for Health Education England in collaboration with the Nursing and Midwifery Council (Health Education England, 2015a). This report built on previous work commissioned by the Nursing and Midwifery Council to undertake an independent review of the issues connected with the regulation of health care support workers, which concluded that there was 'a strong case for regulation in that it would control access to employment, be accompanied by defined and nationally agreed competencies and mandatory, standardized training, and clarify the scope of individual support workers' practice'. The Willis recommendations stopped short of regulation and consequently there remains huge variation across England in training, role and remuneration, and little or no correlation between levels of qualification held and the activities undertaken or rate of pay. This needs to be regularized as a matter of priority. The policy has crystalized into piloting training for a 'nursing associate' role between health care support workers and registered nurses and introducing degree nurse apprenticeships. The Nursing and Midwifery Council is preparing to regulate the nursing associate role and the apprenticeships are currently being rolled out in Trusts but both are controversial, further adding complexity to the division of labour and management of the workforce, not least its educational support (Rafferty, 2018).

Some attempt to rationalize training for nursing support staff is being made. The Health Secretary commissioned Skills for Health and Skills for Care to develop a code of conduct[4], standards and competencies for health care support workers. These were launched in March 2013 and from 1 April 2015 the Care Certificate was implemented in England. There is an expectation that employers will support their new-to-post support workers to achieve the standards in the certificate within approximately twelve weeks of starting employment. However, currently this is voluntary and there is no legal requirement for employers to use this Code of Conduct.

2.1.2.1 *Pre-registration nursing education*

Historically, pre-registration nurse education in the UK was hospital based, modelled on an apprenticeship system with schools of nursing attached to large acute hospitals. Student nurses were primarily based on the wards, and were paid as part of the workforce and active members of the nursing team providing care. Nurse education therefore was strongly linked to the requirements of the NHS. Blocks of time were spent outside the clinical environment in school, for academic study periods. Competency assessment for nurse registration was undertaken through practical ward-based examinations, some written papers and a national written examination that was abolished in the 1970s. There were two levels of nurse preparation leading to qualification as either a state registered nurse (SRN, with three years' training) or state enrolled nurse (SEN, with two years' training). There were also specialty-specific registered nurses, e.g. mental health nurses and sick children's nurses. The nursing associate role appears to recapitulate many of the features of the enrolled nurse, a role abolished in the early 1990s. Having removed the two-tiered system of nursing, England is reinstating this system at a time when the rest of Europe appears to be moving in the opposite direction.

Nurse education underwent a fundamental overhaul when Project 2000 was introduced in 1986. Diploma level preparation as a minimum for all registered nurses (now based in universities, with practice placements in service) was introduced. Project 2000 represented a massive reorientation of nurse training: "the uncoupling of education from direct and persistent control by service". Underpinning it was a desire to put nursing education on a par with other professions (and so help with recruitment of school leavers) and ensure nurses were fit for practice – with the knowledge and clinical decision-making skills needed in a modern health service. It transferred schools of nursing into higher education institutes, increased the theoretical component and made students 'supernumerary' and no longer part of the staff. But this latter change came at a price; the government funded only half the replacement costs, creating service gaps that have been filled by increasing the contribution (both in number and in range of activities undertaken) of cheaper staff – unregistered health care assistants (Rafferty, 1996).

In order to register, students have to follow an education programme that meets the Nursing and Midwifery Council's required standards of proficiency (Nursing & Midwifery Council, 2018). The standards set out what must be achieved at the point of registration. It takes at least three years to become a nurse, unless students can show that they have already met some of the course requirements. At present, nursing students

4 http://www.skillsforhealth.org.uk/standards/item/217-code-of-conduct

learn foundation knowledge and basic skills in the first year of the programme, the Common Foundation Programme. In order to then move into their chosen two-year specialism – adult, mental health, or children's nursing – they need to demonstrate that they have met certain 'outcomes', including certain essential skills. These essential skills are grouped in clusters known as essential skills clusters. The Shape of Caring Review made recommendations to change the balance of the Common Foundation Programme to branch skills but this has not yet been confirmed for implementation (Health Education England, 2015a).

Until September 2013 England had a mixed economy of academic level for pre-registration programmes, which were offered by around 80 universities in one of the four fields indicated above. The majority (approximately 85%) of learners studied at Diploma in Higher Education (Dip HE) level, with the rest studying at first degree level or above (Willis Commission, 2012). Although nurse education is based in universities, it is delivered in direct partnership with NHS Trusts and other organizations that provide practice learning opportunities for nursing and other health care students. As required by EU directives, half of the education programme (comprising at least 4600 hours) is spent in practice (including community and hospital practice learning experiences), while the other half focuses on the knowledge and technical abilities needed to underpin and support practice. Most programmes take three years and the higher education institutes must adhere to the Nursing and Midwifery Council standards, although there is some autonomy on recruitment criteria and the structure and curriculum of their programmes. There is no national curriculum (Willis Commission, 2012).

From September 2013 only degree level pre-registration nursing programmes have been offered in England, making UK nursing entirely graduate level entry. The Nursing and Midwifery Council (2010) stated that degree level nurses will be able to provide a better standard of care, and will develop a workforce that can:

- be more independent and innovative and able to use higher levels of professional judgement and decision-making in an increasingly complex care environment;
- assess and apply effective, evidence-based care safely and with confidence, managing resources and working across service boundaries;
- be members, and often leaders, of multi-disciplinary teams where colleagues are already educated to at least graduate level; and
- provide leadership in promoting and sustaining change and developing clinical services.

Higher education providers use credit level descriptors to assist in determining the level of credit assigned to individual modules and units which comprise programmes of study.[5] Credit levels commence at level 4 (first year of study) and extend to level 8 (doctoral level). British undergraduate students take a maximum of 120 credits, which is considered a full workload for one year (120 UK credits equals 60 ECTS (European) credits). Universities apply different credit frameworks, but 360 credits need to be accumulated (usually 120 credits at each of levels 4, 5 and 6) to qualify for a nursing award at honours level.

NHS-funded support – in the form of a 'bursary' – has been available to individuals accepted for an NHS-funded place on a full- or part-time course leading to professional registration as a nurse or midwife. The NHS Bursary Unit has funded nursing students with a means-tested bursary and a non means-tested loan with the move to all graduate entry. This system of support changed from being a two-tier system before with a means-tested bursary for degree students and a non means-tested and more generously funded bursary for Dip HE students. This system created perverse incentives for the Diploma and some students opted for that qualification even though they held entry qualifications for the degree. Given the demographics of the profession this made nursing attractive to more mature candidates as well as those from relatively disadvantaged socioeconomic backgrounds. For example, UCAS data from 2014 show that 61% of students accepting a nursing place in the UK were over 21 (across all courses, only 22% are mature students). From 2017 student nurses in England will stop receiving NHS bursaries and instead will have to take out loans to pay their tuition fees. Thus at the time of writing this policy has been changed to putting nursing and midwifery degrees on a par with other student loan-based systems. The assumption is that there are many more candidates who could become nurses but whose numbers are capped by commissioners – there is an expectation that removing this restriction will enable universities to have greater control over numbers and income, and enable a growth in the supply of registered nurses. However, there are also risks. Nursing students are more

5 Higher education credit framework for England: guidance on academic credit arrangements in higher education in England. http://www.qaa.ac.uk/publications/information-and-guidance/publication?PubID=2730#.VlHKb7_aknJ

mature, with other responsibilities, so this may impact on their motivation to enter the profession, and similarly for candidates entering postgraduate diplomas, who may not be willing to take on further debt. While is too early to draw firm conclusions about the impact of the funding reforms on the supply of nurses, evidence shows that applications to undergraduate nursing courses in England in 2017/18 dropped by 23% compared to 2016/17 and, as feared, mature students are dissuaded or diverted by the funding changes with UCAS figures showing a total 19% drop for mature students (age 21 or older) (Buchan et al., 2017; House of Commons Health Committee, 2018). This trend is of great concern as mature students are more likely to remain in the profession (House of Commons Health Committee, 2018).

2.1.2.2 *Post-registration nursing education*

In 2013 the Nursing and Midwifery Council launched a public consultation to review a new model of revalidation[6] that nurses will need to undergo to maintain their registration. The new revalidation process took effect from April 2016. To maintain their registration, nurses and midwives must demonstrate that they have met Nursing and Midwifery Council post-registration education and practice standards every three years. The standards cover both practice (e.g. a minimum of 450 hours over three years for a registered nurse) and continuous professional development (CPD). The CPD standard requires registrants to undertake at least 35 hours of learning activity relevant to their practice every three years and maintain a personal professional profile of their learning activity. Currently, there is no legal requirement for employers to provide time for CPD-related learning (Royal College of Nursing, 2017). Despite this, the Nursing and Midwifery Council indicated that employers have a responsibility to support their staff to meet these requirements even in the absence of protected time (Royal College of Nursing, 2015).

In terms of CPD content and providers, the Nursing and Midwifery Council does not set any formal conditions on what does or does not constitute valid CPD and therefore the UK CPD market is unregulated. CPD content and providers usually fall under two main broad categories – higher education and non-higher education. Higher-education CPD is provided by an accredited higher education institution in the UK and these frequently involve a range of developmental and clinically specific courses, some of which may result in the acquisition of a formal qualification (such as a master's degree) or as stand-alone training/education. The second option is non-higher education CPD which is very diverse and can include conferences, webinars, online learning modules, reading, mentoring, and mandatory workplace training.

Different workplaces have different financial and support mechanisms for their nurses to undertake the required CPD hours and it is up to the employer and the nurse to negotiate a cost- and time- sharing agreement (Ball & Pike, 2015). Within the public sector some funding support and time to attend these courses may be provided by employers. In 2009 nurses in England spent an average of six to seven days on CPD. Levels of CPD vary according to employer and setting, with nurses in the independent sector recording more than those in the NHS, and staff working in education recording the most. But the factor that has biggest effect on levels of nurse CPD is the financial context of the health service. At the time of the national Trust deficit crisis in 2006, training budgets were cut and CPD levels fell from 10.6 days in 2005 to 7.3 days in 2007. A survey from the Royal College of Nursing (Ball & Pike, 2015) identified that 85% of nursing staff are using their own time and 31% their own funds to undertake CPD activities, with nearly 25% of respondents using annual leave to accommodate this (Ball & Pike, 2015). This can have considerable implications for the new revalidation process as over half of the nurses surveyed (55%) did not feel confident their employer will give them access to sufficient professional development (Ball & Pike, 2015). At the time of writing, cuts to CPD budgets have excised up to 50% of the support for nurses and midwives in some Trusts. This impairs the capacity of the workforce to maintain quality and safety in care as well as its resilience by upskilling in line with the increasing complexities of and demand for care. It also impacts on the migration of workers from other countries looking to the NHS for professional development opportunities (Leone et al., 2016).

As part of CPD programmes, nurses in the UK have the opportunity to gain specialist or advanced qualifications in a variety of subject areas. In England universities offer a variety of levels for post-registration education including specialty training leading to registerable qualifications and a diversity of courses in clinical practice, teaching and management. Entry level qualifications to become a specialist nurse involve having an RN qualification, a first level initial registration with the Nursing and Midwifery Council and in some cases a period of experience of sufficient length in professional practice. This 'period of experience of sufficient length' varies across specialties and roles. The majority of academic qualifications for specialist education and advanced nursing practices are

6 http://www.nmc.org.uk/standards/revalidation/

offered at postgraduate diploma or master's degree level, with the exception of some (e.g. specialist community public health nurses) that are still offered also at a degree level but this level is phasing out now with the transition to wholly graduate level education. In the UK there is no title protection for specialist nurses, leading to the creation of multiple professional titles and roles; this has made it difficult to collect accurate data on numbers. This has also increased inconsistencies in scope of practice, education and training across hospital providers and higher education institutions, and career progression for clinical nurse specialists.

Advanced nursing roles are rising in the UK political agenda (Rafferty, Xyrichis & Caldwell, 2015). The RCN defines an advanced nurse practitioner (ANP) as 'a registered nurse who has undertaken a specific course of study of at least first degree (Honours) level' who is able to: make professionally autonomous decisions, receive patients with undifferentiated and undiagnosed problems, assess health care needs and make differential diagnoses, screen patients for disease risk factors and early signs of illness, order necessary investigations, admit or discharge patients from their caseload, and refer patients to other health care providers as appropriate, and provide leadership. As with clinical nurse specialists (CNS), there is variation in the titles used and educational preparation of nurses in advanced nursing roles. Advanced practice nurses/clinical nurse specialists are now recognized for their role in improving the delivery of patient care, reducing costs, enabling more efficient ways of working and redesigning services around patient need.

Finally, nurse consultant posts have also been introduced in the UK to improve the clinical career structure. As with advanced practice nurses and clinical nurse specialists, the main characteristics of this role is that nurses are practising autonomously at an advanced level with a significant proportion of their role involving direct clinical care and education, research and management activities. Professional knowledge for nurse consultants is acquired through specialist training or equivalent experience at master's level and increasingly at doctoral level education (UK National Profile of Nursing Services).

2.1.2.3 *Enrolees in nursing*

Compared to some of its European counterparts and devolved countries in the UK, the move to all-graduate entry in England has been slower to evolve. It also coincided with the upsurge in women entering tertiary education. Nursing is a net contributor to the growing proportion of women in higher education. A higher proportion of female students (n=1 314 035 – 57%) than male students (n=1 002 820 – 43%) were studying in higher education in the UK during 2016/17 (Higher Education Statistics Agency, 2018). The highest proportion of overall female students in science subject areas (42%, n= 229 905) were studying subjects allied to medicine where nursing is the largest subject area in that category. In 2015 there were on average around 27 new nurse graduates per 100 000 population in the UK, thus contributing not only to the health economy but also to the higher education economy (OECD, 2017b). Investing in nursing is also an investment in families and community health. It is not clear to what extent these assumptions have driven policy in an overt way but the recruitment of a better qualified workforce has been justified by the assumption that it will be more flexible and capable of functioning in an increasingly complex and safety-conscious environment. There is evidence from the US and Europe of better-educated nurses impacting the mortality of patients (Aiken et al., 2003; Aiken et al., 2014).

The number of nursing students entering higher education in England will deliver 23 121 full-time equivalent nurses by 2019. This will include: 2 630 mental health nurses; 13 048 adult nurses (for acute and community care), 5 876 children's nurses and 1 567 learning disability nurses (Health Education England, 2015b). However, planned numbers of entrants do not convert into equivalent Nursing and Midwifery Council registrants and the removal of the bursary has already reduced the numbers of new entrants for many higher education institutes. Figures will further reduce on account of attrition estimated at 28% and missing conversions from students who complete but do not register with the Nursing and Midwifery Council. Data from higher education statistics indicate that in 2013/2014 nursing saw a 73% rise in first degree entrants since 2007/08. Data released by UCAS in early 2017 concerning the number of applicants to study nursing indicate a 23% drop in applications and the decline was particularly notable among older applicants (Buchan et al., 2017). In England 20 820 students have been placed on nursing courses in 2017, a reduction of 5.5% (n=1220) compared to 2016. What consequence changes in the number and profile of nursing students may have is still unclear but it may cause particular shortages in specific subject areas, such as mental health, which traditionally relied on older students (Buchan et al., 2017).

2.2 The English nurse workforce

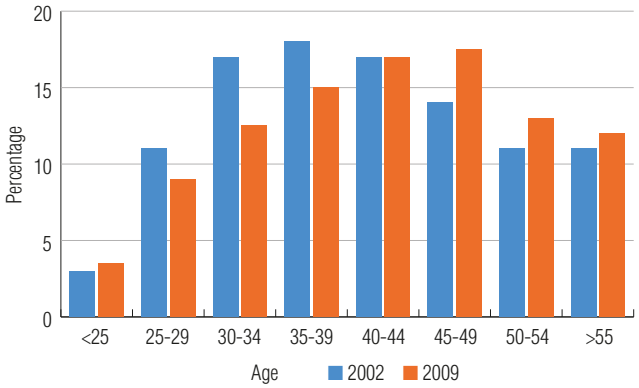
2.2.1 Composition and configuration

According to OECD (2017b), in 2015 the number of nurses per capita in the UK equalled 7.9, one nurse less than the average OECD 35 (9 per 1 000 population) and the ratio of nurses to physicians was 2.8 (OECD 35 average 2.8). A report by the Health Foundation and Nuffield Trust comparing the four health systems of the UK identified that England had a much lower rate of nurses per 1 000 population (5.8 in 2011) compared to the other countries (Wales 7.1, Northern Ireland 7.5, and Scotland 7.9) (Bevan et al., 2014). There were 284 000 full-time equivalent nurses and health visitors working in hospitals and community health services in NHS England in March 2017 (NHS Digital, 2018). The National Audit Office wrote a report on managing the supply of NHS clinical staff in 2016 and noted that there were 3106 fewer nurses being trained in 2014–2015 than in 2004–2005, a drop of 19% (National Audit Office, 2016:4)

Their distribution by field of practice is shown in Figure 2.1. Recent drops in mental health (11%) and community nursing, areas of priority for policy implementation of the government's Five-year forward view, have spiked concern (Buchan et al., 2017). There are no reliable data held centrally on the numbers of nurses working for other employers, but recent large-scale surveys of nurses working in all settings (who are members of the largest trade union and professional body, the Royal College of Nursing) would suggest that three quarters of all nurses are employed by the NHS, with just over a quarter (26%) working for other employers: GPs, independent hospitals, care homes, banks/agencies, higher education institutions and hospices. National statistics indicate that there are 23 832 nurses employed by GPs (Nuffield Trust, 2018).

The average age of nurses working in the UK (across all sectors) has risen steadily over the last twenty years. OECD data demonstrate that the UK trains far fewer nurses than comparable countries. In 2014 the UK had 29 nurses per 100 000 population; the OECD average was 45 per 100 000 population. The US trained significantly more (63), while Australia has been training even more at 76 per 100 000 population (Buchan et al., 2017:3). The removal of the bursary to support nurse education has resulted in a 23% decline in applications to nursing courses (Buchan et al., 2017:4). Until 2017, 40% of the applicants were aged 25 years and over. The removal of the bursary may be impacting this group especially in addition to pressure on pay. This is of concern with the ageing profile of the workforce (see below for details).

Figure 2.1 *Age profile of UK active nursing workforce, 2002 and 2009*

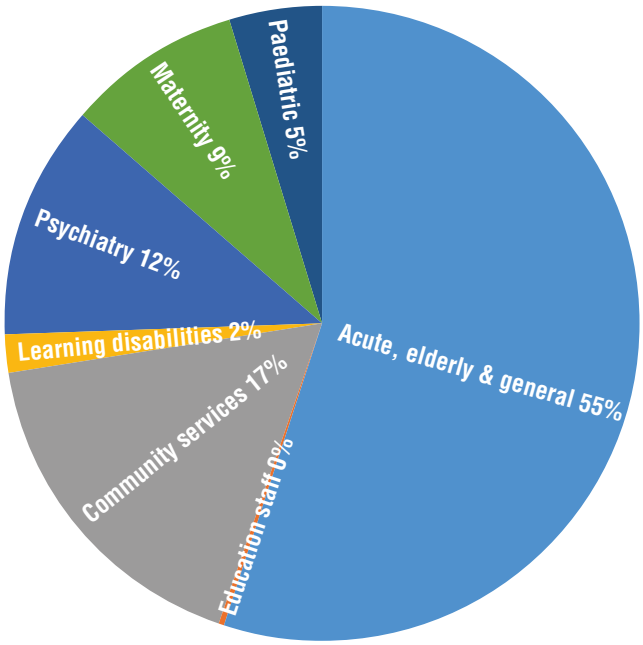


Source: Ball & Pike, 2015

Within the UK, people are choosing to go into nursing later in life, which has also contributed to the changing demographic profile and ageing of the nursing workforce. The average age of qualification for those training in the 1970s was 21, compared to 29 for those qualifying since 2000. This has a disproportionate effect on the workforce of different fields of nursing – community-based nurses are typically older than those working within hospitals, thus larger numbers of district nurses and health visitors are reaching or nearing retirement age.

Figure 2.2 shows how nurses are distributed across different settings within the NHS. More than half (55%) work in general acute care. Despite twenty years of national policy to move more care away from hospitals closer to patients through the provision of more community care, the proportion of nurses working in the community relative to those working in hospitals has remained virtually unchanged.

Figure 2.2 *Where registered nursing staff work within the NHS*



Source: Department of Health, Sept 2010 (based on headcount of all qualified nurses, midwives and health visiting staff, excluding bank)

2.2.2 Deployment and skill-mix models

The National Institute of Clinical Excellence endorsed the Safer Nursing Care Tool in its guidelines in 2014 and since then NHS Improvement has produced a safe and sustainable staffing resource (NHS Improvement, 2018b). Nurse staffing levels are now systematically reviewed relative to workloads, but the 'establishments' set tend to be 'historical'. Perhaps unsurprisingly then, staffing levels and caseloads vary considerably in different parts of the NHS, and even within the same organization. The RN4Cast survey of nurses (covering 31 acute Trusts in England in 2010) found that medical/surgical ward staffing varied from an average of 5.2 patients per registered nurse (on a day shift) in one Trust to as many as 10.9 patients per registered nurse in another. Similarly, the average proportion of registered nurses on duty ranged between Trusts from 43% to 68%.

Nurse staffing levels have become an issue of increasing concern. Inquiries into notorious cases of care failure in the NHS have repeatedly identified inadequate nurse staffing as a key factor. And there were a number of reports in 2011 where standards of nursing care had been found wanting. All of this adds to mounting public pressure to have greater guarantees that both the quantity and quality of nursing on offer in NHS hospitals is sufficient to meet patient needs with dignity and respect. At the start of 2012 the Prime Minister responded to this pressure by saying: "If we want dignity and respect, we need to focus on nurses and the care they deliver. Somewhere in the last decade the health system has conspired to undermine one of this country's greatest professions." He set out a number of nursing initiatives to be promoted nationally (such as intentional rounding and promoting nurse leadership).

Health services in England are being asked to demonstrate the quality of their services, through an assessment against a growing number of performance indicators and outcome measures. Despite this increased focus on making the quality of the NHS more explicit, and political rhetoric to reassure the public that nursing is being taken in hand, none of the data collected relates to nurse staffing. Adequate staffing is one of the six key standards which all health service providers must demonstrate they meet in order to be registered as a provider with the Care Quality Commission. Yet there are no standardized data reported on nurse-to-patient staffing ratios or skill-mix (most typically in the UK taken to mean the percentage of registered nursing staff among all nursing staff).

RN4Cast nurse survey responses to items on the practice environment scale exemplify how nurses on wards are faced with the challenge of meeting quality goals with constrained resources. Nearly all respondents in England (94%) agreed that 'high standards of care are expected by management', yet the lowest level of agreement was recorded against statements on the adequacy of staffing. For example, 24% said there 'were enough staff to get the work done' and only 27% said there 'were enough registered nurses to provide quality care'.

Nurse staffing levels are not currently mandated in England, but are the subject of legislation in Wales and there are planned mandatory levels in Scotland. In the wake of the Francis Inquiry the National Institute of Clinical Excellence was asked to produce evidence-based guidelines on safe staffing for the NHS. It produced two guidelines, one each in acute adult care and maternity. This programme of work was suspended in mid-2015. Work began on mental health and community settings and has been remitted to other parts of the NHS, though safe staffing guidelines in acute and maternity settings remain in place (National Institute of Clinical Excellence, 2014; 2015). To date, the staffing policy in acute care has been retained but no further work by the National Institute of Clinical Excellence has been commissioned in this area. At the time of writing guidance from NHS Improvement based on a calculus of care hours per patient day has been introduced into acute settings but as yet no clear evaluation of its effectiveness has been undertaken (NHS Improvement, 2018b). This improvement resource

is being extended to emergency care and other areas such as neonatal intensive care and paediatrics, mental health and learning disability. There are signs that the policy response to staffing crisis is a dilution of skill mix with the introduction of the new nursing associate role (Department of Health, 2017) rather than strengthening the ranks of the RN workforce.

2.2.3 Career structures

As nursing education in the UK was hospital-based, nurses' careers were also 'bound' to particular hospitals with the knowledge and skills nurses gained not being easily transferable to other types of patients or organizational contexts (Philippou, 2011). However, with the move of nursing to higher education institutions and a more generalizable training that would prepare nurses to work with a wide range of patients both inside and outside hospitals, newer models of nursing were created, breaking the monopolistic control of hospitals over the career prospects of nurses (Philippou, 2011).

The hospital as an organization offered a linear career model and the use of clinical grading systems was the most common structure signifying nurses' career path and pay progression, both in the UK as well as other international health care systems (Philippou, 2015; Buchan, 1999). In the UK career progression in nursing has been 'bureaucratic' in nature, usually developed within one organization, typified as a linear advancement from staff nurse to ward sister or charge nurse and then, for a few, a move into management, based mainly on the experience practitioners gained in clinical practice (Philippou, 2011; Robinson & Murrells, 1998).

Career paths are inevitably shaped by a host of factors, some relating to the type of roles and posts that exist and others relating to opportunities to progress. Hence career paths are affected by: the wider economic climate, the nursing labour market, the value placed on nursing within society, the accessibility and quality of nurse education (both pre- and post-registration), management and leadership within health services, and a willingness to embrace new ways of doing things through new roles (such as clinical nurse specialists) or different skills (such as prescribing), to name a few.

Within the UK health care system various policies have been proposed and introduced by the Department of Health in order to meet the targets set for the nursing workforce. For example, Working Together, Learning Together (Department of Health, 2001) set out a vision of lifelong learning aiming to extend skills in order to meet patients' requirements, improve client care and promote and expand career development opportunities. The Skills Escalator (Department of Health, 2005) was developed as a structure by which the NHS enables staff to acquire new skills and invest in professional development. The Skills Escalator encourages staff, through a strategy of lifelong learning, to constantly renew and extend their skills and knowledge, enabling them to move up the escalator. It focuses on skills and competences and the emphasis shifts from the needs of specific professions to the needs of patients and service users (Department of Health, 2005). In this way, health care staff are supported to have careers that are more flexible and satisfying, whilst simultaneously filling skills gaps that develop because of staff turnover and new or increasing demands for a service (Department of Health, 2005).

For nursing in particular, the Modernising Nursing Careers programme (Department of Health, 2006) acted as a policy vehicle to deliver a number of significant work streams for the development and future direction of nursing. The programme had four overarching aims: to develop a competent and flexible workforce, update career pathways and career choices, prepare nurses to lead, and modernize the image of nursing. It sought to do this through five main areas of work:

- the standardization of advanced and specialist roles;
- the development of a fast track scheme for future nurse leaders;
- enabling nurses to lead and coordinate care;
- the development of a careers framework with postgraduate career pathways; and
- a review of the level and content of pre-registration education.

A pathway-based model, which demonstrates the breadth of nursing roles across pathway settings and sectors, has been published as part of this work (Department of Health, 2009). This articulates clearly how nurses can progress both up through a speciality and across specialties following preceptorship, by engaging with continuous professional and personal development and through the acquisition of additional knowledge skills and competencies (Department of Health, 2009).

The shifting political landscape, however, meant that the outputs of this policy did not come to fruition and it fell short of full implementation in meeting its potential (Rafferty, Xyrichis & Caldwell, 2015). The Shape of Caring Review (Health Education England,

2015a) has taken forward some of the ideas of this work that still need to be addressed. The need to modernize and create career frameworks fit for today's nurses and health care landscapes are increasingly important with evidence in the UK indicating that the desire to establish a satisfactory career was the second most commonly reported reason for nurses wanting to leave the profession, after the desire for a better-paid job (Philippou, 2015).

2.2.4 Planning mechanisms

Prior to the Health and Social Care Act 2012, the Secretary of State's education and training functions were largely delegated to 10 strategic health authorities (Ham et al., 2015). Funding arrangements were based on historical flows rather than actual costs of provision or consideration of future workforce configurations. At strategic health authority level the workforce budget was not ring-fenced and there was a widespread view that the training budget was often used for other purposes (Ham et al., 2015). Moreover, there were concerns that the way in which funding was allocated was not thought to support the best outcomes and there were disparities between funding levels for medical and nursing education (Willis Commission, 2012; Ham et al., 2015). The Act abolished strategic health authorities and established Health Education England, which currently holds responsibility for education and training in the NHS in England across the health professions. The revised structure comprised a national board and 13 regional local education and training boards. This structure was designed to allow workforce planning and commissioning on a national scale while being responsive to local needs and changing workforce requirements (Ham et al., 2015). The local education and training boards took on the responsibility for commissioning education and training places and acted as a forum for developing the whole health and public health workforce. They also identified and agreed local priorities for education and training, and allocated a minimum percentage of funding for continuing professional development with employers providing an account of how CPD funding was to be spent.

Health Education England had an annual, ring-fenced training budget of £5 billion (Ham et al., 2015). Contracts were set on numbers of student places and agreed between regions and higher education institutes. Health Education England was the single accountable organization that led and coordinated investment in the development of the health and public health workforce (Health Education England, 2015b:4), and it relaunched its strategy across health and social care in December 2017 (Health Education England, 2017).

In 2007 Buchan commented that "in the space of eighteen years, between 1989 and 2007, no single system for NHS workforce planning in England survived for more than a few years before being replaced as a result of broader reorganisation or specific redesign".

The 2007 Health Select Committee workforce planning report described the inadequacy of workforce planning in the health service in England. With 70% of NHS funding spent on NHS staffing, the point is made that the effectiveness of its workforce in large part determines the effectiveness of the health service. However, the committee considered that there had been "a disastrous failure of workforce planning" in England. More recently, in 2018 the Health Committee undertook an Inquiry into the Nursing Workforce and diagnosed many reasons for the shortfall in staff, including workload pressures, the reduction in recruits occasioned by the removal of the bursary for new recruits, cuts to CPD, the uncertainty surrounding Brexit, and the sense of generally not being valued. It has called upon the government to expand the nursing workforce at scale and pace (House of Commons Health Committee, 2018) and will review the position in 2019.

Grave concerns have been expressed about the impact that funding constraints will have on the UK nursing labour market. For example, at the end of 2011 the effect of the economic 'squeeze' on nursing was evidenced through a two-year pay freeze for those earning more than £21 000, reduced pensions for increased contributions, reduction (estimated at 10%) in pre-registration nurse training places, and higher education cuts that will impact on capacity.

More recently, at the time of writing the Royal College of Nursing labour market survey in 2017 has warned of the danger that new roles, degree-based apprenticeships and the introduction of a second level role, the nursing associate, will distract attention away from the need to invest in the current workforce and provide the support needed to enable it to perform optimally (Royal College of Nursing, 2017).

2.2.5 Mobility

Nine out of ten nurses in the UK are female, most are in their 40s and about half have children living at home. Between the late 1990s and 2005 England relied heavily on recruiting nurses from abroad to increase its

nursing workforce, and 10% of nurses working in the UK first qualified as a nurse in another country. This has impacted on the ethnic profile – the proportion of nurses from black and minority ethnic backgrounds doubled between 2002 and 2009 from 6% to 13% and increased again post Francis. Nursing has been designated in 2015 as a skill-shortage occupation with a ruling to enable foreign nurses to stay and potentially prioritized beyond an interim period (NHS Employers, 2017).

In 2014 there were 86 668 foreign-trained nurses in the UK, equalling approximately 13% of the total nursing population (n=683 625), with an annual inflow of 7 794 foreign-trained nurses. The UK has the highest number of foreign-trained nurses among OECD countries. The UK has a long history of employing internationally qualified health care professionals to help sustain the NHS workforce (Aiken & Buchan, 2004; Buchan & Rafferty, 2004). There were many campaigns concerning the international requirements for health care staff, with the first example taking place as early as the 1950s and 1960s (Buchan & Rafferty, 2004). In the 1990s under the Labour government there was also a major campaign with incentives to boost NHS staffing levels at a rate that could not be achieved via UK-based routes alone (Buchan & Rafferty, 2004). With the publication of the NHS Plan in 2000 (Department of Health, 2000) targets were increased further with highly ambitious health workforce expansion targets (7 500 more consultants, 2 000 more GPs, 20 000 extra nurses and 6 500 allied health professionals (AHPs) by 2004). The year 2017 was significant as a turning-point in more nurses leaving rather than joining the register, driven by the combined effect of the departure of EEA nurses following the UK vote to leave the European Union, the ageing workforce, pay and workload pressures, and former restrictions on the number of nurses being educated (Royal College of Nursing, 2017:4).

2.3 Structure of nurses' work

2.3.1 Working conditions

The majority of NHS employers adhere to nationally set terms and conditions and pay their staff according to the Department of Health system, 'Agenda for Change'. Whilst in principle there is scope to move away from the nationally agreed framework and set terms and conditions locally, few NHS trusts have done so, although this may change as more Foundation Trusts are established.

In the past hospital ward staffing was organized to cover three shifts: early, late and night. But 12-hour shifts have become more common, to the point of becoming the norm. There are concerns about the possible negative effect 12-hour shifts may have on performance levels, and the removal of the shift overlap which allowed for more face-to-face staff communication and easier cover for staff training. Staff working 12-hour shifts are more likely to be happy with their working hours than those on 8-hour shifts (Ball et al., 2017) .

The NHS pay system has traditionally been based on nationally agreed terms and conditions, which were renegotiated through pay bargaining bodies, each involving multiple staff associations/trade unions covering different staff groups. Pressure to overhaul the pay system had been growing since the 1970s. By the mid-1990s many regarded the system as outdated and inflexible and saw it as hampering service improvement by obstructing role development and failing to reward experience adequately. It also left the service open to equality challenges on the basis of equal pay for work of equal value.

The introduction of greater employer freedoms granted to self-governing Trusts in the early 1990s allowed pay to be determined locally. But few Trusts took full advantage of this freedom. Those that did typically adapted some elements of the national system (referred to as 'Whitley'), whilst retaining the overall structure (these systems were referred to as 'shadow Whitley').

The election of a Labour government in May 1997 raised the prospect of a new NHS pay system. *Agenda for Change – Modernising the NHS Pay System* (Department of Health, 1999) was the largest-ever attempt to introduce a new pay system in the public services. It covered more than a million staff, and approximately 400 000 nursing staff. Its objectives were to improve the delivery of patient care as well as improving staff recruitment, retention and motivation.

In 2006 data from the Labour Force Survey suggested that nurses and midwives were paid unfavourably relative to teachers, with gross earnings 20% lower than primary teachers and 24% lower than secondary teachers (Pike & Williams, 2006). Recent analysis of the supply of nurses and its responsiveness to nurses' pay suggests that it is a valid mechanism but it varies regionally and is reliant on a series of factors related to the elasticity of the labour market. In London it has greater capacity to boost supply compared with other parts of the country (Crawford, Disney & Emmerson, 2015). Other cost-effective ways

of boosting employment may include greater flexibility over hours worked, measures to reduce the difficulty and stress of the job, and ways in which nurses are managed, e.g. with respect to career progression.

2.3.2 Governance and leadership

When hospitals became self-governing Trusts following legislation in 1990, they were required to have a nurse director as one of the five executive Trust board positions. But ever since the role's inception, there has been tension regarding the extent to which the executive director of nursing has an operational or strategic role: whether they directly manage nursing services, or provide professional leadership to nurses within the organization, or both.

Board composition and management structures vary considerably between Trusts. Each typically has a Director of Nursing, but titles vary hugely, and sometimes do not refer to nursing but are more general references to quality or patient care. Most also have an assistant Director of Nursing. Below this level nursing is led (although not necessarily managed) by a lead nurse for each division/directorate, who is often supported by a number of 'matrons' covering a subgroup of clinical units (e.g. wards).

The average ward has 28–30 beds and is managed by a ward sister or charge nurse, the traditional terms referring to female and male ward leaders respectively. The ward sister is seen as the lynchpin in hospital care: setting and maintaining standards, ensuring a culture of learning and development, and managing the contribution not just of the nursing staff employed by the ward but of the wider multidisciplinary team. But the role has changed over time, partly by design but also by default.

In the late 1980s, following recommendations made by Griffiths in 1983, there was a drive towards general rather than professional management in the NHS, and greater devolvement of managerial and financial responsibility. Senior nursing posts nationally, regionally and locally typically became less managerial and more advisory in remit. Ten years later the effects of the Griffiths reforms were still being felt, leaving some "dismayed at the nursing policy and leadership vacuum engendered by general management".

The trend to devolve management levels prompted by Griffiths was reaffirmed by the reforms in 1990. At the ward level this resulted in NHS Trusts using their newly granted freedoms to develop ward manager posts, with greater responsibilities for budget and human resource management. However, there was, and continues to be, little management training offered to ward managers to enable them to fulfil their role. Whilst on the surface this development may have appeared to raise the status of the ward sister, by encompassing more general management, a currency that was highly valued at the time, in recent years the view has been put forward that this may have been at the expense of other more intrinsically essential parts of the role, e.g. as nurse leader, service coordinator and quality arbiter.

Doubts about whether ward sisters have sufficient time to do the job of managing a ward *and* ensuring quality of care effectively have led to calls for ward leadership to be strengthened, so that they are given the skills and time needed to be effective, and a commensurate salary. Economic pressures have further compounded the reshaping of the ward sister role, as sisters find themselves taking on caseloads of patients to cover the gaps caused by staffing shortages. In response to this there has been a campaign to ensure ward sisters are *additional* to the number of direct care nurses required per shift (i.e. 'supervisory').

2.4 Synthesis and policy implications

This case study demonstrates that the size and shape of the nursing workforce is a highly sensitive barometer of changes in the wider health economy. From 1997 there was significant investment in the NHS, of which nursing was a beneficiary. Cuts in 2004–2005 impacted nursing with a 'boom to bust' scenario, the economic downturn reflected in cuts in commissions and therefore new entrants to the labour market. These swings have been complemented by climbing demand and improved productivity in terms of patient length of stay and volume of throughput. Yet the question is whether staffing levels have been able to catch up quickly enough with demand from historical establishments? Workforce planning methods have been heavily criticized by the Health Select Committee Inquiry into Nursing (House of Commons Health Committee, 2018). Data from RN4Cast demonstrate that there is significant variation between Trusts but that medical wards, in particular, have less favourable staffing and burnout and emotional exhaustion levels relative to their European peers. Similarly, efforts to set minimum staffing levels have been resisted by the government and unresolved tensions remain in the regulatory field over support workers and advanced practice and specialist nurses. What this case study illustrates is that policy-makers and managers have significant levers they can pull to improve the work

environment and hence nurse and patient outcomes. Policy-makers can influence the size and shape of the workforce, and managers how the workforce is deployed, managed and supported at a local level. Adequate staffing is an essential precondition for quality of care. But the support system around staffing needs to be robust. The magnet accreditation programme is an internally recognized evidence-based approach to improving the work environment providing significant improvements in the quality of nurse and patient outcomes. Nurses have demonstrated their value in the management and coordination of chronic diseases and advanced practice roles (Delamaire & Lafortune, 2010). Nursing is an important policy intervention in the health system. The economic downturn has paradoxical effects on nursing; on the plus side, austerity measures mean that nursing is seen as a more secure form of employment and attracts a competitive pool of applicants. On the negative side, the downward pressure on numbers being educated alongside an ageing workforce and the retirement bulge means pressure on the current workforce is up. The need to implement policies that will strengthen the resilience of the workforce and support the work environment is greater than ever if the prospect of a "carequake" in the future is to be averted (Prime Minister's Commission, 2010). What this case study demonstrates is that policy-makers have the capacity to pull the levers to secure the supply and shape of the workforce and prioritize quality of care should they decide – and demonstrate the political will – to do so.

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3 Finland

Anneli Ensio, Johanna Lammintakanen, Mikko Härkönen, Juha Kinnunen

3.1 Context-organization of the health system, education and regulation

3.1.1 Finland and its health system

Finland is a Northern European country with a population of 5.5 million (Eurostat, 2017). The administration system of this sovereign republic consists of three levels: state, province and municipality. The Finnish welfare state is characterized by a universal right to social welfare and health care services. Municipalities (n=311) are responsible for providing basic services, including primary education, and social and health services to all their residents. They have a considerable degree of freedom to plan and organize the services within the limits of legislation and can provide the services either themselves (including federations of municipalities) or purchase the services from the private or third sector (non-profit associations). Twenty hospital districts are responsible for the provision of municipal secondary care services. Each municipality must be a member of one hospital district. Hospital districts are financed and managed by the member municipalities. Each hospital district is part of one of five university hospital catchment areas (target population of about one million) (Ministry of Social Affairs and Health, 2018a).

The health and social welfare services are mainly publicly funded (75.1% in 2016). Municipalities have a right to levy taxes in order to finance these services. National Health Insurance financing is based on compulsory insurance fees. Also state subsidies cover part of the funding. Approximately 20% of the funding comes from

user-fees. Health expenditure has increased throughout the whole 2000s. Between 2000 and 2010 health spending in Finland increased, in real terms, at a rate of over 4% per year on average. Health care spending totals 9.3% of gross domestic product, or US$4 033 per capita (OECD, 2017a; THL, 2018).

3.1.2 Regulation and legislation of the nursing profession

The Act on health care professionals (Act 559/1994) requires that nurses must have a valid qualification from a university of applied sciences and must be registered by the National Supervisory Authority for Welfare and Health (Valvira), which keeps the register of health care personnel. The register holds three categories of nurses: general nurse (RN), public health nurse and midwife (Nursing in Finland, 2014). According to the Health Care Professionals Act a health care professional is an individual who has been given the right to practise a profession (*licensed professional*) or the authorization to practise a profession (*authorised professional*) and a person who, on the basis of this Act, is entitled to use the occupational title of a health care professional as laid down by government decree (*professional with a protected occupational title*). A licensed or authorized professional or a professional with a protected occupational title is entitled to practise the profession in question and to use the related occupational title. The profession with a protected occupational title can also be practised by other persons with adequate training, experience and professional skills and knowledge (Ministry of Social Affairs and Health, 2018a.)

3.1.3 Nurse education

3.1.3.1 *Pre-registration nursing education*

A dual model has been adopted in higher education. The system comprises both universities and universities of applied sciences. The universities emphasize scientific research and research-based education. The education in universities of applied sciences is more practical-oriented in response to the needs of working life. Higher education degrees include bachelor, master's and postgraduate degrees (Licentiate[1] and PhD) at universities (e.g. in health sciences or nursing sciences). At universities of applied sciences the degrees are: university of applied sciences degrees (e.g. registered nurses, midwives) and university of applied sciences master's degrees. No tuition fees are charged in either type of university. With the exception of university of applied science degrees, students in the health care field are mainly part-time students who combine their studies with family and job duties. The employers usually support the students by enhancing flexibility in work time scheduling (Education System in Finland, 2018).

In universities of applied sciences there are three different pathways to becoming a qualified nurse. The three streams all include three-and-a-half years (210 ECTS credits) of study in basic education in nursing to fulfil the criteria set in EU Directive 2013/55/EU. At the start, the student can choose basic studies for a degree in nursing (bachelor degree in nursing, Registered Nurse) and can include in the curriculum additional extended courses for the degree of public health nurse (four years/240 ECTS credits) or midwife (four-and-a-half years/270 ECTS credits). Both public health nurses and midwives are entitled to use the title of registered nurse too, and can thus work as registered nurses. The majority of health care professionals working in the health care sector are employed in public health services, operated by municipalities (health centres and hospital districts). Registered nurses tend to work mostly in hospitals, whereas registered public health nurses tend to work in community health centres and schools (Nursing in Finland, 2014; OKM, 2006).

The practical nurse is a lower level nurse who can work autonomously only within a circumscribed set of tasks. The practical nurse degree is an upper secondary education degree (180 ECTS credits, including 50 ECTS credits training), which can be completed at vocational institutions, through apprenticeship training or as competence-based qualifications. The vocational qualification in social and health care can be taken in two to four years depending on the student's background. Practical nurses can specialize, for example in nursing and care, emergency care, rehabilitation or care of the elderly. Practical nurses work with people of different ages. In nursing their duties may include promoting the client's health, ability to function and well-being. They plan, implement and assess the level of care and take care of the patients as part of multi-professional teams and networks (Finnish National Board of Education, 2011; Finnish Education in a Nutshell 2012; Finnish VET in a Nutshell, 2015). The vocational qualification of practical nurses is planned together with the National Board of Education and employers (OKM, 2006).

1 In the Finnish education system there exist two scientific or artistic postgraduate degrees, namely Licenciate and Doctorate. According to ISCED – classification 2011, Licenciate degrees are classified as Doctoral or equivalent degrees. In some fields the degree programme leads to the degree of Licentiate (e.g. in Medicine). However, within nursing and other health sciences, Licenciate is a higher level degree than the master's level degree (Finnish Education in a Nutshell, 2012).

According to the Act on health professionals (Act 559/1994), health care professionals are obliged to maintain and develop their professional competence. The Ministry of Social Affairs and Health has recommended three to ten days of formal education in order to meet the requirement of continuing professional development (CPD). In 2011 approximately 76% of health and social care professionals took part in CPD, for an average of 4.3 days. According to the Finnish Nurses Association (FNA) study, 15.2% of nurses reported that they did not participate in formal education at all, and 30% of the respondents had at least five days of formal education in 2015. The FNA would like to see CPD become a requirement for re-evaluation (OKM, 2006; Jackson et al., 2009; Rautiainen & Vallimies-Patomäki, 2014; Hahtela, 2017).

3.1.3.2 *Post-registration nursing education*

The requirement for university of applied sciences master's degree studies is a bachelor level degree in nursing and at least three years of work experience. The university of applied sciences master's degree requires 60–90 ECTS credits and takes one-and-a-half to two years. It has several orientations, such as health promotion, leadership and development in social and health care, rehabilitation, and clinical nursing. Each student has a personal study plan, which facilitates student guidance and the monitoring of progress in studies. Graduates can apply for similar positions as those graduating from universities with a master's degree (Nursing in Finland, 2014).

In 1979 the first university level programme was established in nursing science and health care administration at the University of Kuopio. Five Finnish universities (University of Eastern Finland, Oulu, Tampere, Turku and Vaasa) now offer graduate (bachelor and master's degrees, altogether 300 ECTS credits) and postgraduate (Licentiate, PhD) level education in nursing sciences, two universities offer education in health management sciences (University of Eastern Finland, Oulu), one in health economics (University of Eastern Finland), one in health and human services informatics (University of Eastern Finland) and one in social and health management (University of Vaasa). Nurses (including public health nurses and midwives) have taken advantage of the opportunity to enrol in these programmes. In 2017 altogether 1232 students graduated from the programmes in the field of health and welfare (Official Statistics Finland, 2018). Graduates from master's level programmes have been employed in various positions throughout the health and social services system and the educational system (e.g. first-line nurse managers in primary and secondary care, teachers at universities of applied sciences, various project duties, experts in ministries and other national institutes).

The universities also provide PhD programmes in the above-mentioned fields. The requirements for a PhD degree include theoretical studies (50 ECTS credits) and a PhD thesis with public examination. Professionals holding a PhD have careers such as director of hospital district or chief executive nursing officer, as well as various kinds of positions demanding high level analytical expertise in addition to scientific careers. For example, the formal requirement for principal lecturer in a university of applied sciences is either licentiate or PhD degree (Education System in Finland, 2018).

3.1.3.3 *Enrolees in nursing*

The Education and Research Development Policy steers education and research in Finland. The Education and Research Plan is adopted every four years by the government and it covers all forms of education. The details of higher education provision are agreed with three-year performance agreements with universities (target number of degrees and intakes) and universities of applied sciences (intakes in each field of education), as well as Vocational and Educational Organizations (maximum number of students in different fields) (Järvelin, Rico & Catani, 2002; OKM, 2015a).

Annually, 2 400 new students enrol in nursing (RN) education, of whom 70–80% graduate. During 2014–2015 the Ministry of Education and Culture granted extra funding for increasing the number of new nursing students in universities of applied sciences. Of the 1 493 extra intakes, almost 80% were in social and health care education (OKM, 2014; Eriksson et al., 2015). According to the Education and Research Plan the goal for new entrants in health care education in 2016 is 4 550 at universities of applied sciences and universities (excluding the number of medical students) and a further 7 350 in integrated social and health care education (mainly initial vocational training) (OKM, 2012).

Furthermore, health workforce forecasts have an effect on the numbers of new students. For example, entrants to the fields of social services, health and sports have grown by 7% during 2011–2016 compared to the intake in 2009 (Matrix Insight Ltd, 2012). The most recent anticipation report (OKM, 2015b) stated that the need for new graduates stayed almost at the current level in social and health care education. There is, however, a need to increase VET level education and decrease the number of students at universities of applied sciences. There is also a

need to increase integrated education in social and health care by 22% of the current level. In health care the need for new workforce personnel is increasing. During 2011–2030 the number of needed employees in health care will increase by 30 000. However, it is anticipated that increasing the number of new students in health care is not the only solution. There is also a need to utilize fully the existing workforce and immigrants (OKM, 2015b).

3.2 The Finnish nurse workforce

3.2.1 Composition and configuration

According to OECD (2017b), in Finland in 2014 the number of practising nurses per 1 000 population was 14.6, and the ratio of nurses to physicians was 4.6. Altogether there were 61 207 nurses, 15 560 public health nurses and 3 855 midwives, totalling 80 622, of whom 71 835 worked in health and social services in 2014. The remainder worked in public administration, education or in other fields (Tilastoraportti, 2018). The nursing shortage has been a cyclical phenomenon in Finland; in the 1970s, 1980s and early 1990s there were nursing shortages. However, the early 1990s nursing shortage resulted in unemployment during the economic recession. At that time younger, newly graduated nurses found it especially difficult to obtain permanent nursing positions. Many left nursing for other careers. During the worst year (1996–97), approximately 3 700 new nurses graduated annually, while concurrently there were over 8 500 unemployed nurses (7.5% unemployment rate). The situation improved at the beginning of the 21st century (Santamäki, 2007). In 2014 the unemployment rate of registered nurses was 1.9% (1611 persons). The Ministry of Employment and the Economy considers the nursing shortage a serious problem and a difficult one compared with other work areas. One of the problems with this shortage is that many qualified nurses do not work in nursing; it is estimated that in 2012 4% of qualified nurses were not practising nursing (Ailasmaa, 2015a; Tilastoraportti, 2018).

Most health care personnel are aged between 35 and 49 years. Their mean age increased by five years over the period from 1990 to 2000. Approximately 37% of all employees in health and social care are over 50 years old. However, nurses are the youngest age group, their average age being 43 years (Ailasmaa, 2015a). The differences in mean age between different health care professions are small, but over the next few years large numbers of pharmacists, nurses, dentists and doctors, and especially nurses and doctors in management positions, will be retiring. The rate of retirement is rapidly accelerating at the same time as population ageing is driving up the need for health care and social services.

According to calculations based on the demand for the labour force, it is estimated that by 2025 there will be approximately 235 000 job openings in health and social care of which 67% are due to natural wastage. Although there will be new graduates joining the workforce, estimates show that the actual gap will be at least 20 000 or more, depending on shifts in the status of well-being of the citizens, changes in health care organizations and structures, as well as productivity in health and social care (Koponen, Laiho & Tuomaala, 2012; Ono, Lafortune & Schoenstein, 2013).

Health centres offer a wide variety of services, including preventive, maternity and child health services, general outpatient care, care on inpatient wards (in larger cities these are often classified as GP-run hospitals), oral health care, school health care, occupational health care, care of the elderly, family planning, physiotherapy, laboratory services, and imaging. Many health centres also provide ambulatory psychiatric care. It is estimated that only about 5% of health centre visits lead to specialty care referrals, indicating that the wide scope of expertise in health centres can cope with most health needs. Tasks are often divided among health centre clinicians according to the needs and circumstances of the individual centre and the experience or interest of its staff. Teamwork between doctors, nurses and other professionals has increased in recent decades, which has led to a high degree of 'horizontal integration' or care coordination within health centres. For example, some health centres have assembled multi-professional rehabilitation teams, such as diabetes teams, dedicated primarily or exclusively to care for particular types of medical conditions. Some health centres have also arranged for specialists to perform regular on-site consultations, such as those for a radiologist from the local hospital to interpret patients' x-rays at the centre.

3.2.2 Deployment and skill-mix models

Compared with other health systems, a key distinctive characteristic of Finnish health care is the extensive role played by nursing staff (Koskinen et al., 2006). One of the key measures of nurse staffing is the average patient-to-nurse ratio, i.e. how many patients an individual nurse is expected to care for. The ratios vary depending on the reference. For example, a study by Aiken et al.

(2014) found that the patient-to-nurse ratio in Finland was 7.6 to 1, while in Taina Pitkäaho's (2011) study on three specialized health care organizations the patient-to-nursing-staff ratio varied from 7.3 to 8.5, and the patient-to-registered-nurse ratio varied from 9.6 to 11.

The Finnish initiative on advanced practice roles for nurses started at the beginning of the 21st century when the shortage of physicians became critical and task shifting between physicians and nurses emerged as a major part of the solution. The Ministry of Social Affairs and Health supported this development with national strategies, state grants and legislation. This reconfiguration started in 2002 with the National Project for Securing the Future of Health Care, organized by the Ministry of Social Affairs and Health. One of the subprojects was to develop the division of labour between different personnel groups in health care with a view to securing access to care and the supply of staff, as well as reforming certain operational models. In 2002–2005 the results of this development period were collected and decisions were taken relating to roles and division of labour based on those policies.

The extended task descriptions for nurses and public health nurses covered assessment of the need for care, provision of care and referring to care in case of acute health problems following visits to nurses' reception and in the context of telephone advice, as well as monitoring of long-term patients. In specialized medical care, nurses' job descriptions were extended in outpatient departments for different medical specialties, treatment units, cardiac care units and intensive care. Doctors' tasks were also transferred to physiotherapists and radiographers. In some cases nursing tasks were assigned to practical nurses. These proposals largely legitimized existing practices by making them official. The outcomes of the projects and proposals were used in preparing the national recommendations, developing health care education, and in other preparatory work associated with developing the division of labour (Hukkanen & Vallimies-Patomäki, 2005).

The 'National Development Programme for Social Welfare and Health Care' was adopted by the government to define objectives and main measures for municipal social and health care for 2008–2015. It includes the action plan for: 1) prevention and early intervention; 2) ensuring sufficient staffing levels and strengthening skills; and 3) services functioning as an integral whole/effective models of operation (Ministry of Social Affairs and Health, 2012).

The Ministry of Social Affairs and Health allocated €2.7 million in state grants for the regional implementation of the action plan. Strengthening skills is a high priority for the Finnish Parliament and is thus one of the three development objectives in this plan, which includes the advancement of nursing roles. Some examples of advanced roles for nurses in primary health care are nurse consultation for acute health problems and non-communicable diseases and nurse consultation supported by physician e-consultation. Nurse consultations at outpatient clinics and advanced roles for nurses in operating theatres are examples of advanced nursing roles in specialized medical care. In evaluating this plan, patients felt that access to care and continuity of care had improved. They had received more counselling, which has improved patient education and self-care. The majority of patients perceived task shifting from physicians in a positive way. Only 14% of the patients in hospital care had negative attitudes towards task shifting. Implications for education included strengthening clinical competencies in nursing education and establishing postgraduate studies for specialization (30–60 ECTS credits, e.g. in acute care nursing, mental health, or perioperative nursing) (Rautiainen & Vallimies-Patomäki, 2014). In 2016 the Ministry of Social Affairs and Health proposed 10 specialization areas for clinical nursing in order to strengthen development and implementation of evidence-based nursing practice (Ministry of Social Affairs and Health, 2016). The action model of expertise is found on the Nursing Research Foundation webpage.[2]

Physicians also mainly reported positive experiences, such as having more time for patients. Both physicians and nurses experienced improved multi-professional collaboration. However, physicians felt they had to deal with more demanding cases and that consultations by nurses had increased physician workload in the set-up period, but this decreased as the experience of nurses increased (Hukkanen & Vallimies-Patomäki, 2005; Peltonen, 2009).

The redistribution of tasks was also supported by legislation. Parliament adopted the Decree on Nurse Prescribing in April 2010 (Decree 1088/2010). A national list of medicines and nationally defined postgraduate education are regulated by the Ministry of Social Affairs and Health and the Ministry of Education and Culture, the National Supervisory Authority for Welfare and Health and the regional health authorities. Requirements for nurse prescribing are stipulated as having three years' work experience, plus at least 45 ECTS credits in nurse

2 http://www.hotus.fi/hotus-en/expertise-evidence-based-health-care

prescribing and clinical examination, as well as being authorized by the physician-in-charge of the organization. This authorization allows nurses to prescribe medications from the national formulary for patients. In 2018, 339 nurses have a right to prescribe medicines. The Finnish government proposes extending nurse prescription to cover other work units, such as home care and out-patient clinics in secondary health care at the beginning of October 2018 (Ministry of Social Affairs and Health, 2018b). Other measures include the National Register for Health Care Professionals, development of evidence-based guidelines, a structure for monitoring adverse events and defining requirements for CPD. A national steering group was set up by the Ministry to follow up on this initiative (Rautiainen & Vallimies-Patomäki, 2014; Ministry of Social Affairs and Health, 2012; Sermeus & Bruyneel, 2014; Vesterinen, 2014.)

3.2.3 Career structures

In specialized areas of health care nurses have the option to build a career as advanced practice nurses (APN), such as clinical nurse specialist (CNS) positions, who are independent, experienced practitioners with a university level master's degree. Their tasks and roles are related to patient nursing, organization and scholarship. These roles are new in Finnish health care and therefore no national guidelines yet exist to steer the implementation of these roles (Jokiniemi, 2014). These tasks and roles are currently being further developed.

3.2.4 Planning mechanisms

The Ministry of Social Affairs and Health directs and guides the development of health care in the country. It defines the main domains of social and health policy, prepares and steers their implementation, plans key reforms, and handles the political decision-making process. The Primary Health Care Act (66/1972), the Act on Specialized Medical Care (1062/1989) and the Health Care Act (1326/2010) and their later amendments give a framework to the municipalities to work within for the provision of health services (Vuorenkoski, Mladovsky & Mossialos, 2008; Ministry of Social Affairs and Health, 2018a). Currently the legislation is changing due to the reform.

There is no state level mechanism to directly steer strategic human resources for health geographically or by level of care, except to influence the education of health professionals (see Section 3.1.3.3). However, since the 1991 needs assessment, workforce planning and forecasting have been conducted every four years in the context of overall labour projections. An extensive network of national and regional experts has participated in the comprehensive analysis of long-term labour demands (projection period 2008–25). For example, the Ministry of Education and Culture, the Ministry of Employment and the Economy, the Ministry of Social Affairs and Health, the Ministry of Finance, Statistics Finland, the Government Institute for Economic Research, the Association of Finnish Local and Regional Authorities, among others, have all participated in the analysis. The process has strong political support. As a result of the process the 'Development plan for education and research 2011–2016' was accepted by the government and defined the entrance targets for all educational fields by 2016. New forecasting results have been published in 2015, but the government has not yet made any decisions on the future education policy (OKM, 2012; Ono, Lafortune & Schoenstein, 2013; OKM, 2015b).

The Ministry of Education and Culture is responsible for regulating and supervising the training of health care professionals. Most universities are public corporations under law (558/2009; amended 315/2011). In theory, universities are free to decide on the number of students to be recruited, but in practice the Ministry of Education and Culture and the universities negotiate the budget and the number of students. The universities of applied sciences have a similar negotiation process with the Ministry of Education and Culture.

3.2.5 Mobility

Traditionally there had been little international mobility of health care professionals in Finland. However, over the past 20 years the situation has changed and the number of people of foreign origin with qualifications has increased. Finland now has a mixed mobility profile as the outflows of health professionals have decreased and equilibrated with the inflows. In general, Finland has only minor recruitment activity abroad. At the beginning of 2008 the number of health care personnel born abroad was less than 10 000. In 2014 there were altogether 1 799 physicians of foreign origin (8.6% of all practising physicians), 2 847 nurses, midwives and public health nurses of foreign origin (3.5% of all practising nurses) and approximately 4 000 practical nurses (5.5% of all practical nurses) practising in Finland. Many professionals of foreign origin were also unemployed, retired or not in the labour force (805 qualified nurses) (Ailasmaa, 2015b; Tilastoraportti, 2018). Medical doctors and dentists represent important shares of all new arrivals

to the medical workforce. This signals that the Finnish system could become dependent on the influx of health professionals from abroad.

The majority of foreign health professionals have come from EU countries, especially Estonia and the Russian Federation. Practical nurses come also from Asian and African countries. Foreign nurses migrating to Finland are predominantly female. The average age is 37 years for female nurses and 34 years for male nurses (Ailasmaa, 2015a).

Nurses have migrated from Finland to other Nordic countries such as Norway and Sweden. Medical doctors have migrated to countries such as Sweden and Estonia. In 2015, 717 health professionals emigrated, of whom 272 were nurses. Altogether 7 931 health care professionals of working age resided abroad. A small number of Finnish nurses work abroad (3 500), while only 3% of all working nurses in Finland are foreign persons, so international nurse migration has not cut the current shortage significantly (Ailasmaa, 2015b; Ono, Lafortune & Schoenstein, 2013; Tilastoraportti, 2018).

3.3 Structure of nurses' work

3.3.1 Working conditions

In Finland a large number of organizations collect information about working conditions in health care. The Finnish Medical Association and the Finnish Nurses Association regularly collect data about the well-being of their members. The Finnish Institute of Occupational Health follows working conditions within the professions and compares data between different professions. Furthermore, all hospital districts and health centres collect information and maintain data warehouses of the working conditions in different organizations. The National Institute for Health and Welfare and the Association of Finnish Local and Regional Authorities compare the data at national level and the statistics provide the basis for comparison within the county and internationally.

Generally, working conditions of health care staff, including nurses, have been stable over recent years. Compared with other professions, nurses have been slightly more satisfied with the working conditions. However, a detailed survey indicates that a number of factors produce increasing dissatisfaction in working conditions (Ensio et al., 2016).

The Finnish Nurses Association has conducted a survey on working conditions among its members on four occasions (2010, 2012, 2014 and 2016). The main conclusions in relation to working conditions of the latest survey are: 1) the most important aspects in terms of nurses' well-being at work are the opportunity to provide high-quality care and appropriate working models. In general, nurses are very proud of their profession and they want to deliver good-quality care. 2) They were most critical towards compensation and reward. They perceived that it was not in balance with the demands of the work. 3) The youngest nurses were most critical towards the working conditions, while the oldest age groups were most satisfied. 4) Nurses working in intensive care units were most satisfied, while those working in hospital emergency rooms were the most critical. 5) The results have improved compared to 2014. Nevertheless, there is a need to develop further, e.g. recruitment practices, balancing skill-mix and resources in needs and demands (Finnish Nurses' Association, 2014; Hahtela, 2017).

Finnish RN4CAST Nurse Survey respondents (n=1133) reported that cooperation between doctors and nurses was good, that there is an active development policy for personnel, the level of autonomy is high, an orientation programme is provided for new personnel, and nurses have time to communicate with colleagues. Almost 85% of the respondents would recommend their workplace to another nurse as a good place to work. Three out of four nurses were moderately or very satisfied with their work, but 49% expressed the intention to leave their current job within the next year as a result of job dissatisfaction. Of these, 55% would seek work with an alternative employer, 20% would look for a job outside the hospital, and 25% would leave the profession (Ensio et al., 2016)

In Finland public sector health care staff are salaried and only a few doctors have a separate contract with the organization. The level of salaries and other reward mechanisms are negotiated at the national level by the labour unions and employers. The national agreement is adopted by all public organizations, and salary levels are consistent all over the country in principle. However, it is within the scope of the local authorities to make local agreements governing the conditions of employment (e.g. salaries and working hours) (KT Local government employers, 2018).

3.3.2 Governance and leadership

In Finland the Primary Health Care Act (66/1972) established the general framework for the organization and financing of primary care, giving municipalities responsibility for implementing them at the local level in health care centres. Before this, care was mainly provided by self-employed doctors, most of whom are now employees. The current system is based on health centres which offer a wide range of medical, social and community services to their local population. Their size varies across different geographical areas, with larger centres in urban areas and smaller ones in rural zones. They are staffed by multi-disciplinary teams of GPs, nurses and other health professionals (laboratory assistants, midwives, physiotherapists and sometimes medical specialists: paediatricians, gynaecologists, psychiatrists, etc.) who provide most of their services (Bourgueil, Marek & Mousqués, 2005).

In 2014 Finland had 3.2 physicians per 1 000 population, which is below the OECD average of 3.6. There were 14.6 nurses per 1 000 population in Finland in 2014, which is higher than the OECD average of 8.4. The relatively high density of nurses in Finland has enabled the task shift between doctors and nurses and strengthened the independent role of nurses (OECD, 2017b; Bourgueil, Marek & Mousqués, 2005).

Even though the number of doctors in Finland is close to the European average, the number of patient–doctor appointments in Finland is among the lowest in Europe. This makes it necessary to employ many more nurses, who carry out numerous tasks not done by their colleagues in other countries, particularly in maternal and child health care. Many first contacts in health centres are with nurses, especially public health nurses. They often make the initial health assessment and refer patients if necessary to the GP or hospital. Hence as soon as the patient calls a health centre, it is often a nurse who makes the initial assessment. The nurse assesses the need for care and gives an opinion by telephone if the symptoms are clearly not serious, or makes an appointment if there is any doubt what the problem might be or whether it might be more serious than originally thought. In some cases the nurse may refer the patient directly to hospital. Nurses also have their own consulting hours for procedures such as injections, removing stitches and taking blood pressure. Nurses are also heavily involved in home care, particularly for the elderly. In areas with a particularly low density of doctors, they even carry out certain procedures, e.g. diagnosing acute respiratory infections, suturing minor wounds, making laboratory tests or controlling some chronic diseases (Bourgueil, Marek & Mousqués, 2005; Statistical Yearbook on Social Welfare and Health Care, 2012).

3.4 Synthesis and policy implications

Overall, the challenges of the health care system in Finland are rather similar to those in other parts of Europe; older populations coexist with increasing expectation of population, difficulties in adopting effective cost control and shortages of staff. So far the Finnish health care system has been publicly run and financed, in which process the role of local municipalities has been crucial. However, steering the health system is becoming more difficult. There have been attempts to reform the structures of the health and social service system but so far the structural reforms have not succeeded. Health and social services will be integrated on all levels, which also changes the competence requirements of all health and social care professionals. The majority of the Finnish population have access to the internet and health topics are the most popular areas of interest. Increasing information and knowledge about opportunities in diagnostics and treatments increases population awareness about health. It will influence population health in a positive direction, but put enormous pressure on health care services as well.

In addition, patients' freedom of choice was expanded at the beginning of 2014. Citizens can select any health unit in the country as their preferred provider, as well as selecting any hospital for specialized health treatments. Quality of care may become one of the factors affecting decisions.

A crucial question for the Finnish health care system is how to manage the health workforce in the future. The national system of workforce planning and forecasting is comprehensive and well- adapted to its purpose (see Ono, Lafortune & Schoenstein, 2013; Matrix Insight Ltd, 2012). But there are still questions related to the current workforce, for example how to retain them in their current positions, organizations or in the health care sector in general, and how to organize their work and the balance in the division of labour between different professions? There are some specialties in the hospital sector which are suffering from a lack of physicians, such as inpatient psychiatric care. Primary health centres, particularly in rural areas, are struggling due to a shortage of GPs and dentists. One of the solutions has been advancing the roles of nurses in order to cope with the shortages (Vesterinen, 2014).

Another solution is to emphasize the role of leadership and management and develop management in health care. One subproject of the National Development Programme for Social Welfare and Health Care 2012–2015 by the Ministry of Social Affairs and Health is oriented towards "support[ing] the restructuring of services and well-being at work by means of management". The subproject includes targeting staff members from different generations and exploring how their different needs should be taken into consideration in management and leadership. Furthermore, the staff members' job satisfaction needs to be improved. All these requirements stretch and challenge the managerial competences of all managers working in health care organizations.

There will be a predicted shortage of nurses in 2025. Nurse migration may not solve the issue, due to for example language barriers. Therefore, increasing the number of students in education, offering adults opportunities for changing from other fields to health care, and taking good care of current employees are important strategies for the future. Additionally, defining a clear division of labour between different professions, supporting citizens to stay at home for as long as possible, using e-health applications, and rethinking current service chains and ways of working may ease the burden and position the health system more positively for the challenges that lie ahead.

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4 Germany

Britta Zander-Jentsch, Franz Wagner, Nargiz Rzayeva, Reinhard Busse

4.1 Context-organization of the health system, education and regulation

4.1.1 Germany and its health system

Germany is a Western European country with a population of 82.5 million (Eurostat, 2017). It is a federal parliamentary republic consisting of 16 states (*Länder*), each of which has a constitution that is consistent with the federal, democratic and social principles embodied in the national constitution, which is known as the Basic Law, or *Grundgesetz* (Busse & Blümel, 2014). A fundamental facet of the German political system – and the health care system in particular – is the sharing of decision-making powers between the states, the federal government and legitimized civil society organizations (Busse & Blümel, 2014). Based on the Bismarck model, the German health care system is built up of statutory health insurance (SHI) funding and a private/public mix of providers. The SHI is part of the social insurance system along with pension insurance, unemployment insurance, occupational accidents and disease insurance and long-term care, all regulated by the Social Code Book (SGB). According to the National Association of Statutory Health Insurance Funds, as of January 2018 there are currently 110 statutory health insurance companies in Germany covering 70 million residents, which is 90% of the population. Federal legislation encourages competition among the sickness funds. At the same time power-making authority within the system of joint government has been transferred, and thus centralized, to institutions located at the federal level as a way to ensure uniform standards; exam-

ples include the above-mentioned National Association of Statutory Health Insurance Funds and the Federal Joint Committee. Health care spending totals 11.3% of gross domestic product, or US$5 551 per capita (OECD, 2017).

4.1.2 Regulation and legislation of the nursing profession

Nursing regulation and legislation are provided for by the Nursing Act, which came into force in 2004 and gives specific information about the permission to hold the occupational titles general nurse and paediatric nurse. Additionally, it provides information about the certification and licensing of nurses, theoretical and practical training in qualified hospitals, as well as admission criteria and acknowledgement of equivalence training in EU countries. Regulation of geriatric nurses is provided for by the Geriatric Nursing Act, which came into force in 2003 and regulates permission to hold the occupational title as well as education in geriatric nursing. In July 2017 the Nursing Professions Reform Act set the foundation for a sustainable and high-quality nurse education.

There is no obligatory registration and no joint nursing chamber in Germany. However, in 2003 the DBfK launched a voluntary registration project (*RbP – Registrierung beruflich Pflegender GmbH*) in Germany. The project has been under the sponsorship of the German Nursing Council since 2006. The aim of this project is to ease the documentary process of further and advanced training and thus to establish quality standards, to evaluate and strengthen the profession and its self-image, to better deal with public health issues and to promote self-regulation. As of 2017 three states have established nursing chambers; another four are in the process of implementing nursing chambers.

4.1.3 Nurse education

4.1.3.1 *Pre-registration nursing education*

Until 2017 basic nursing training was organized in three branches: for general nurses, paediatric nurses and geriatric nurses. Legislation for entry into the profession is based on federal law. The duration of these programmes has been three years (full-time) or five years (part-time) and applicants are required to have completed secondary school (10th grade). Students are expected to complete 2 100 hours of theoretical and practical training and 2 500 hours of practical on-the-job training. Upon completion, the students take state examinations. As part of the new Nurse Professions Reform Act, the new nursing education programme will be implemented in 2020. Elements of the programme include that nurse education for general and paediatric nurses, as well as for geriatric nurses, will be merged into only one regulating Act instead of two. Furthermore, within the first two years of training all nurse students will receive common interdisciplinary training and may select their specialization in the practical parts of the training. Students continuing interdisciplinary training also in their third training year will receive the professional qualification 'Pflegefachfrau' and 'Pflegefachmann', which corresponds to a graduate general nurse. This qualification is entitled to be automatically recognized by other EU states according to EU Directive 2005/36/EC. Furthermore, students may have the option to obtain their professional qualification in elderly or paediatric care. Another novelty of the German nursing educational system is the establishment of university level education as a second pathway into the profession in addition to conventional nurse training.

Nursing schools are usually associated with hospitals and located at hospital campuses. The theoretical and practical training is usually given in schools as a class. Practical on-the-job training takes place in hospitals in various types of hospital ward. Nursing schools are characterized by heterogeneity. Nurse assistants are supposed to help general and paediatric nurses provide basic care for patients in hospitals. The education programme takes one year (full-time) and aims to provide knowledge, skills and capabilities to be able to fulfil tasks such as washing and dressing patients, helping people to mobilize, monitoring, feeding, etc. The students are expected to complete 500 hours of theoretical and 1 100 hours of practical on-the-job training. The total number of nurse assistants in hospitals is small. In 2015, 53 000 nurse assistants worked in hospitals, compared to 377 000 graduate nurses (Statistisches Bundesamt, 2017b).

Education for general and paediatric nurses is free of charge to students. Admission and examination fees may, however, apply. For the theoretical parts of the curriculum fees for learning materials may be charged (e.g. literature). Nursing students receive remuneration. The exact amount depends on the type of employer. In public health care institutions students receive monthly €1 041 in the first training year, €1 102 in the second, and €1 203 in the third (Bundesagentur für Arbeit, 2018). Geriatric nursing education in some states requires tuition fees. In the light of the Nurse Professions Reform Act 2017, however, nurse training will be free of charge. Responsibility for financing nursing schools used to be

Table 4.1 *Number of nurses graduating from German health care schools between 1999 and 2016*

	1999/ 2000	2004/05	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	1999–2016 (%)
Geriatric Nurses	2 935	3 508	5 020	5 154	6 777	7 760	7 570	8 281	9 540	+225
Paediatric Nurses	2 035	1 845	1 759	1 772	–	1 902	1 815	1 711	1 882	-8
General Nurses	16 143	14 543	14 505	13 806	17 263	15 598	15 297	15 117	15 195	-6
Total	**21 113**	**19 896**	**21 284**	**20 732**	**24 040**	**25 260**	**24 682**	**25 109**	**26 617**	**+26**

Source: Statistisches Bundesamt, 2017b

the state governments', but shifted largely to sickness funds in 2000 supported through an 'apprenticeship surcharge' (Busse & Blümel, 2014). More recently there has been a trend towards academic education of nurses in Germany in order to align to European standards. Using model clauses in the Act of Nursing and following the Bologna Process, there were 22 universities in 2010 that offered nursing studies programmes of four to five years' duration. In 2016 the number of universities offering such programmes had increased to 78 (www.pflegestudium.de). In addition to the professional title, students earn a bachelor degree (Stöcker & Reinhart, 2012).

In outpatient care, medical assistants support physicians in the investigation, treatment (such as preparing injections, putting on bandages or taking blood samples), care and counselling of patients and carry out organizational and administrative work. They also operate medical devices, do laboratory work and play an important role when it comes to prevention and providing patients with information on medical check-ups, follow-ups and healthy lifestyles. They work primarily in medical practices of all disciplines and other institutions and health care organizations. Training for medical assistants takes place in vocational schools and the practical training in hospitals or medical practices.

4.1.3.2 *Post-registration nursing education*

Specialization in nursing is provided for in a limited range of areas (e.g. intensive care, anaesthesia care, psychiatric care). Education for speciality nursing is usually regulated by the states and in most cases is organized as two-year part-time programmes with 720–1 000 hours' theory. There are also university graduate courses in nursing science, nursing education, nursing management and economics that have been offered for more than 30 years. These allow nurses to obtain an academic qualification which enables them to work in nursing research institutions, nursing administration or nursing education institutions (e.g. nursing schools).

4.1.3.3 *Enrolees in nursing*

The total number of nurses who graduated between 2000 and 2015 has increased by 25.4%, with 17.3% of the growth taking place in the years between 2010 and 2015 (OECD, 2017). Significant changes can, however, be observed for specific subcategories. In the past decade the number of geriatric nurses who have graduated has increased by 225%, whereas the numbers of general and paediatric nurses have decreased by 6% and 8% respectively.

4.2 The German nurse workforce

4.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 13.3, and the ratio of nurses to physicians was 3.2. The total number of practising nurses was estimated at 1.09 million.

According to the Federal Statistical Office, the number of persons working in the German health care sector reached 5.5 million in 2016. Thus the size of the health care workforce has been expanding steadily since 2000 with an increase of over 36%. Of all those working in the health care sector in 2016, 49% worked full-time, amounting to 3.9 million full-time equivalents. Furthermore, in 2016 the hospitals' workforce amounted to about 1.2 million people and 857 000 of these were women (Statistisches Bundesamt, 2017b). A further 121 000 people worked in inpatient institutions for prevention and rehabilitation. Nurses and nurse assistants (nurses with three-year and one-year education providing direct patient care; excluded are midwives and geriatric nurses), with a total of 829 000, are by far the largest occupational group among health service professionals in Germany.

Table 4.2 outlines trends in human resources since 2000 according to WHO data (which is used for

Table 4.2 *The German health care workforce 2000–2013*

	2000	2005	2010	2013
Physicians per 100 000	326	341	373	405
Number of physicians, medical group of specialties	55 794	61 947	69 364	75 653
Number of physicians, surgical group of specialties	51 124	57 643	63 880	69 084
Number of physicians, obstetric & gynaecological group of specialties	14 556	15 251	15 888	16 522
Number of physicians, paediatric specialties	9 142	9 338	9 466	9 983
% of physicians working in hospitals	49	50	52	53
General practitioners per 100 000	66	67	66	67
Dentists per 100 000	73	76	79	83
Pharmacists per 100 000	58	58	62	64
Nurses per 100 000	1 070	1 142	1 239	1 319
% of nurses working in hospitals	61	56	54	54
Midwives per 100 000	17	19	23	24

Source: WHO Regional Office for Europe, 2014

better comparability). When analysing health care personnel figures from 2000 to 2013, several trends can be observed. The total number of physicians across all sectors has increased by 24%, while the number of general practitioners has remained almost unchanged. In particular, the number of surgeons and non-surgical physicians increased by about 35%. The number of pharmacists has also increased by 10% in the same time period and the number of dentists by 14%. Similar trends can be observed in the number of nurses (nurses with three-year and one-year education providing direct patient care; excluded are midwives and geriatric nurses) across sectors, which has increased by 23%.

According to the Federal Statistical Office, the distribution of the nurse workforce between sectors is uneven (Table 4.3). In 2015, 542 000 nurses were employed in inpatient and semi-residential care settings (FTE: 410 000) and 150 000 in the ambulatory sector (mainly in ambulatory long-term care). In ambulatory care which is provided by physician offices a different type of nursing staff is employed, namely medical assistants (as described above). Of those, 358 000 medical assistants worked in ambulatory care settings compared to only 43 000 that were employed in hospitals in 2015 (Statistisches Bundesamt, 2017b).

Significant demographic change can be observed when comparing the number of nurses across sectors in different age groups (Table 4.4). Although the German Federal Office of Statistics had been using different age groups until 2010, Table 4.4 demonstrates that the group of nurses below the ages of 35 and 30 years has been steadily decreasing since 2000, whereas the group of nurses aged 50 years and more have more than doubled.

From 1995 to 2015 the number of beds in acute and psychiatric hospitals decreased, as did the average length of stay, while more patients were admitted (Table 4.5). As a result, fewer inpatient days were observed. As the number of physicians increased, their ratio to both

Table 4.3 *Health care personnel according to occupation and sector in 2015 (per 1000)*

	Medical assistants	Specialist Nurses	General and Paediatric Nurses (including nurse assistants)	Physicians
Inpatient care settings (persons)	43	52	542	184
(FTE)	32	41	410	163
Ambulatory care settings (persons)	358	16	150	150
(FTE)	238	11	101	135
Total (persons)	**421**	**78**	**829**	**370**
Total (FTE)	**282**	**59**	**600**	**327**

Source: Statistisches Bundesamt, 2017b.

Table 4.4 *Number of general and paediatric nurses (including nurse assistants) in all sectors by age (in 1000s)*

	2000	2005	2010		2016
All age groups	718	763	827	**All age groups**	829
Under 35	303	263	261	**Under 30**	171
35–50	321	369	366	**30–40**	170
50 and older	93	131	200	**40–50**	205
				50–60	226
				50–60	56

Source: Statistisches Bundesamt, 2017b

admissions as well as inpatient days improved. The number of nurses in hospitals slightly decreased, which led to more admissions but fewer patient days per FTE nurse. Furthermore, the nurse-to-physician ratio (FTE) decreased by 38% to only 2.1 nurses per physician in 2015.

4.2.2 Deployment and skill-mix

According to the nurses' feedback from the RN4CAST survey, 89.4% of the nurses were females and 10.6% were males. In terms of their working conditions, 66% of nurses were employed full-time and 44% part-time. The average duration of employment as a registered nurse was 16.5 years, of which the average of 13.4 years was spent in their current hospital. The average number of hours worked on their last shift was 8.3 hours. However, 36.4% of nurses stated that they worked beyond their contracted hours on their last shift. The patient-to-nurse ratio in the analysed German RN4Cast hospitals showed an average of 10:1. Thus Germany, along with Spain (10:1), shows the worst performance when compared to the international average. In Germany the objective patient-to-nurse ratios correlate with the perceptions of the nurses relative to their staffing situation, as the question whether nurses were confident that staffing is sufficient to provide good quality of care was denied by 82% of the respondents. Focusing on the composition of the hospital nurse population since 1999, it can be observed that the staffing situation in German hospitals has changed. The overall number of nurses in German hospitals has not changed in total numbers, but has decreased in FTE by 9% (Table 4.6). The number of part-time employed nurses in German hospitals has continued to increase over the past two decades, showing an increase of 53% (207 000) in 2014 compared to 135 000 in 1995. Reasons for the increase in part-time work are mostly related to workload or family demands. Based on a head count, there appears to be a higher ratio of nurses to patients in bigger hospitals, since the best staffed hospitals are general hospitals with more than 500 beds, with an average of 33.7 physicians and 81.5 nurses per 100 occupied beds. For hospitals with fewer than 100 beds, the average figures are 13.7 physicians and 66.4 nurses in general (Rechel, Dubois & McKee, 2006).

Table 4.5 *Structural and process parameters in acute and psychiatric hospitals, 1995, 2000, 2010 and 2015*

	1995	2000	2010	2015	Change (%)
Hospital beds (x 1 000)	610	560	503	499	–18
Average length of stay (days)	12	10	8	7	–37
Patient admissions (x 1 000 000)	16	17	18	19	21
Patient days (x 1 000 000)	183	168	142	141	–23
Patient admissions per FTE nurse	45	52	59	60	32
Patient days per FTE nurse	0.52	0.51	0.46	0.44	–15
FTE Nurses (x 1 000)*	351	332	306	321	–9
FTE Physicians (x 1 000)	102	109	135	154	51
Patient admissions per FTE physician	156	159	133	125	–20
Patient days per FTE physician (x 1 000)	1.8	1.54	1.1	0.92	–49
FTE Nurse-to-FTE Physician ratio	3.4 : 1	3.0 : 1	2.3 : 1	2.1 : 1	–38

Source: Statistisches Bundesamt, 2017a. Statistisches Bundesamt, 1997–2017

*including general nurses, paediatric nurses, nurse assistants and other nurses (without/with examination).

Until 2018 German State Regulation specified only general guidelines for hospital staffing. Thus the Hospital Financing Act required only the provision of medical, nursing and midwifery services without any further specification (Simon, 2008). However, due to the poor nurse staffing situation in many hospitals for more than 15 years, in January 2019 minimum staffing regulations were finally implemented for those areas of hospital care in which patients are at high risk, namely intensive care units, geriatrics, cardiology and trauma surgery. Those minimum staffing levels are determined as the maximum number of patients per nurse and are distinguished between day and night shifts.Accordingly, the self-regulatory bodies of hospitals and sickness funds were obliged by law to agree on the minimum levels for nurse staffing by the end of June 2018. In case no agreement could be achieved on minimum levels, the Ministry of Health has to take on this decision by the end of December 2018 (Bundesgesundheitsministerium, 2018). Besides, the Federal Joint Committee (*Gemeinsamer Bundesausschuss*) requires compliance with certain guidelines regarding nursing personnel for a few specific hospital sections, such as neonatology, paediatric oncology, paediatric and paediatric heart surgery sections, as well as for hospital units caring for patients with abdominal aortic aneurysm. According to these guidelines, at least 40% of the nursing staff on the neonatal intensive care units in Level 1 hospitals (perinatal centres for patients at highest risk) should be paediatric nurses with a specialization in paediatric intensive care. An alternative to a completed advanced education qualification would be a minimum of five years' experience in a neonatal intensive care unit. The same requirements apply to nursing staff in paediatrics and paediatric cardiac surgery centres. For neonatal intensive care units of Level 2 hospitals (intermediate care for patients at high risk) and paediatric oncology centres the number of nurses with the above-mentioned qualifications should be at least 30% of the total nursing staff.

4.2.3 Career structures

In spite of a growing trend towards academic education and increasing numbers of 'nursing experts/specialists' functioning as change agents in Germany, actual numbers of advanced nursing practitioners are few (Simon, 2009). In addition, the range of study programmes in nursing has primarily supported careers in areas only indirectly related to patient care, such as management and teaching. However, several hospitals have started to establish new roles for nurses following the idea of advanced nursing practice. Their major limitations are legal constraints which inhibit task shifting.

Triggered by the Expert Council of the Federal Ministry of Health, the Federal Joint Committee presented a guideline to allow models of care where nurses substitute for some of the physician's tasks. In October 2011 the Ministry of Health adopted a guideline for implementation of a task-shifting model for some medical activities and tasks from physicians to qualified nurses. According to the new guideline, qualified nurses are to take over tasks previously reserved for physicians, such as specific infusion therapies, wound care and pain therapy, and care of patients with diabetes mellitus type I and II, hypertension, chronic wounds or dementia (SGB V, §63 (3c)). However, as of 2015 no model project has been implemented, partly due to conflicts of interests between the professions.

4.2.4 Planning mechanisms

The unemployment rate in the nursing profession in Germany has traditionally been low. In 2009 a total of 16 691 persons (in the group of nurses, accident ambulance and midwifery) were unemployed, whereas this figure dropped in 2013 to 12 277 individuals. Legally regulated working times for hospital employees excluding breaks is set to 38.5–40 hours per week by the collective pay agreement (Tarifvertrag) depending on the federal state (Tarifvertrag für den öffentlichen Dienst, 2012a).

Nevertheless, a continuously increasing shortage of nursing personnel in Germany has become one of the main topics of discussion in nursing care and health care in general. The increase in elderly and older people in the community has led to a significant increase in the need for professional care. As such, an increasing demand for nursing personnel in the future seems to be inevitable. In the past, there were some attempts to implement forecasting tools in nursing practice. In addition, the Krankenhausstrukturgesetz that passed in November 2015 has established a nurse staffing development scheme ('Pflegestellen-Förderprogramm'), which – starting in 2016 – allocates €330 million yearly for about 6 350 new posts in nursing plus a 'nursing supplement' of €500 million per year. Furthermore, to employ more nurses on a continuous basis, hospitals have been supported by a so-called nursing surcharge since 2017. Starting in 2019, this nursing surcharge will be supplemented by the means of the above-mentioned staffing development scheme and therefore will grow from €500 million up to €830 million. Hospitals may qualify for this enhanced

surcharge dependent on their nurse staffing to provide an incentive to keep adequate staffing.

According to a discussion paper published by the Federal Statistical Office, in which the authors forecast how personnel demands and job offers in nursing professions will most likely develop within the next 20 years, two possible scenarios were presented. The first assumes that the future number of hospital cases, as well as the number of care-dependent patients, relates only to population growth (the 'status quo' scenario). The second scenario is based on the idea that people, due to increasing life expectancy in the future, will have delayed health problems and therefore will require professional care at an older age compared to today (the 'declining treatment rates' scenario). According to the 'status quo' scenario, the demand for nursing staff (FTEs) between 2005 and 2025 in all three care sectors will increase by a total of 27.3%. However, this demand varies significantly when viewing results for each care sector individually: while the demand for nurses (FTEs) in hospitals is expected to increase by 12.4% in the next 20 years, the number of care-dependent patients and therefore the demand for nursing staff (FTEs) in inpatient and (semi-)residential care facilities will increase by almost 48.1%. According to the 'declining treatment rates' scenario, the demand for nursing staff (FTEs) between 2005 and 2025 will increase by a total of 19.5%. The outcomes of this scenario also show a smaller increase in demand for nurses in hospitals in the next 20 years (8.1%) compared to the increase in inpatient and (semi-)residential care facilities (35.4%) (Afentakis & Maier, 2010).

Some federal states have created local projects to better monitor and improve the nursing shortage. One such project is called 'Hessischer Pflegemonitor' – a web-based information system developed on behalf of the Hessian Ministry of Social Affairs to deliver reliable, current and prognostic information on the nursing workforce across sectors. Part of this project involves regular surveys conducted among working nurses with the purpose of detecting current changes and trends in employment and qualification so that the offered education, training and specialization training can adequately respond to these changes. A similar project, the 'Pflegepersonal-Monitoring NRW', has been initiated by the German Institute for Applied Nursing Research (*Das Deutsche Institut für angewandte Pflegeforschung e.V.*) with the aim of conducting surveys on the nursing workforce situation, and the development and needs assessment in all hospitals, home-care services, nursing homes and training or education facilities in North Rhine-Westphalia. Such monitoring is intended to provide the institutions, associations and politicians with important signals and to secure a timely supply of qualified nursing personnel in all areas of care.

4.2.5 Mobility

Germany is both a receiving and a source country with respect to nurse migration. However, the extent of nurse migration to and from Germany is relatively limited compared to other major destination and source countries. Therefore very little research has been conducted on the impact of nurse migration on Germany's health care system thus far. Despite expectations, EU enlargement has not had the anticipated impact in bringing more nurses into the country. In 2013 there were 3 million people working in nursing professions in Germany, of whom 373 000 came from outside Germany. Of those foreign nurses about 20% came from Poland, which accounts for 76 000 people. Another 47 000 nurses came from Bosnia Herzegovina and 31 000 from Kazakhstan (Zegelman, 2015). In 2017 a survey among 237 German hospitals revealed that 21% of the surveyed hospitals in rural areas reported foreign nurses employed in the hospitals. Outflow data is difficult to access; however, according to estimates from the German Nurses Association, fewer than 1 000 nurses a year are leaving the country. Major destination countries for German nurses include Switzerland, Austria, Scandinavian countries, the Netherlands, the United Kingdom and the USA (Ognyanova & Busse, 2011).

4.3 Structure of nurses' work

4.3.1 Working conditions

According to OECD[1] data from 2015, the remuneration for German nurses is 13% higher than the average wage of all workers. Nurses in public hospitals[2] and nursing homes in Germany are paid based on the payment scheme for federal and municipal employees, whereas wages in hospitals with other ownerships than public ones, e.g. private for-profit hospitals, might be higher or lower. In this respect, incomes and wages in public hospitals are based on the pay grades and levels of the collective pay agreement for Public Service (*Tarifvertrag*

1 The remuneration of nurses refers to average gross annual income of nurses working full-time, including social security contributions and income taxes payable by the employee. It should normally include all extra formal payments, such as bonuses and payments for night shifts and overtime.

2 Salaries paid by not-for-profit or private employers may differ very much from this, depending on region and type of institution.

Table 4.6 *Remuneration of employees in public services set by the collective pay agreement (valid from 1 July 2017 to 28 February 2018)*

Pay Grade	Qualification	Experience Levels and Wages in Euro					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			after 1 year in L1*	after 2 years in L2*	after 3 years in L3*	after 4 years in L4*	after 5 years in L5*
1 to 3	Unskilled or semi-skilled		1751-2326	1781-2388	1818-2487	1853-2561	1942-2629
4 to 5	Mininum 1 year of training	2143-2249	2363-2482	2512-2598	2598-2716	2685-2803	2736-2865
6 to 9	Minimum 2.5 years of training	2343-2966	2586-3219	2710-3523	2828-3751	2908-4092	2989-4240
10 to 11	Bachelor Degree (Technical college)	3057-3168	3381-3508	3636-3763	3891-4146	4376-4701	4490-4956
12 to 13	University Diploma or Master's Degree	3280-3657	3636-4057	4146-4274	4592-4694	5166-5281	5422-5524

Source: Remuneration Scheme TVöD-B VKA, 2017

für den öffentlichen Dienst – TVöD). Assignment to the appropriate pay grade depends mainly on training/degree and completion of further education, as well as the complexity of the work tasks, the amount of responsibility involved in the job (Table 4.6) and on regional and sector-specific factors which play a role in the income level (Tarifvertrag für den öffentlichen Dienst, 2012b).

In this respect, general and paediatric nurses are usually assigned to pay grades 7–8, geriatric nurses to pay grade 5 and nurse assistants to pay grades 3–4 (Tarifvertrag für den öffentlichen Dienst, 2012b). Nurses who have completed a university degree and hold managerial positions are usually assigned to higher pay grades. Thus a nurse who has an overall responsibility for the nursing staff in hospitals, or in a particular assigned nursing area with a minimum of 900 employed caregivers, can be classified into pay grade 12 (Vereinte Dienstleistungsgewerkschaft, 2012). However, even though degree nurses should be classified into pay grades E9–E15 (Table 4.6), in practice, however, classification largely depends on the scope of tasks rather than on the qualification a nurse has obtained, or is due to the negotiating skills of individual nurses. Thus, in light of the evolvement of new professional roles in Germany, it has to be acknowledged that these new skills have often still not been fully reflected by hospital payment schemes. Pay grades are furthermore divided into several pay levels according to the work experience of nurses and acquired advanced training. Another interesting facet is that in Germany there are still distinct differences in pay between newly formed German states and the old West German states, as well as between general nurses and geriatric nurses (Seibert et al., 2018).

On average, the results of the RN4CAST study showed low job satisfaction (37%) for Germany, relatively high burnout rates (30%) and moderate intention to leave (36%) the hospital, albeit with a high variability between the 51 participating hospitals. For example, the level of satisfaction in the 51 hospitals ranged from 20% to 80%. It is also important to mention that job dissatisfaction and burnout of nurses in Germany has doubled since 1999 (Zander, Dobler & Busse, 2012). With respect to the intention to leave the hospital, 36% of the surveyed nurses admitted that they would leave for another hospital in the next year due to dissatisfaction if they had an opportunity to do so. About 38% of these nurses mentioned that they would look for a job in another hospital, 15% would prefer working as a nurse but not in a hospital, and about 45% would like to look for a job outside nursing. Career fluctuation and early career ending in the German nursing profession have been also studied in various other studies, such as in the 'Nurses Early Exit Study' (NEXT, 2002–2005), also at the European level. Accordingly, about 19% of the hospital nursing staff in Germany think about leaving the nursing profession at least several times a month and about 29% of hospital nursing staff consider changing their workplace. The NEXT study also revealed that 36.4% of hospital nursing staff were emotionally exhausted due to a work/family conflict and low job satisfaction which often results in an early career ending. A work/family conflict, which mainly occurs due to lack of time and burnout, was demonstrated in 43.6% of the hospital nursing staff (Simon et al., 2005). Recently a variety of initiatives and projects have been designed to improve working conditions and job satisfaction.

The main trade union in the health care market is the United Services Union, which belongs to the umbrella organization of German trade unions. Through the establishment of collective agreements in public services, as well as among private employers in the health care market, the United Services Union has the greatest influence on the organization of working conditions stipulated under the collective agreement as well as on wages in the health care sector (Vereinte Dienstleistungsgewerkschaft, 2011). Besides trade unions, there are also a number of professional organizations such as the German Nursing Council (*Deutscher Pflegerat*) and the German Nursing Association (*Deutscher Berufsverband für Pflegeberufe*).

The German Nursing Council (*Deutscher Pflegerat e.V.*) is the umbrella organization for German nursing and midwifery. Major goals include promoting the importance and benefits of professional nursing and midwifery for an effective and efficient health care system, as well as lobbying on professional goals and issues at the federal level (Deutscher Pflegerat e.V., 2011).

The German Nurses Association (*Deutscher Berufsverband für Pflegeberufe – DBfK*) represents the interests of professional nurses in general, paediatric and geriatric care. Key objectives are the representation of the nursing and midwifery professions to support and enhance understanding of nursing interests in relation to ministries of health and education and other relevant public agencies, and the development and implementation of vocational training and continued academic and professional development of the professions. The DBfK is also a member of the International Council of Nurses and the European Federation of Nurses Associations and is particularly engaged in the improvement of nursing and health care provision for the population and in supporting the increase in the number of nurses in the country (Deutscher Berufsverband für Pflegeberufe, 2012).

4.3.2 Governance and leadership

In most hospitals management is shared between the medical director, the nursing director and the administration manager. Tasks and responsibilities for hospital management and its members are regulated by the hospital owner. The hospital size determines the number of nurse management levels. Thus in small hospitals there might be only a nurse director, who is directly responsible for the ward managers, whereas nurse directors in bigger hospitals or hospital chains would communicate with so-called nurse managers, centre managers or department managers, who in turn are responsible for ward managers.

4.4 Synthesis and policy implications

In Germany nurse education has not yet followed European and international trends. The primary reasons are a general lack of understanding of the potential benefits of better qualified nurses for health outcomes, strong opposition from medical organizations and the major trade union, as well as concerns about the financial implications of such change. However, nursing associations lobbied for academization of nurses and achieved some progress, as described earlier in this chapter.

There are currently 37 higher education institutions offering bachelor degree programmes to educate nurses. In contrast, a total of 35 public universities and four private universities offer the opportunity to study human medicine. The recommendation of academic education as an optional route into the profession has been followed as well, to unify the three branches of nursing into one general nurse qualification.

The role of nurses in health care and long-term care is being debated and is slowly changing. New roles are emerging (e.g. family health nurses) and the allocation of responsibilities between physicians and nurses is being rethought, although everything beyond the delegation of tasks meets with fierce opposition from physicians. There is concern about the quality of care. However, issues around reimbursement and a shift of power probably play an equally important role.

There is a lack of regulation in the nursing profession. Currently the states are the regulators. There is neither a federal register nor a system to check CPD. In at least two states legislation has been passed by regional governments to establish self-regulatory bodies (nursing chambers similar to the existing medical chambers). This is a fundamental improvement in many aspects of the profession. After being established in three states (another four are on their way), within a few years all other states will probably follow. Because of the German constitution, a federal chamber of nurses as a regulator is not possible.

Changes are also being triggered by the increasing shortage of nurses. In the face of demographic change and increasing demand for care, this is a crucial issue. The political response to this challenge was slow. However, recently the number of nursing students

(primarily geriatric nurses) has increased. The shortage has raised a lot of discussion about nurses' working conditions and remuneration, as well as (international) recruitment and retention.

The German health system is based on self-regulation between the key stakeholders (purchasers and providers of care) within a strict legal framework. This has given health insurance funds, hospitals and the association of SHI physicians a great deal of power. The system is dominated by an exclusive bio-medical perspective on health issues.

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5 Greece

Dimitrios Zikos, Marianna Diomidous, John Mantas, Daphne Kaitelidou, Marina Karanikolos

5.1 Context-organization of the health system, education and regulation

5.1.1 Greece and its health system

Greece is a Southern European country with a population of 10.8 million (Eurostat, 2017). Health care spending totals 8.3% of gross domestic product, or US$2 223 per capita (OECD, 2017). The share of public spending is fairly low, around 60%, while out-of-pocket payments make up the bulk of the remaining private expenditure. Currently public spending is capped at 6% of GDP, as a pre-condition of Greece's Economic Adjustment Programme. Greece's health care system is a mixed system comprising elements from both the public and private sectors. In the public sector a National Health Service type of system coexists with a social health insurance (SHI) model. Since 2011 the National Organization for the Provision of Health Services (EOPYY) has acted as the sole purchaser of health care services for patients covered by the publicly financed National Health System (Economou et al., 2017). The health care sector is highly regulated by the central government. Specific legislative controls exist to moderate the activities of third-party payers and service providers, purchasing processes, products pricing, reimbursement policy and official certification-licensing of health care professionals. Greece has incorporated into its national legislation the EU directives related to the professional qualifications of health care personnel, medical technology and equipment, pharmaceuticals and voluntary health insurance. Since 2010 Greece has experienced a profound economic crisis,

which still affects public sector spending and services in health care and education (Economou et al., 2017).

5.1.2 Regulation and legislation of the nursing profession

Nursing in Greece is regulated by the Hellenic Regulatory Board of Nurses (HRBN)[1]. This is a self-managed authority for registered nurses established in 2004 under Law 3252/2004. The internal organization of the HRBN is managed through legislative provisions. These are based on legislative authorization by the government, or by the collective body that manages the authority itself, whose decisions are approved and authorized by the Minister of Health.[2]

The aims of the HRBN[3] are to ensure the health of the population through the maintenance of nurses' professional practice. It holds the Professional Register Records and is responsible for licensing and disciplinary procedures. It is governed by a Temporary Executive Committee of 15 nurses and follows a recognition process for nursing in collaboration with the Hellenic National Academic Recognition and Information Centre (NARIC).[4] There are also seven regional departments,[5] each with its own structure and governance.

The below explanation on nurse education refers to the current situation, but it should be noted that this situation may rapidly change in the next few years. Currently, in the beginning of 2019, the Greek Government is passing a series of legislations as a reform of Higher Education. Most of the technological educational institutions are either upgraded to universities or are being incorporated into existing universities as new faculties. This legislation is currently under implementation, and its consequences will be more visible from 2020 onwards. For nursing, those who previously graduated from technological educational institutions will have the opportunity for top-up programs to be upgraded to university graduates, whereas existing nursing students at technological institutions when they graduate are becoming by default university graduates.

Regarding the certification processes, the diplomas provided upon graduation by the Higher Education Nursing Institutions (universities and technological educational institutes) testify to the adequacy of knowledge and nursing skills. All nurses are required to be registered by the HRBN. According to Eurostat data, there were 19 743 practising nursing professionals in Greece in 2015 (down from 19 973 in 2013).[6] Nurses who meet the standards required by the diploma may also apply to the regional authorities for a licence to practise.

Additionally, university graduate nurses have the option to be registered with the Hellenic Union of University Nursing Graduates.[7] Nurses graduating from technological educational institutes can be registered with the Hellenic Union of Technological Educational Institute Nursing Graduates. There are also various other nursing organizations in Greece. The Hellenic Nurses Association[8] is an important scientific and professional association, aiming to develop nursing science and improve the quality of nursing care. It represents nurses at national and international levels and is a member of various European Nursing Associations, including the International Council of Nurses[9] and the European Federation of Nurses Associations.

In recent years two nursing federations have been established. The Pan-Hellenic Federation of Nursing Staff Unions (PASONOP-ESY)[10] includes a variety of unions formed by nurses of all levels and ranks. The Pan-Hellenic Association of National Health System Nurses represents the unions, which are formed exclusively by professional nurses with a university degree or a technological educational title/diploma.

1 Information and detailed presentation related to the Hellenic Regulatory Board of Nurses (HRBN). Information and analysis acquired from the official website of the European Council of Nursing Regulators (FEPI) concerning the Presidency of the HRBN. Available at: www.fepi.org/fepi-members/fepi-members-102/detail/hrbn-hellenic-regulatory-board-of-nurses--549, May 2015.

2 Official website of the Hellenic Ministry of Health & Social Solidarity. Available at: http://www.moh.gov.gr/, December 2015.

3 Information and detailed presentation related to the Hellenic Regulatory Board of Nurses (HRBN). Information and analysis acquired from the official website of the European Council of Nursing Regulators (FEPI) concerning the Official Responsibilities of the HRBN. Available at: www.fepi.org/fepi-members/fepi-members-102/detail/hrbn-hellenic-regulatory-board-of-nurses--549, May 2015.

4 Official website of the Hellenic Organization of the Recognition of Official Diplomas for the Universities and Technological Graduates of the Nursing Graduates of Hellas. Available at: http://www.doatap.gr/en/index.php, December 2015.

5 Official website of the Hellenic Ministry of Health & Social Solidarity, Section of Information for the Structural Analysis of the Hellenic Public Health Care System. Information for the Hellenic Regions and the 7 Regional Health Administrations in the Hellenic State. Available at: http://www.moh.gov.gr/articles/health/c26-xrhsimoi-syndesmoi/ygeionomikes-perifereies/146-ygeionomikes-perifereies, December 2015.

6 EUROSTAT figures include only nurses working in private and public hospitals and health centres, so there is a degree of underestimation.

7 Official website of the Union of University Nursing Graduates in Athens. Available at: http://www.nursepe.gr/, March 2015.

8 Official website of the National Union of Nurses in Greece. Available at: http://www.esne.gr/index.php/component/content/article?id=44&Itemid=74, December 2015.

9 Official website of the International Council of Nurses. Available at: http://www.icn.ch/, December 2015.

10 Official website of the Panhellenic Union of Nurses in Greece. Available at: http://pasonop.gr/, December 2015.

5.1.3 Nurse education

5.1.3.1 *Pre-registration nursing education*

Nursing education in Greece is regulated by the Ministry of Health. Regulations are based on those established by the International Council of Nurses and on World Health Organization guidelines. In addition, committees within the nursing departments in provider institutions define the process and the criteria for developing specialist approaches related to practice and to specialization based on the specific requirements of each department.

Training of nurses in Greece conforms to EU standards for mutual recognition of qualifications according to European Community directives[11] regulating the free movement of European health professionals. For undergraduate studies, a student may pursue either a four-year undergraduate degree in a university or four-year undergraduate studies at a higher technological education institute (ATEI).[12] Both programmes require 240 ECTS credits for graduation.

The academic degrees provide students with a professional degree. There are two university nursing faculties in Greece that provide four-year undergraduate studies: the Nursing Faculty at the National and Kapodistrian University of Athens and the Nursing Faculty at the University of Peloponnese in Sparta. Clinical training is provided in nearby university and public hospitals, within their clinics and units.

There are eight ATEIs with nursing faculties in Greece. The basic nursing course takes four years (approximately eight semesters), of which the eighth semester is dedicated to clinical practice. Registered nurses can be either university or ATEI graduates, while midwives are ATEI graduates.

In addition, there are nursing assistants with one to two years of basic study and hospital-based training prior to their employment. Officially, nursing assistants are graduates from either occupational training schools (public or private), which usually involve two-year studies, or basic education schools (i.e. high school graduates).[13]

Nursing assistants work in organizations and dispensaries and are employed in home nursing, as child minders and as practice assistants in pharmacies, veterinarian clinics, etc.

All nursing students follow a combination of theoretical and hospital-based training. Theory courses are provided in the form of academic lectures. There is a series of courses with supplementary sessions involving simulation. ATEI nursing schools and university nursing schools differ in the delivery of in-hospital training sessions. ATEIs provide training for a full year as trainee hospital employees, whilst university nurses receive training sessions during visits to university hospitals alongside their undergraduate studies. There is no formal competency assessment, but in most cases students take written or oral examinations for each course they undertake. Although there is no formal evaluation of practical nursing skills, students take written exams which are designed to address clinical competencies.

Nursing education is provided free of charge by the state at both university and ATEI levels for Greek nationals. Foreign students are not permitted to study nursing at Greek universities or ATEI without having first taken the Greek high school examinations. Based on figures from 2011, the registration fees for postgraduate (MSc) courses at nursing universities or ATEI was approximately €1 000. The fees subsequently increased due to cuts to educational institutions as a result of the economic crisis. Indicatively, the registration fees for the postgraduate programmes in the Department of Nursing at the National and Kapodistrian University of Athens increased to €2 000. Moreover, the content of all postgraduate programmes is currently undergoing re-evaluation and re-approval, and new fee levels will be available after their re-establishment.

5.1.3.2 *Post-registration nursing education*

There are no specialist or advanced practice roles that require a master's degree or employment at different grades, since there is no career pathway that fits this model. Nevertheless, there is a two-year MSc specialization course in clinical areas related to nursing science. Most of the clinical MSc courses are provided by the Faculty of Nursing at the University of Athens,[14] with new MSc programmes being established at the Faculty of Nursing at the University of Peloponnese.[15] ATEI institutions also provide MSc courses. The acquisition

11 Official website of the European Union. European Regulations, Directives and Other Acts. Available at: http://europa.eu/eu-law/decision-making/legal-acts/index_en.htm, December 2015.

12 Official website of the Hellenic Union of Nursing Graduates. Available at: http://www.eenat.blogspot.gr/, December 2015.

13 Official government announcement paper FEK 165/A'/24.7.2001.

14 Official website of the MSc Courses in the Faculty of Nursing in the University of Athens. Available at: http://www.nurs.uoa.gr/metaptyxiakes-spoydes.html, December 2015.

15 Official website of the MSc Courses in the Faculty of Nursing in the University of Peloponnese. Available at: http://sparti.uop.gr/~nosil/ekpaideush_metaptyxiakh.html, December 2015.

Table 5.1 *Number of entrants by training institution, 2010–2014*

Type and name of training institution	Students (Number of entrants)				
	2010	**2011**	**2012**	**2013**	**2014**
Faculty of Nursing, National and Kapodistrian University of Athens	206	175	174	201	153
Faculty of Nursing, University of Peloponnese	60	109	144	143	200
ATEI of East Macedonia & Thrace	146	141	164	172	198
ATEI of Salonica	152	216	218	127	109
ATEI of Thessaly	273	256	289	207	223
ATEI of Ipirus	303	316	281	130	163
ATEI of Western Greece (Patras)	230	237	240	205	207
ATEI of Central Greece (Lamia)	215	241	248	177	201
University of Western Attica (former ATEI of Athens)	169	266	221	227	207
ATEI of Crete	226	223	220	158	169
Total	**1 980**	**2 180**	**2 199**	**1 747**	**1 830**

Source: Hellenic Statistical Authority, 2018

of a postgraduate clinical diploma is in many cases taken into account for the placement of nurses in specific departments.

5.1.3.3 *Enrolees in nursing*

Since 2000 there has been a decline in the number of nursing students starting their studies in universities and ATEIs. Table 5.1 shows the number of entrants per institution as reported to the Hellenic Statistical Authority. There has been an average intake of around 1990 annually over the five years reported, but with a marked decline in 2013 and 2014.[16] Given the current shortage of nurses (see below), these low levels of enrolment are unlikely to be sufficient to produce enough qualified nurses to cover the increasing needs of the population. In addition, the overall labour force in the country has been shrinking in recent years.

16 Hellenic Statistical Authority website. Individual student characteristics/2016 – Technological, Vocational and Ecclesiastical Institutions (students, institutions, academic staff) (end of the academic year 2016). Available at: http://www.statistics.gr/el/statistics/-/publication/SED34/-, and http://www.statistics.gr/el/statistics/-/publication/SED31/-, June 2018.

5.2 The Greek nurse workforce

5.2.1 Composition and configuration

According to OECD data, in 2015 the number of practising nurses per 1 000 population was 3.2, comprising 1.8 practising nursing professionals and 1.4 practising nursing associate professionals (see Table 5.2). This is far below the OECD average of 9.0 (OECD, 2018). In 2015 the ratio of nurses to physicians was 1.5, limited to nurses and doctors employed in hospitals. Greece is an unusual example in that it has more medical doctors than nurses. Within the EU, only Portugal and Italy are comparable. Upon closer inspection, these figures reveal that the problem is the very low ratio of nurses per 1 000 inhabitants, which is the lowest in the EU.

To a degree, this low level may in part be associated with a doctor-dominated system in Greece and the different limitations placed on doctors' and nurses' scope of practice. But it also reflects downward pressure on health

Table 5.2 *Number of practising nurses per 1 000 population, 2000, 2010 and 2015*

Year			2000	2010	2015
Practising nurses	Professional nurses, practising	Number of persons (head counts)	14 030	20 491	19 743
		Density per 1 000 population (head counts)	1.3	1.84	1.82
	Associate professional nurses, practising	Number of persons (head counts)	15 674	17 931	14 975
		Density per 1 000 population (head counts)	1.45	1.61	1.38

Source: OECD, 2018

Table 5.3 *Number of nursing and midwifery professionals (including health visitors) and nursing associate professionals (including practical nurses) in Greece by region per 10 000 population, 2015*

	Nursing and midwifery professionals (including health visitors)	Nursing associate professionals (including practical nurses)
Anatoliki Makedonia, Thraki	21	18
Kentriki Makedonia	18	18
Dytiki Makedonia	16	16
Ipeiros	25	27
Thessalia	19	21
Ionia Nisia	13	16
Dytiki Ellada	16	15
Sterea Ellada	9	8
Peloponnisos	11	12
Attiki	27	21
Voreio Aigaio	14	18
Notio Aigaio	8	16
Kriti	22	15

Source: Eurostat, 2018

care system costs, which appears to impact nurses more heavily than doctors.

Between 1980 and 1990 there was an 85.4% increase in the absolute number of nurses in Greece. This was subsequently restricted to 20.5% in the 16 years that followed. The introduction of the National Health System in the early 1980s contributed to the recruitment of new nursing staff, but the increase was not sustained, primarily due to central policies and state finances. After the mid-1990s there was a turn towards controlling state expenses, which had implications for staffing levels, exacerbated further by the crisis since 2010. The authors' prediction is that there will be insufficient numbers of nurses to replace those nearing retirement age. The issue of shortage of nursing staff is becoming even more evident since the number of nurses seeking employment in other countries has increased rapidly after the onset of the crisis.

Table 5.3 provides details of nurses per 10 000 people by geographical region and highlights the significant disparities between different parts of the country. In this context it is also worth mentioning that the economic recession in Greece has led to staff hiring freezes and a substantial reduction in the recruitment of new nursing staff in Greek hospitals.

5.2.2 Deployment and skill-mix models

Although the ratio of nurses to population has increased moderately over the course of the 2000s, Greece still has one of the lowest numbers of nurses in the EU. The freeze on hiring personnel due to recent economic constraints has resulted in the closure of a large number of intensive care units and many National Health Service hospital clinics functioning below operational capacity, resulting in long patient waiting lists.

In 2015 approximately 12 000–13 000 nursing positions across public hospitals were vacant.[17] As a result, hospitals are often forced to hire private (and potentially under-qualified) nurses to cover both day and night shifts. Another consequence of staff shortages is the closure of intensive care units. Between 250 and 350 of the 650 intensive care units have been closed due to the lack of doctors and nurses to staff them and provide support for them to function properly.

The distinction between the work of medical and nursing personnel in Greek hospitals is clearly defined. There is no indication that nurses are substituting for doctors in caring for particular types of patient. The lack of interprofessional collaboration between nurses and doctors is a reflection of a medically orientated health care system. In each of the hospital departments, teams of doctors make daily visits to patients on the wards where they take histories and perform physical examinations. The nurse in charge is provided with details about the care, treatment and medications required. Nurses perform the majority of routine tasks prescribed. In

17 Official website of the Reform of Hellenic Hospitals, of the Hellenic National Health Care System. Information Related to the Vacant Positions of Nurses in the Hellenic National System of Health Care. Available at: http://anadiarthrosi-nosokomeion.nurs.uoa.gr/index.php/apotelesmata-se-epipedo-xwras/giatroi-kai-nosileutes, June 2012.

addition, nurses have to ask the doctors' permission to undertake medical interventions not initially prescribed. In general, only nursing staff working in intensive care units have greater autonomy.

In accordance with the medical model, the majority of care and treatment decisions are made by doctors, leaving only a very small opportunity for other health care professionals to participate in the provision of multidisciplinary care. A number of factors seem to constrain the delegation of medical tasks to nurses. The political will is lacking with regard to changing the legal framework needed for doctors to delegate part of their authority to nurses and other professionals. Nurses themselves also seem reluctant to take initiatives to press for change. As a result, medically dominated hospital/institutional care takes priority in Greece over the more holistic prevention-based models of primary care.

Health system reforms since 2010 have not altered the nature of the duties undertaken by nurses and doctors and clear role differentiation remains. In addition, the pattern of employment for nurses, combined with the priorities set by nursing organizations and political leadership, does not allow for the expansion of nurses' roles to become more autonomous care providers. Specifically, current political priorities focus on short-term cost-savings and technical efficiency gains rather than on a longer-term strategy for allocating resources.

Under these circumstances, it is challenging for nurses to be able to turn the crisis into an opportunity for the mutual benefit of nurses, patients and the health care system as a whole. However, the recent plan (2017) to reform and expand the provision of primary care could potentially become a starting point for a broader and more autonomous role for nursing within the health care system, given that the aim is to operationalize primary care units staffed by multidisciplinary teams delivering more integrated care.

5.2.3 Planning mechanisms

There are few official policy documents related to planning.[18] The *International Journal of Nursing Practice* addressed the issue of nurse workforce planning in 2008, noting major issues such as understaffing, organizational problems associated with jobs in nursing, and increased burnout levels of Greek nurses, due to heavy workload (Sapountzi-Krepia D et al., 2008).

5.2.4 Mobility

Students who have studied nursing outside the European Union have to be recognized by the Hellenic National Recognition Information Centre (NARIC). NARIC is overseen by the Ministry of Education and is responsible for the recognition of university degrees and professional qualifications that are awarded by foreign higher education institutions.

5.3 Structure of nurses' work

5.3.1 Working conditions

Nurses are predominantly salaried. In a few private care services, such as home care, nurses are remunerated on a fee-for-service basis. Nurses in public hospitals are employed through the Supreme Council for Civil Personnel Selection.[19] This body coordinates nursing positions in specific hospitals and nurses who apply are evaluated based on specific criteria. Once nurses are employed in the public sector, they undergo a two-year probation period (as cadets) to become permanent civil servants. In the private sector nurses are employed through contracts and the employer has the legal right to dismiss them.

Since the start of the economic crisis, there have been major changes in the way civil servants are paid, based on Law 4024/2011. One important aspect of this law is the consolidation of the remuneration levels of different categories of civil servant. Table 5.4 presents the net remuneration levels of nurses working in public hospitals. The table applies to nurses with no dependents. For each dependent child there is a 5–10% increase to the figures given. This net figure includes deductions for taxes and social insurance of 30%.

18 Official website of the Hellenic Website of Health Care News in Hellas. Information Related to the Immediate Needs of the Greek National Health Care System for Nursing Staff nowadays. Available at: http://www.healthreport.gr/%CE%BD%CE%BF%CF%83%CE%B7%CE%BB%CE%B5%CF%85%CF%84%CE%AD%CF%82-%CE%BF%CE%B9-%CE%B1%CF%86%CE%B1%CE%BD%CE%B5%CE%AF%CF%82-%CE%BA%CE%B1%CE%B9-%CE%B5%CE%BE%CE%B1%CE%BD%CF%84%CE%BB%CE%B7%CE%BC%CE%AD%CE%BD/, April 2015.

19 Official website of the Supreme Council for the Selection of Staff for the Public Services of Greece. Available at: https://www.asep.gr/asep/site/home.csp, December 2015.

Table 5.4 *Monthly income of nurses in the public sector, 2013–2014*

Working Years	University Diploma (in euros)	ATEI Diploma (in euros)
0	720	675
5	760	708
10	820	742
15	890	810
20	900	830
25	960	840
30	1 150	900

Source: Official website of the Independent Research Website for Labour & Professional Issues in Greece. Information Related to the Average Monthly Wages of Nurses in Greece. Available at: http://ergatika.gr/sse/klinikes/, December 2015

Like all other public servants, nurses are paid based on a Common Payroll Algorithm, which was established in 2011.[20] Their wages are paid each month from the central payment authority.[21] According to this payment policy, each nurse receives between €675 and €1 150 per month, depending on their years of experience and qualifications. Compared to other public servants, nurses receive similar salaries.

Historically, nurses working in the private sector were paid 15–20% less compared to those in the public sector, with some exceptions. Recently, there has been a decrease in the minimum wage of employees in the private sector, voted by the Greek Parliament. Comparison with other employees in the public sector used to be meaningful in the past, but since the introduction of the Single Payroll Policy for the public sector in 2013–2014, salaries are calculated regardless of profession. Nurses working in the public sector are employed exclusively on full-time contracts. The private sector allows part-time nursing contracts, although nowadays nurses who work part-time are rare.

According to nurse self-reports (2009) in the RN4CAST study, working conditions in Greek hospitals are far from satisfactory. Around 8–9 out of 10 nurses reported that they did not have adequate support services enabling them to spend sufficient time with their patients. In addition, 80–85% of the survey participants claimed that there was both insufficient time and opportunity to discuss patient care with their peers.

The results of one national study in 2013–2014 indicate that nursing remains an unpopular career choice. The working conditions, general framework and context of practice are factors that contribute to the dissatisfaction experienced by nurses and nursing assistants alike. In almost half the sample, perceptions of the practice environment were below expectation, while age, work team position, shift work and involvement in union activities further influenced perceptions of the work environment.

Other important factors influencing the quality of nurses' working environment are related to the supply of equipment and technical infrastructure and adequate staffing levels, as well as issues related to management and nursing leadership of the profession. Recognition of personal achievements and working within a meritocracy, levels of remuneration and clarity concerning their duties and the competencies involved in the nursing role were also factors influencing nurses' levels of satisfaction. Factors associated with work dissatisfaction included heavy workloads due to understaffing and a lack of teamwork between nurses and other health professionals.

There is no formal state recommendation regarding nurse-to-patient ratios, but there is a widely recognized need to increase the number of nurses and this should be considered as a priority for policy-makers in the health care sector.

A weekly schedule is issued by the supervisor and head nurse of each department; nurses may request their preferred schedule to the head nurse, who should take this into account. Family-friendly policies used to include a 30-minute reduction to the working time from 8 to 7.5 hours. However, this was abolished in 2011.

All nurses, including those in the private sector, can receive maternity leave and care leave. Nurses usually receive two months' leave before giving birth and three months' leave after. This is extended to five months in the case of a premature birth. In the case of pregnancy with complications, nurses receive sick leave with full pay. Nurses in the public sector receive nine months of full-time paid maternity leave for child care.

5.3.2 Governance and leadership

There are four services in the hierarchy of Greek hospitals, including medical, nursing, administration and technical services respectively. Each has a director. The nursing service has an additional structure that focuses on nursing management and practice. This is headed by

20 In 2010, as part of cost-cutting measures in response to the economic crisis, the salaries of all civil servants, including nurses, were reduced by 20%.

21 Official website of the Consolidated Payments Authority for the Greek Public Sector and the Hellenic General Secretariat of Information Systems. Information Related to the System of Payments of Nurses and Workers in Greek Hospitals. Available at: http://www.gsis.gr/gsis/info/gsis_site/Services/DimosiaDioikisi/epsp.html, December 2015.

the Director of Nursing Services. The Nursing Service Office is divided into two departments. The first is called the Office of Clinical Education. This office is managed by nurses responsible for the theoretical education and training of all nurses and other allied health professionals. One of the most common initiatives of the office of education is the organization of seminars in the hospital conference rooms. Depending on the hospital, the nursing service is subdivided into further sectors. Each sector can consist of numerous departments led by a head of department and an assistant head of department.

In the case of Greek hospitals with fewer than 400 employees, the executive board comprises five members. In the case of hospitals with more than 400 employees, there are seven members. At board level there used to be a requirement to include the Nursing Services Director of the hospital. Whilst this was temporarily abolished, the Nurse Director has now been reinstated.

Each hospital executive board consists of the following members:

- Hospital Director
- 2–3 members from the Ministry of Health
- A hospital deputy director
- The director of the hospital nursing department
- An elected representative of medical doctors
- An elected representative of the other hospital employees

Within the organizational structure of the Ministry of Health, under the General Directory of Health Services, there is a Department of Nursing Personnel but no National Chief Nurse within the Greek government. Nurse representation in policy decision-making begins with the HRBN, involving other nursing organizations and, in some cases, higher education nursing departments. There is one chief nurse to every hospital.

5.4 Synthesis and policy implications

The Greek health care sector is highly regulated by central government. With the introduction of a National Health System (ESY) in 1983, strategic targets for health reform initiatives were implemented to facilitate a unified health care sector. However, three reform attempts in the 1990s and 2000s were not fully instigated. Major reforms were implemented as a result of the severe economic crisis since 2010. Mostly driven by the series of Economic Adjustment programmes, they resulted in the establishment of a single-payer social health insurance mechanism (EOPYY), and a series of actions to improve efficiency and reduce spending, particularly in the pharmaceutical sector. These, however, had an adverse effect on service delivery, partly due to the impact on availability and workload of health care professionals (Economou et al., 2017).

Nursing in Greece has been operating mainly in the public sector, although during the last decade the number of private nurses has increased with the expansion of the private sector. Nursing practice in Greece faces a series of challenges related to nurse training and education, regulation of nursing duties and professional development requirements.

Interviews with Greek nursing representatives in 2013–2015 highlighted a series of major issues.[22] With regard to education, there is a pressing need to bring nurses educated to university level in line with international guidelines. There is also an incongruity between the duties expected of nurses and the respective education and training levels they have attained. For example, graduates from two-year practical nursing schools can only be recruited as nursing assistants in the public sector, despite the fact that due to low staffing levels, they perform nursing duties.

Furthermore, nurse-to-patient ratios in hospitals need to be increased. This shortage may be one factor associated with high rates of job dissatisfaction among Greek nurses and their intention to leave their current job.

Based on the RN4CAST results, burnout syndrome is very prevalent, and 85% of participants expressed dissatisfaction with their current working conditions. Nursing organizations and trade unions have made attempts to present their concerns to policy-makers, but these attempts often lacked a common and well defined strategy.

Problems associated with the continued economic recession are only likely to make the situation worse. For example, restrictions on public expenditure may lead to a decrease in the recruitment of new nurses, and consequently to the deterioration of working conditions, emotional exhaustion and job dissatisfaction, since staffing is recognized as an important determinant of the negative outcomes associated with nursing.

With respect to the educational opportunities for nurses, on-site training, professional education and lifelong

22 Official website of the Daily News in the Island of Rhodos. Submission of Complaints from the Hellenic Regulatory Board of Nurses. Available at: http://parapona-rodou.blogspot.gr/2015/11/blog-post_3.html, April 2015.

learning should become future priorities. Greek nurses often ask for more education and training – an issue reflected in their responses in the RN4CAST study. As an example, whenever a hospital hosts a seminar for nurses, the room is full and overcrowded.

The consequences of the economic crisis and subsequent plans for hospital sector restructuring are diverse and are related to the difficulties in recruiting new nursing staff, salaries of nurses and nursing education and training. Funding nursing research in Greece might possibly help to increase the standing of the profession. In addition, in terms of health outcomes, there might be a positive effect, since the nurses' role is fundamental in helping to safeguard patients and maintain quality of care.

Demographic changes (immigration, ageing population, increasing numbers of the population below the poverty line, etc.) require a reassessment of population health needs and the introduction of targeted public health initiatives. Greek nurses need to position themselves at the forefront of policy changes to proactively prepare themselves for the challenges that lie ahead. This may not be easy since it requires changes to everyday practice, additional education and training, a collaborative approach to nursing practice, inter-professional collaboration and systemic thinking. But investment and tackling problems will not happen unless nurses in Greece build support to increase their resilience to withstand today's challenges and to build a better health system for the years to come.

5.5 References

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6 Ireland

Roisin Morris, Anne Matthews, Anne Scott

6.1 Context-organization of the health system, education and regulation

6.1.1 Ireland and its health system

Ireland (used throughout to refer to the Republic of Ireland) is a Northern European country with a population of 4.8 million (Eurostat, 2017). The health service of this parliamentary democracy has been undergoing reform, with pledges from the government to increase organizational efficiencies and deliver on policy to move to a primary care model of health care, in order to reduce reliance on inpatient hospital services. The Department of Health, led by the Minister of Health, is responsible for the formulation and evaluation of policies for the health service in Ireland, while the Health Service Executive (HSE) is responsible for managing and delivering public health and personal social services. The Health Act of 2004 charges the HSE with using the resources available to it in the most beneficial, effective and efficient manner to improve, promote and protect the health and welfare of the public. Established in 2005, the HSE has undergone many structural changes and is currently organized by Directorates (Health Service Executive, 2015).

Health care spending totals 7.8% of gross domestic product, or US$5 528 per capita (OECD, 2017). Austerity had been played out from 2008 to 2014 within the Irish health service by means of cutbacks in expenditure, particularly in expenditure on staff. Budget cuts commenced throughout all government departments in 2009. In 2010 the health budget in Ireland was €14.2 billion. In 2012 the health budget was less than

€13 billion (Department of Health, 2015a). There were 12 000 fewer HSE staff in December 2013 than there were at the height of public health sector employment in 2007, despite the increased demand associated with higher unemployment and falling private health insurance uptake (Burke et al., 2014). Reductions in funding and an embargo on staff recruitment continued until the end of 2014.

6.1.2 Regulation and legislation of the nursing profession

An Bord Altranais agus Cnáimhseachais na hÉireann, or the Nursing and Midwifery Board of Ireland (NMBI), is responsible for the national regulation of the nursing and midwifery professions, including the regulation of education and training of nurses and midwives. Registration with the NMBI is a legal requirement for any person who wishes to practise as a nurse or midwife in Ireland. Further to this, student nurses and midwives must register as candidates on the Candidate Register and satisfactorily complete all the statutory and EU requirements of an approved programme to be eligible to apply for registration as a nurse with the NMBI. Higher education institutions responsible for nurse education and training in Ireland, and their partner health care institutions, must comply with NMBI requirements and standards. Central to the concept of professional regulation is the link between educational preparation, scope of practice for individual nurses and midwives, and accountability for practice (Department of Health and Children, 2015a). The scope of practice for nurses and midwives is determined by legislation, EU directives, international developments, social policy, national and local guidelines, education and individual levels of competence.

The Nurses and Midwives Act (2011) was designed to enhance the protection of the public in its dealings with nurses and midwives, to recognize midwifery as a separate profession, to provide for the registration, regulation and control of nurses and midwives, to enhance the high standards of professional education, training and competence of nurses and midwives, to investigate complaints against nurses and midwives, and to increase the public accountability of the Board (Department of Health and Children, 2015b). The Act changed the name of An Bord Altranais (ABA) to the Nursing and Midwifery Board of Ireland (An Bord Altranais agus Cnáimhseachais na hÉireann) in 2012. The NMBI assumed responsibility for the development of a new statutory framework for the maintenance of professional competence of registered nurses and midwives. In addition, employers are required to facilitate the maintenance of professional competence of nurses and midwives through the provision of further training and development opportunities within the workplace. The Board's main objective is the promotion of high standards for nursing and midwifery. This includes the promotion of high standards of professional education, training and practice and professional conduct among nurses and midwives. The Board is also responsible for the protection of the public in its dealings with nurses and midwives, as well as protecting the integrity of the profession (Department of Health and Children, 2015b).

6.1.3 Nurse education

6.1.3.1 *Pre-registration nursing education*

Over the past two decades major changes and developments in nursing and midwifery education have occurred in Ireland. Changes to pre-registration nursing preparation from the apprenticeship model to the diploma in 1994 and then to degree level education in 2002 came about in response to concerns about the need to ensure that nurses were fully equipped to meet the rapidly changing and complex demands of the future health service.

Key drivers which brought about a change in the system of nurse education from the early 1990s included industrial unrest among nursing staff regarding, the slow pace of change in the development of nursing as a profession, and the lack of progress from nursing leadership and health service employers in bringing about better working conditions. Ireland's entry into the European Economic Community in 1973 meant that it was incumbent upon the government to comply with EEC directives for general nursing, which eventually led to the end of the apprenticeship model of nurse education (O'Dwyer, 2007; Clarke & O'Neill, 2001).

In the early 2000s nurse education moved to being solely undertaken at degree level with the aim of preparing nurses who could work flexibly and autonomously. Degree level education aimed to ensure that registered nurses would have a good understanding of human behaviour, responses, needs, effective nursing approaches and interventions, and the theoretical underpinnings of health care delivery models and systems. It was anticipated that such an educational preparation would enable nurses to develop and use their clinical skills more effectively. It would also prepare nurses to take leadership roles in planning for and responding to the

future health and nursing care needs of the population. Degree education would also put nurses on an equal professional footing with other health care professionals. Nursing education in Ireland became fully integrated into tertiary (third level) education sector (in universities and institutes of technology) in 2002.

In 2006 the first graduation of students from the new four-year Bachelor of Science (BSc) undergraduate education programmes in general, psychiatric and intellectual disability nursing took place. The first intake to these programmes was in September 2002 (Health Service Executive, 2010a). This change was followed by a four-year BSc undergraduate education programme in midwifery and a four-and-a-half year BSc undergraduate education programme in integrated children's and general nursing which commenced in September 2006 (with the first cohort of students graduating in 2010). Today, students enrolled in BSc undergraduate education programmes in nursing/midwifery are full-time and participate in classroom lectures and clinical skills development laboratory sessions based in the host tertiary institutions and clinical practice placements which are based in audited partner health services.

Altogether there are 44 pre-registration undergraduate nursing programmes in the higher education sector, including those in the different subdivisions of nursing. Programmes are delivered by both universities and institutes of technology across Ireland. There is an annual intake of approximately 1570 students into nursing and midwifery at pre-registration level. Successful completion of a Pre-Registration Honours BSc degree programme entitles the candidate to apply for registration with the relevant division of the register maintained by the NMBI and the award of a Bachelor of Science Degree (BSc) in nursing. The pre-registration education programme in children's and general nursing (integrated programme) has a duration of four-and-a-half years, while training in the areas of general nursing, intellectual disability nursing, midwifery and psychiatric nursing each have a duration of four years. All Pre-Registration Honours degree programmes in children's and general nursing (integrated: RCN and RGN), general nursing (RGN), intellectual disability nursing (RNID), midwifery (RM) and psychiatric nursing (RPN) take place in 13 higher education institutions (i.e. universities and institutes of technology) in partnership with 57 main health care agencies (hospitals/clinical sites). Nursing degrees in Ireland are offered at National Qualification Framework (of Ireland) level 8 (240 ECTS credits) which equates to level 6 on the European Framework (Rami & Shortt, 2014).

It should be noted that children's nursing, mental health nursing (single specialist qualifications) and midwifery programmes are also offered at post-registration level to registered nurses.

6.1.3.2 *Post-registration nursing education*

Currently post-registration education opportunities for registered nurses and midwives enable the nurse/midwife to register on an additional division of the nurse register. Specialist education programmes, which are post-registration programmes, are designed, developed and conducted with reference to a specific body of knowledge and experience in an area of nursing and midwifery. The NMBI approves these, as well as additional courses that lead to minor awards, supplemental awards and special purpose awards.

In order to qualify as a clinical nurse/midwife specialist, post-registration education relevant to the nurse's or midwife's area of specialist practice, at higher diploma level or equivalent, must be undertaken. This is underpinned by extensive experience and clinical expertise in the nurse/midwife's relevant specialist area of practice. Advanced nurse/midwife practitioners are highly experienced in clinical practice and are educated to master's degree level (or higher) in a specialist field of practice. Their workload involves carrying out holistic assessments, diagnosis, autonomous decision-making regarding treatments, interventions, and discharge from a full episode of care (National Council for the Professional Development of Midwifery and Nursing, 2010).

Primary legislation was introduced in 2006 to enable prescribing authority for nurses and midwives, with the necessary legislative amendments signed into law on 1 May 2007. This allows a registered nurse or midwife, who has the appropriate clinical experience, has completed an approved education programme, is registered with the NMBI as a registered nurse prescriber, and has authority from their health service provider, to prescribe a range of medications within their scope of practice. The first prescribers in Ireland were registered with the NMBI in January 2008.

In an evaluation of the nurse prescribing initiative, support for nurse prescribing rights was high with key stakeholders. Nurses, medical doctors, pharmacists and administrative bodies agreed in general that nurse/midwife prescribing would save time for patients and doctors, and that it was a necessary initiative for today's

health service. There was also support for increasing the numbers of prescribers and the idea that nurse prescribing could lead to financial savings (Drennan et al., 2009).

6.2 The Irish nurse workforce

6.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 11.9, and the ratio of nurses to physicians 3.8.

In 2014 there were 64 970 'active' nurses registered with the NMBI. However, this figure includes nurses who have maintained their NMBI registration but are in fact no longer practising. Scott, Matthews & Corbally (2003) put the number of nurses who are registered on the active file of the register with the ABA but are no longer employed as nurses at about 25% of the total number of nurses on the active register of the ABA, based on their survey response patterns using the active file of the register as a sampling frame. There is also a distinct 'inactive' file for nurses to register on if they are not practising as nurses or are practising outside Ireland. The Health Service Personnel Census estimated a total of 33 992 nurses working in the public health service in 2014 (Department of Health, 2015a). The HSE currently reports 38 000 nurses in the health service, inclusive of trainees, staff, public health and management (HSE, Health Sector Workforce, April 2018). The total number of nurses working in the voluntary, private and other sectors was estimated to be in the region of 9286, although data on nurses working outside the public sector are not routinely collected (Behan et al., 2009).

The RN4CAST data indicate the ratio of nurses to physicians to be three nurses to one doctor, based on organizational data from the 30 study hospitals (large acute adult hospitals). However, it should be noted that these data were collected in 2009–2010, prior to some of the more drastic austerity-driven cuts to the health budget and staffing in the Irish health service.

Linked with overall public sector austerity measures, a memorandum in 2011 sent to members of the HSE and relevant stakeholders indicated the government's commitment to reduce nurse staffing levels from 36 782 full-time equivalent (FTE) nursing professionals in the HSE in 2011 to 34 313 in 2015, representing a reduction of approximately 7%. This happened despite an increase in the population of approximately half a million people between the years 2004 and 2011 and a projected increase of a further possible 7%, to 2015 (Central Statistical Office, 2011). Nurse staffing reductions were achieved through an early retirement scheme, non-replacement of staff on maternity leave, an embargo on the recruitment of new staff, the employment of agency staff and a decrease in the number of educational places available. The departure of high numbers of retirees is likely to lead to a significant loss of clinical expertise. On the other hand, the RN4CAST study suggests that approximately 76% of nurses working in general surgery and general medical wards in Ireland are under the age of 40. The young age profile of the nursing workforce in these settings infers that maternity leave may be a relatively common request and therefore non-replacement of maternity leave staff clearly places significant pressure on the workforce. Nursing representatives and other stakeholders fear that reductions in nurses at the bedside will put pressure on their colleagues and increase risks to patient care and safety. Other factors expected to put pressure on the nursing resource is the expected increase in non-Irish nurses leaving the country, again due to poor economic circumstances (Humphries, Brugha & McGee, 2008; Humphries et al., 2015). Of the female nursing workforce 17% is non-Irish, and across gender a high proportion of these nurses (89% of females, 95% of males) work on a full-time basis.

6.2.2 Deployment and skill-mix models

There is no national mandate and no national data for optimal nurse-to-patient ratios in the Irish health care system. However, data from the RN4CAST study indicated a nurse-to-patient ratio of 1:6.9 at the bedside in the sample of general medical, surgical and mixed general/medical wards in the study.

Nurses in Ireland work a 37.5 hour week. Recommendations by the Commission on Nursing in 2007 to reduce the working week to 35 hours are still outstanding.

6.2.3 Career structures

The introduction of the degree programme has given nursing professional recognition and further opportunities for clinical, education and research career development. Upon completion of their undergraduate degree, nurses in Ireland can apply for staff nurse posts. Higher level nursing positions include Clinical Nurse Manager I, II and III posts. Specialist and advanced diploma and master's programmes have been introduced and clinical nurse/midwife specialist and advanced nurse/midwife practitioner roles have evolved. With the

move of nursing education into tertiary level institutions, nurses and midwives can take up positions as lecturers in the universities and institutes of technology. In addition to the normal academic qualifications required of a lecturer in higher education, i.e. master's/PhD, nursing and midwifery lecturers must also be registered nurses or midwives.

6.2.4 Planning mechanisms

To date, workforce planning in the Irish health service has been limited in its ability to predict the need for future health personnel due to the fact that there is limited information on the supply and demand of health care workers in the private, public and voluntary sectors. Workload assessment tools, staffing systems and workforce planning techniques are varied but lack integration. Whilst progress has been made in the routine collection of standardized nursing data in the public sector, no equivalent data are available for the independent sector. At present there is no centralized system for the routine collection of data on the numbers and profile of nurses working in the independent sector. To achieve a realistic understanding of the future demand for registered nurses and midwives it is necessary to establish a baseline for nursing employment in this sector using reliable and standardized data for nursing in both the public and independent sectors.

In 2009 the Skills and Labour Market Research Unit and the Expert Group on Future Skills Needs developed a quantitative tool for workforce planning within the health service as a whole, by professional/occupational group (Behan et al., 2009). This model enables projections to be made about the numbers of nurses required (as well as other health professions), based on population projections, the estimated number of nurses currently working in both the public and independent sectors, the graduate supply and attrition, and return to work rates. Projections are based on maintaining current numbers of staff to the population. This is an excellent development for workforce planning in the Irish health service. That said, there is a need for the development and implementation of systematic workforce planning data collection systems to improve the availability and quality of data upon which projections can be made. Workforce planning in health care should take into account inter-professional working, combine quantitative and qualitative methods and be conducted in the context of demographic changes (beyond just population change), evolving demand for reconfigured services, socioeconomic developments, the regulatory environment, budgetary constraints, migratory flows, policy initiatives and technological changes (Behan et al., 2009). These are challenges for the future which have been considered within an integrated workforce planning strategy for the health service for 2009–2012 (Health Service Executive/Department of Health, 2009) and the national strategic framework for health & social care workforce planning (Department of Health, 2017).

A National Review of the Undergraduate Nursing and Midwifery Degree was published by the Department of Health in 2012 covering workforce planning and the curriculum requirements for this changed environment. Under workforce planning, it was agreed to maintain the existing number of undergraduate places for student nurses and midwives (1 570). It was recommended that a national framework should be developed to assist with the determination of nursing and midwifery staffing levels and skill-mix aligned to patient acuity/dependency and service developments. A taskforce on staffing and skills-mix for nursing was established in July 2014, chaired by the Chief Nursing Officer at the Department of Health. The taskforce developed a framework to determine the staffing and skill-mix requirements for the nursing workforce, initially focusing on medical and surgical care settings in adult general hospitals (Department of Health, 2015c). This framework was pilot-tested in 2016–2017 and the final framework was published in 2018 (Department of Health, 2018).

6.2.5 Mobility

Throughout the years of Ireland's economic prosperity, there was a policy of overseas recruitment to fill nursing vacancies in the health service. Between 2000 and 2006, 9 441 nurses were issued with work visas/work authorization, of whom 90% were nurses from India and the Philippines. The total number of work authorization/work visas issued to nurses accounted for 60% of all skilled professionals during this time (Barrett & Rust, 2009; Humphries, Brugha & McGee, 2008). RN4CAST study data indicated that 38% of respondents trained for their basic nursing qualification outside Ireland; 52% of this group stated that they had trained in the UK, 21% in India and 17% in the Philippines. Those educated in the Philippines and India reported lower levels of emotional exhaustion and more positive perceptions of the work environment than Irish-educated nurses. The public sector embargo on recruitment, in place since 2009, was only eased in 2015. During its existence, the domestic supply of native Irish nurses increased and many Irish and non-Irish nurses found it difficult to

secure employment. This led to many graduate nurses seeking employment in the UK, Australia and elsewhere. This trend has been reversed since 2015, with additional posts made available across the systems, as austerity measures reduce.

6.3 Structure of nurses' work

6.3.1 Working conditions

Registered staff nurses working in the HSE today receive a starting salary of €28 768. Staff nurse salaries go up to a maximum of €43 904, with a senior staff nurse salary rising to €47 424. Clinical Nurse Managers can earn approximately €52 713 to €69 541. Nurse salaries compare poorly to those of doctors. Consultant doctors working in the public sector in Ireland can earn between €150 000 to over €200 000, depending on their contract and whether or not they became consultants after 1 January 2011 (this is exclusive of income earned through private practice, which is significant in a number of medical specialties). Non-consultant hospital doctors earn €32 938, plus a living-out allowance of €3 913 for an intern, up to €77 283 for a Senior Registrar, with the living-out allowance as per interns added to this. Overtime hours are added to salaries where the individual works in excess of the statutory working week, though subject to the European Working Time Directive. Health care assistants earn approximately €25 834 to €32 906.

Nurses and midwives employed in the public health services have won a number of entitlements, alongside their counterparts throughout public service. Among these are 28 annual leave days. Nurses working outside the public service are entitled to the statutory minimum entitlements of four working weeks leave in the year. Leave entitlements are dependent on contractual issues in relation to hours worked per week. Anyone under a contract of employment is entitled to protection under the Maternity Protection Acts 1994–2004. All contracted employees in Ireland are entitled to 26 weeks' maternity leave with the option to take an additional 16 weeks unpaid leave.

In response to austerity measures including public sector staff cuts, salary reductions and pension contribution levies, the Irish Government and the unions of Ireland came to a mutual agreement on how to proceed in light of the impact of the recession. The *Croke Park Agreement* (formally the Public Service Agreement, 2010–2014) is a formal pay and conditions agreement between the parties whereby the government has promised public service workers, including nurses, no further pay cuts for four years and no compulsory redundancies which might otherwise result from the current Irish economic climate. In return, the government wanted significant cost-savings, industrial peace and increased efficiencies across the public service. The Public Service Stability Agreement 2013–2016 ('Haddington Road Agreement') further set out measures on productivity, cost reduction and reform to achieve the targeted pay bill reduction.

Data from the RN4CAST study revealed that 42% of nurses reported burnout and feeling dissatisfied with their job. Nurses, however, also reported positively on the quality of care provided within their hospitals and said that they would recommend them to others. These findings are likely to be a reflection of the current difficulties being experienced within the Irish health service, in relation to staffing shortages as a result of cutbacks. The RN4CAST study data was collected at a time when the government was in the early stages of implementing significant cuts to the health budget. This put severe pressure on nurses to carry out increasingly heavy workloads, something that continues today.

A positive working environment for nurses is fundamental to ensure a motivated and satisfied workforce. Staff shortages are anecdotally being highlighted as a cause for employee dissatisfaction and burnout. In the RN4CAST study nurses were dissatisfied with both their salary and education leave. When compared with findings from 2001 (Scott, Matthews & Corbally, 2003), it was noted that levels of satisfaction among Irish nurses had decreased over the past decade.

Almost one third of respondents (32.3%, n=444) to the RN4CAST nurse survey were found to be very satisfied with nursing as a career, with a further 39.3% (n=540) stating that they were moderately satisfied. Approximately 11% of respondents (n=152) were very satisfied with their current job and a further 47% (n=650) were moderately satisfied. Levels of satisfaction with specific elements of the job are reported in Table 6.1. In the 2001 empowerment survey of nurses and midwives in Ireland, 74% of respondents were found to be satisfied with their "job as a whole, taking everything into consideration" (Scott, Matthews & Corbally, 2003).

Whilst policies related to work/life balance have been put in place by the HSE to support the recruitment and retention of employees of the highest calibre, it is unclear whether these are making much impact. These policies are implemented by way of a flexible working scheme as well as through job sharing and

Table 6.1 *Variation in levels of job satisfaction among respondents*

Satisfaction with aspects of the job	Very dissatisfied	A little satisfied	Moderately satisfied	Very satisfied
Work schedule flexibility	7.1	14.1	44.6	33.6
Opportunities for advancement	24.3	35.1	35.1	5.5
Independence at work	6.3	16.7	55.2	21.7
Professional status	9.3	19.1	53.6	18
Wages	41.6	32.3	22.1	4
Educational opportunities	22.5	38.2	32.3	7
Annual leave	5.6	13.2	51.3	30
Sick leave	10.4	16.1	50.1	23.3
Study leave	31	31.3	28.8	8.9

part-time employment. The extent to which work/life balance policies are promoted and utilized in the Irish health service is not well documented. Findings of the RN4CAST study indicate that nurses are relatively happy with their work schedule flexibility, independence at work and professional status, with only 21%, 23% and 28% respectively stating that they were dissatisfied with these elements of their work versus education leave and salary. However, more recent restrictions such as the employment embargo, non-replacement of nurses on maternity leave and the non-facilitation of nurses seeking more flexible working arrangements are likely to increase levels of burnout among staff over time.

Heavy workloads are compounded by nurses becoming involved in non-nursing duties, resulting in nursing work being left undone, due to time constraints. As previously mentioned, 42% of Irish nurses who participated in the RN4CAST study stated they were burnt out. In addition, 73% of respondents believed that their workplace had inadequate staffing and resources. Approximately 98% of respondents indicated that they spend some of their time performing non-nursing care, filling in for non-nursing services not available during out of hours, routinely answering phones and carrying out administrative duties. Approximately 88% of nurses stated that they left some elements of nursing work undone due to time constraints. How nurses actually decide on work priorities cannot be gleaned from these self-reported, cross-sectional data, although nurses appear to prioritize some nursing work (medication, treatment administration) over other elements (comfort, talking to patients, for example). These findings lead to the conclusion that the conditions in which those elements of communication we might associate with compassionate care are lacking to enable highly qualified and skilled nurses in Ireland to practise according to their level of competence and capability.

Another finding from the RN4CAST study that may impact job dissatisfaction and burnout amongst nurses is that approximately 60% said they were dissatisfied with opportunities for advancement and further education. Linked with the 'fees initiative' and support for post-registration specialist education following the Commission on Nursing report, there has been an expectation in nursing that study will be funded and time off allowed. However, this is no longer the case. The new Nurses and Midwives Act which will bring in the Continuous Professional Development (CPD) requirement will change this as CPD will possibly be mandatory for annual registration by each nurse (at present annual registration involves fee payment only, once the nurse/midwife is on good standing with the regulator). Lack of opportunity to develop and implement skills and expertise is currently being highlighted by the Irish Nurses and Midwives Organisation (INMO) as something that needs to change. The Organisation argues that the roll-out of nurse prescribing and the development of nurse-led services and clinics, particularly in the community, can result in financial savings. Empowering nurses in this way could serve to increase satisfaction and decrease burnout.

6.3.2 Governance and leadership

Today, nurses occupy positions of influence from hospital level to government. Positions of nurse leadership, management and influence include the chief nursing officer (a position created in the late 1990s) at the Department of Health with responsibility for nursing policy development. In 2013 the chief nursing officer position was raised to the second most senior level in the Irish civil service (Assistant Secretary, equivalent grade to the Chief Medical Officer), signifying a greater focus on

and commitment to the nursing/midwifery contribution to Irish health policy (Department of Health, 2015b).

The HSE incorporates the Office of the Nursing and Midwifery Services Director, whose main priority is to provide leadership and to support capacity building, innovation and excellence in nursing and midwifery.

Nurse management structures at hospital level include:

- The Director of Nursing (DoN)
- The Assistant Director of Nursing (ADoN)
- Clinical Nurse/Midwife Manager 3 (CNM 3), a unit manager/manager over a clinical area (e.g. surgery, medicine)
- Clinical Nurse/Midwife Manager 2 (CNM 2), a ward manager
- Clinical Nurse/Midwife Manager 1 (CNM 1), a 'junior' ward manager

6.4 Synthesis and policy implications

Nurses in Ireland have come a long way since the country entered the EEC in the 1970s. Commitments by government to align pre-registration nurse education to standards set for members of the EEC, along with a determination among nurses for better working conditions, contributed to positive developments for the profession. On the recommendations of the Commission on Nursing (1997), government investment in the nursing professions over the past decade has led to the development of clinical and management career pathways for nurses, opportunities to qualify at bachelor, master's and PhD level and significant role expansion in certain areas. In addition, there is the potential for the nationwide roll-out of nurse-led specialist clinics, nurse prescribing and diagnosis. While much has been accomplished, the constant state of flux within which the Irish health service finds itself poses challenges for the future direction of Irish nursing.

A significant change to the way in which health care in Ireland is currently delivered is anticipated with the introduction of a fully functioning model of primary health care. This is likely to have a notable impact on the delivery of care from a human resource perspective. The new model of care delivery aims to improve the organization and efficiency of the current primary care infrastructure. This should result in a more integrated service with effective primary care teams who work to prevent disease and diagnose, treat and rehabilitate patients in the community, thereby decreasing the need for inpatient care and reducing associated costs. However, the move from secondary to primary care will increase the burden already facing community-based nurses. Commitment to change at many levels will be required to meet the challenges and build the appropriate capacity for the future. It is therefore essential that, in line with change, nurses receive appropriate continuing professional development opportunities to prepare them for the changed/increased demand for community-based care. This will include training and development for nurses across specialties.

By 2036 it is projected that there will be more older persons than younger persons in the Irish population, i.e. up to 1 119 000 persons aged 65 years and over compared with just 750 000 persons aged 0–14 years (Central Statistical Office, 2004). An ageing population poses particular challenges for health care policy-makers who will need to invest in the professional development of the nursing workforce to up-skill them to be able to care for older adults, as well as investing in the infrastructure required to care for the increasing numbers of older people within the Irish population.

The impact of the recent embargo on the recruitment of nurses, in conjunction with a policy of incentivized retirement, has had a downward impact on nurse-to-patient ratios across the health service.

This may result in increased levels of burnout and dissatisfaction, already found to be high among Irish nurses (Aiken et al., 2012). The Minister for Health established a Taskforce on Safe Staffing & Skill Mix in 2014. The Taskforce, under the leadership of the chief nursing officer, is developing a staffing and skill-mix framework for medical and surgical nursing clinical areas, and this is awaited in 2015.

Nurse prescribing and other elements of advanced practice, such as the development of nurse-led clinics for the management of specific chronic conditions, could be introduced to improve efficiencies in health care delivery. At the same time, this could lead to nurse/midwife empowerment and a potential reduction in burnout, dissatisfaction and intention to leave their current position or the nursing profession.

It is important to be aware of the implications of an ageing nursing workforce. Whilst the nursing workforce in Ireland is younger compared to its European counterparts, approximately 22% of the nursing workforce in Ireland is over 50. The HSE lost a significant number of skilled and experienced nurses

and midwives in recent years due to an incentivized retirement scheme. This placed an increasing burden on the adequacy of the nursing resource in the provision of safe patient care. Older nurses are more experienced. The loss of older nurses results in a concomitant loss of clinical expertise that has been found to positively impact patient outcomes. With this in mind, human resource managers should implement policies that aim to retain older, more experienced nurses.

There is a very real need to establish good health workforce planning processes that allow for appropriate staffing levels and ongoing staff development opportunities. It is crucial that workforce planning mechanisms allow for role expansion as well as appropriate recognition and reward where warranted. Steps must be taken to ensure nursing and midwifery continues to be a valued profession that is seen as attractive to potential new entrants.

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7 Lithuania

Olga Riklikienė, Liudvika Starkienė, Jūratė Macijauskienė

7.1 Context-organization of the health system, education and regulation

7.1.1 Lithuania and its health system

Lithuania is a Northern European country with a population of 2.85 million (Eurostat, 2017). Health care spending totals 6.5% of gross domestic product, or US$1 970 per capita (OECD, 2017). In the early 1990s Lithuania was the first country to break away from the Soviet Union with regained independence that encouraged the development of many areas, especially health and education. Over the last two decades the health system has undergone substantial reforms that aimed to improve population health, address issues of equity, establish consumer choice, and improve the quality of care (Padaiga et al., 2006). In the area of health financing, the old integrated model of state-funded health care financing has been replaced by the mandatory system of health insurance since 1997, establishing a split between providers and purchasers of health services (Miskinis et al., 2011). The Statutory Health Insurance Fund, accountable to the Ministry of Health (MoH), is now responsible for the allocation and distribution of resources. The health insurance system is financed by a combination of insurance contributions and, predominantly, tax revenues. This financing model is supported by many health organizations and perceived as a positive shift in policy position by international experts and by major political parties (Černiauskas & Jankauskienė, 2010). The MoH is in charge of the overall

regulation and organization of the health system (Padaiga et al., 2006).

Health care services are provided at three levels: primary, secondary and tertiary, with priority given to primary care and health promotion. There are three types of hospital: national, regional and municipal. The property rights and administrative functions of all national hospitals fall under the jurisdiction of the state (MoH). Regional and district hospitals, as well as outpatient institutions, fall solely under the jurisdiction of the 60 municipalities (Parliament, 1994). A government-approved health care reform programme was started in 2003 and implemented in three stages (2003–2005, 2006–2008, 2009–ongoing). The reform was aimed at improving quality and access to health care services, optimization of the amount and the structure of health care services according to patients' needs, changes in the structure of services, and restructuring of the network of health care institutions. This contributed to significant changes in working conditions (pay, task distribution and infrastructure), as well as better distribution of the services and duties of health professionals (Government, 2003, 2006, 2009).

7.1.2 Regulation and legislation of the nursing profession

In 2001 the Nursing Practice and Midwifery Practice Act passed and nurses were licensed. The Nursing Practice Act ensures that only those who have a diploma in nursing are able to work as a nurse in Lithuania (Ministry of Health, 2001). This put an end to the Soviet tradition in which medical students or other health care specialists with medical degrees (mostly physicians) could work as nurses. The limitation of the title 'nurse' to only those educated in nursing was vital to establish the exclusive and unique status of nurses among health care providers (Karosas & Riklikienė, 2011).

The MoH is the competent authority, responsible for registration and the right to practise as a nurse. The National Nurses' Register, a legal licensure procedure, was started in 2002. The registration and licensing of nurses is one and the same procedure performed every five years by the State Health Care Accreditation Agency under the MoH, where the Department of Professionals' Licensing is responsible for giving licences to nurses for general nursing practice. The same department issues the licences to practice for other personal health care specialists as well (physicians, midwives, public health care specialists). The main requirements for relicensing are practising the profession for at least three consecutive years during the last five years and a minimum of 60 contact hours of compulsory professional qualification improvement through continuing education (Ministry of Health, 2009b). In case of longer than a two-year break in professional practice, the number of continuing education hours is doubled. The national regulation of compulsory professional qualification improvement for nurses as well as for other health care professionals is the responsibility of the MoH. The Order of the Minister issued in 2002 describes the conditions of compulsory professional qualification improvement and a guarantee of 60% of its funding from the state (Ministry of Health, 2002). Universities and colleges independently or in collaboration with professional organizations and societies provide professional qualification improvement courses for nurses and undertake national and international research and practice conferences and seminars, granting certificates of continuing education. The Centre for Competencies of Health Care and Pharmacy Specialists is an institution under the MoH, which also plays a significant role in the continuing professional education of nurses.

The Lithuanian Nurses Association (LNA), as the main professional nurses' organization, continues to bring together a large number of nurses (53% of all nurses) with active international membership of the European Federation of Nurses and the International Council of Nurses. The LNA applies its efforts to promote solidarity amongst nurses and promotes the welfare and economic and social rights of Lithuanian nurses nationally and internationally.

7.1.3 Nurse education

7.1.3.1 *Pre-registration nursing education*

Three universities (since 2014 two universities) and seven colleges in Lithuania provide undergraduate study programmes for nursing through a dual (two levels of entry) system of nursing education. The strategic reorganization of nursing education in Lithuania started with regained independence, underwent major changes, and since 2002 has been linked to the implementation of Directive 2005/36/EC (Karosas & Riklikienė, 2008). Colleges (mostly similar to the universities of applied sciences found in Finland and the Netherlands) provide higher professional BSN level education (full-time, three-and-a-half years, 210 ECTS credits), issuing professional qualification as a nurse for general practice and the degree of Professional Bachelor in Nursing. Universities

provide higher university education (full-time, four years, 240 ECTS credits), issuing professional qualification as a nurse for general practice and the degree of Bachelor in Nursing.

Education of nurses and their professional activities are regulated by many legal acts, declarations and laws related to nursing practice, nurse rights, functions, competence and responsibility, and general requirements for study programmes. The nursing study programme is oriented towards students' study achievements, which, according to the requirements of knowledge, abilities, skills, and competencies necessary for nurse professional activity, corresponds to level VI of the Lithuanian Qualifications Framework (Government, 2010).

Admission of students is done in accordance with general provisions of the rules for general admission to undergraduate and integrated studies at Lithuanian higher education schools (Association of Lithuanian Higher Education Institutions through the general admission system, 2011) and admission rules approved by the higher education institutions. Candidates holding at least secondary education or equivalent education certified by respective documents can apply. The most important admission criterion is a competitive score. A competitive score is calculated by summing up multiplications of the grades received in competitive teaching subjects at school (recalculated) and respective leverage coefficients. When selecting a higher education school and study programmes each school graduate lists them at their own discretion in rank order. There are 12 of them from 2010.

Since 2009 numbers of state-funded places have been allocated by the Ministry of Education and Science (MoES) to certain fields in biomedicine for colleges and universities. One of the main pitfalls of general admission to the higher education institutes is the limited number of state-financed places driven by financial rather than demographic or demand-side considerations (*numerus clausus*) for biomedicine, to which nursing belongs. Nursing study programmes used to compete with other health care professions (medicine, dentistry, pharmacy, etc.), and suitable candidates for nursing competed with other students for state-funded places. Competition used to be especially high and uneven for entry to university programmes. From 2013 nursing, midwifery and public health study programmes in the universities were separated with appointed state-funded places for these programmes, which enabled more state-funded places in the universities for these programmes. Also, higher education institutes can apply to the MoES with the request to allocate certain numbers of state-funded places for the programmes producing graduates who are in demand in the country (state-funded targeted study programme seats). The students who choose this type of financing do not pay for their studies but have an obligation after graduation to work in the country for three years. The Lithuanian University of Health Sciences every year applies for targeted financing for the nursing programme due to the high demand for nurses in the health care sector. Students wishing to study nursing but who are unable to obtain state-funded places pay for themselves, even though the costs are moderately high. In Lithuania all higher education institutes providing nursing education are public institutions.

For more than ten years nursing students have been exclusively taught by nurses who have significant practical experience within the nursing faculty. Student nurses undertake their clinical training at the largest hospitals, primary health care centres or nursing and supportive treatment hospitals under the supervision of qualified mentors. Different sources of EU structural and other funds have been obtained to support a range of projects (production of teaching/learning material, improvement of equipment and infrastructure for skills development). Despite the changes in the quality of nursing education, the attrition rate for nursing students reaches up to 20% (18.9% in colleges and 19.1% in universities) (Lithuanian University of Health Sciences, 2011). This forces nursing educators to find methods to select the most highly motivated candidates and to keep them motivated throughout their studies.

7.1.3.2 *Post-registration nursing education*

The five nursing specializations – anaesthesia and intensive care, community, mental health, emergency care, and operating room nursing – ensure the quality of nursing care (Ministry of Health, 2009a). Specialized nursing education is organized outside formal nursing education as postgraduate training where colleges and universities provide this specialized nursing training. The content of theoretical and practical training, requirements for the learning environment, and the duration of specialization programmes is defined and varies from 480 contact hours of training for mental health and operating room nursing to 960 contact hours of training for anaesthetists and intensive care nurses (Ministry of Health, 2010). There were 11 978 nurses with different nursing specializations. The majority were community nurses (6 174) (Lithuanian University of Health Sciences, 2011).

The first two-year master's degree programme in nursing was established in 1999 and the only doctorate degree programme in nursing, as a four-year programme, was introduced at LUHS in the same year. Nurses with a bachelor degree can also continue their studies at master's level in different programmes, such as sociology, psychology, pedagogy and management. In 2014 the MoH approved the concept of Advanced Practice Nursing (Ministry of Health, 2014) with subsequent amendments in Nursing Practice and Midwifery Practice Law (Parliament, 2015), which allowed applicants to start the two-year master's degree programme in advanced practice nursing for the first time.

Ensuring the opportunity for lifelong learning, part-time nursing studies are provided over a one-and-a-half to three years' period to facilitate the continuation of education at advanced level for current registered nurses in several higher educational institutions. Prior learning is recognized and accredited by a range of educational institution(s) and programmes (Ministry of Education and Science, 2003). According to national regulations, part-time studies are not funded by the state and are reimbursed by students' personal resources or by third parties (e.g. employers).

The Centre for Study Quality Assessment in Higher Education is an independent expert institution, founded by the MoES, which implements the external quality assurance policy in higher education through mandatory accreditation of the programmes. This agency advises the higher education institutes on self-assessment with the involvement of international experts on nursing education and practice who provide insight and guidance on the itemized aspects of the programme curriculum and its implementation. Only accredited nursing programmes can enrol the students and provide study programmes.

7.1.3.3 *Enrolees in nursing*

In 2014, 536 graduates completed study programmes in nursing. In universities this number includes not only graduates from the first level (undergraduate programmes) (around 80 annually) but also diploma nurses educated to degree level. During the last decade the number of university graduates grew nine-fold from 31 in 2000 to 267 in 2010 (mainly due to rapidly increasing numbers of diploma nurses educated to degree level), but in 2014 the number of university graduates dropped to 153, while the number of college graduates dropped from 562 in 2000 and 638 in 2005 to 332 in 2010 and 383 in 2014 (Health Information Centre at the Institute of Hygiene, 2011, 2015).

7.2 The Lithuanian nurse workforce

7.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1000 population was 7.7, and the ratio of nurses to physicians was 1.8. According to the Health Information Centre at the Institute of Hygiene the physician-to-nurse ratio in 2001 was 0.49, while in 2010 it was slightly higher (0.54). The physician-to-nurse ratio in urban areas (0.65) was almost twice that of rural areas (0.35) in 2010. The same ratio in the private sector was 0.95, although data on the number of nurses in the private sector is not available. Therefore the ratio was calculated per all privately practising nursing, midwifery and other personnel (including nurse aides, specialists in laboratory diagnostics, dieticians, specialists of physical medicine and rehabilitation, etc.). According to the Health Information Centre at the Institute of Hygiene, the number of nurses over the last decade (2001–2009) decreased slightly both in absolute numbers (from 25 684 to 22 776) and in ratio per 1 000 population (from 7.37 to 6.80; average annual change of –1%) (Lithuanian University of Health Sciences, 2011). In 2017 the total number of practicing registered nurses was 21 903 or 7.79 per 1 000 population; the total number of licensed registered nurses was 27 714. The current situation is best described as limited shortages. Two main factors determine why extensive undersupply is not currently observed: (1) previous high enrolment numbers to nursing studies programmes (however, over the last decade the numbers were reduced quite drastically and as a consequence even the replacement by new graduates of nurses who leave the profession through 'natural' attrition (retirement and death) cannot be predicted, and (2) a substantial decrease in the number of hospital beds in 2001–2009 and the lack of services in the community (Starkienė et al., 2011). In part, the decrease in nurses' numbers was compensated for by the declining population numbers (mainly due to emigration). However, the proportion of older adults, who account for a substantial proportion of health care services, has increased and is projected to increase further. It was projected that during 2011–2025 more than a quarter (28.1%) of the current nursing workforce would leave the profession, mainly due to retirement or death, and to a small extent emigration. To ensure current substitution levels, at least 460 nursing students need to be enrolled annually (current admission numbers are 688). However, bearing in mind the low physician-to-nurse ratio and the further predicted increase in nursing

services, these numbers should be higher. As wastage from nursing studies is 19% both in colleges (which train the majority of nurses) and universities, urgent decisions are required regarding the changes in admission arrangements to nursing studies programmes (the current mechanism is based on competition for places among all applicants; prospective students can apply for a place to several higher education institutes simultaneously) and the provision of continuous mentoring support for nursing students, as well as extensive research into the reasons and determinants for dropping out (Lithuanian University of Health Sciences, 2011).

The average age of nurses varies from almost 41 years (anaesthesia and intensive care nurses) to nearly 50 years (community nurses). The average age of general practice nurses, who comprise the largest part of the workforce, was 45.3 years. Due to unfavourable retirement conditions (e.g. pensions are lower than wages), half (50.4%) of the nurses who reach retirement age continue to practise until the age of 70 years, and 20.7% even continue working beyond this age. In 2011 the vast majority of nurses were women. The proportion of men ranged from 0% (paediatric nurses) to 2.6% (community nurses) (Lithuanian University of Health Sciences, 2011).

The National Nurses' Register is linked to the Population Register at the Ministry of Internal Affairs. Deceased nurses are removed from the list in good time. A cross-sectional study carried out in 2011 revealed that the list of licensed nurses does not actually reflect the number of working and practising nurses: 85% of licensed general practice nurses were practising nursing, but almost 6% were working in other areas and 9% were not economically active (retired, unemployed or had left the country) (Lithuanian University of Health Sciences, 2011). According to the Department of Statistics, the unemployment rate of women in the general population was 14.4% in 2010 (Starkienė et al., 2011); however, indicators from the general population and indicators from nurses cannot be directly compared since the basis for calculations of inactive nurses was not the overall population who were trained as nurses, but those nurses who were licensed. For new nursing graduates licensing operates automatically for two years after completion of studies without any additional requirements. Later on, every nurse is required to renew their licence to practice every five years according to the set of requirements as a valid licence is compulsory for nursing practice.

The majority (88.8%) of nurses practised in one organization, and 10.3% at two workplaces. According to the Labour Code, the working week is limited to 60 hours; this regulation is applicable to all professions (Parliament, 2002). Data on the proportion of full-time to part-time workers are not available, but the average ratio of full-time equivalents per one nurse is 1.1 (ratio is 1 for community nurses and 1.2 for anaesthesia and intensive care nurses). Nurses are unevenly distributed geographically. In 2012, 62.1% of nurses practised in urban areas. For example, the difference in the ratio of nurses per 100 000 population in the highest nurse-populated area (Klaipeda city, n=1120) is 7.3 times greater than in the lowest nurse-populated area (Alytus district, n=144) (Health Information Centre at the Institute of Hygiene, 2011).

At the time of the study, 1.8% of community nurses, 3% of mental health nurses, 3.1% of paediatric nurses, 3.6% of general practice nurses and 7.9% of anaesthesia and intensive care nurses were on three-year maternity leave. There is no data source providing data on marital status and numbers of nurses with children (Lithuanian University of Health Sciences, 2011).

7.2.2 Deployment and skill-mix models

There has been a recent study on task shifting and substitution issues in community nursing and general medical practice (Lithuanian University of Health Sciences, 2011). It was found that community nurses provide a large amount of administrative, courier and auxiliary activities. The opportunity to express their competences depends on the work environment; some of the competences cannot be realized because of the lack of legal mandate. Currently, family physicians are responsible for the professional activities of community nurses. The main recommendations were to draw a clear line between the professional activities of family physicians and community nurses working in primary care via establishing consultation rooms where nurses would practise independently (e.g. non-pharmaceutical prescriptions, prevention programmes, patient teaching, health promotion, etc.) (Lithuanian University of Health Sciences, 2011).

According to the latest Health System Reform Framework for 2011–2020 issued by the MoH and confirmed by Parliament, integration of nursing services into primary health care institutions will lead to the transfer of hospital activities into the community, providing care for older adults and end-of-life care (Ministry of Health, 2011). In this situation the responsibilities and obligations of nurses will grow, and thus it is necessary to increase the number of community nurses with high qualifications

and to improve their work conditions consistent with autonomous activities.

7.2.3 Career structures

The career structure for nurses is expanding in Lithuania and is linked with nurses in advanced practice roles, head of nursing or nursing administrator positions in health care institutions or educator positions in higher education institutions. Despite the differences in educational levels and qualification degrees in clinical practice, all nurses in Lithuania can apply for the same position as a nurse. Generally, in university and teaching hospitals nurses with higher education and master's or PhD degrees occupy the roles of nursing directors or nurse administrators. The higher remuneration for nurses with higher education or scientific degrees (e.g. plus 10% of salary for a PhD degree) is more the exception than the rule and depends on the institutional resources and local policy. The preference for higher education for nurses applying to managerial or any other advanced position in practice (e.g. nursing coordinator) is not nationally sanctioned and also depends on local requirements. The trend is that after graduation from master's and doctoral studies nurses more often choose a career in a college or university as a nurse educator or nurse researcher.

7.2.4 Planning mechanisms

Planning of the health workforce was initiated in 2000. In 2003 the Minister of Health approved the Strategic Planning of the Health Workforce in Lithuania in the 2003–2020 programme. This was updated in 2005 with new objectives aimed at integrating health workforce planning within overall health sector reform. The Lithuanian University of Health Sciences was appointed by the MoH as the supervising organization for implementation of this programme (Ministry of Health, 2003). In 2010–2011 the MoH, with the assistance of EU Structural Funds, financed the most comprehensive analytical study on the health workforce (physicians, nurses and midwives) in Lithuania (Lithuanian University of Health Sciences, 2011). It aimed to carry out a comprehensive analysis of current databases, and the first linkage of all data collected by different institutions (on the level of every professional's personal records) was performed. This study was carried out with the aim of gaining a comprehensive and complete picture of the current health workforce, involving inflows from the education system (including attrition from studies) and losses from the profession (due to death, retirement, emigration and moving to other professions), as well as forecasting future supply and requirements for the health workforce according to various scenarios. It also elaborated the minimum admission numbers to study programmes until 2025 in order to maintain sufficient numbers in the health workforce in the future.

The nursing workforce planning system is not an institutionalized programme and there are no annual plans as such. Any data from this organization are, however, fed into policy considerations at the MoH, the MoES and the Ministry of Finance on a project-by-project basis only. At present, statistics on the nursing workforce are collected by several institutions and different databases have to be linked in order to obtain comprehensive data.

The current workforce supply forecasting model is based on a methodology developed by Dewdney (Dewdney, 2001). The projected supply of the nursing workforce equals the supply of the current period plus the annual number of graduates (adjusted with annual drop-out from studies) minus the annual number of those leaving the profession for various reasons (retirement, death/illness, migration, move to other professions, etc.).

The methodology for determining the requirement for the health workforce was approved by the MoH in 2007 (Ministry of Health, 2007). In 2011 it was, however, stated that it should be revised to better reflect the issues in health workforce planning (Lithuanian University of Health Sciences, 2011). The only attempt to quantify the demand for nurses until 2015 was undertaken in 2005 via a Delphi survey. According to the panel of experts, demand for nurses was 800 per 100 000 population, higher by 17.6% than it was in 2010 (Starkienė et al., 2006).

7.2.5 Mobility

At the current rate of migration, Lithuania's health system is not dependent on foreign health professionals. MoH data on inflows indicate that only 10 nursing diplomas from countries outside the EEA (Armenia, Belarus, Russian Federation, Ukraine, Uzbekistan) were accredited between 2005 and 2008 (Padaiga, Pukas & Starkienė, 2011). Thus, the percentage of foreign nurses remains very low in comparison to the number of Lithuanian nurses. Mobility of nurses is described further in Section 7.4.

The MoH issues 'certificates of good professional standing' for nurses who wish to practise abroad.

Data are available for the period starting 1 May 2004. However, the number of these certificates does not reflect the real migratory flows, because nurses may choose not to leave the country or to go abroad only on a short-term basis. During the period 1 May 2004–1 November 2010 there were 1262 certificates of good professional standing issued to 1012 nurses. The average age was 37.8 years (much lower than that of the overall nursing population), and men constituted 2.6% (a higher proportion than in the overall nursing population). Data linkage with the Social Security database at the Ministry of Social Affairs and Labour, which contains records of all employed persons (in both public and private sectors), revealed that only 19.8% of those nurses were practising nursing on 1 January 2011; 11.7% were working in sectors other than health care, and 68.5% did not have records on their employment. This suggests that issuing certificates of good professional standing is a strong indicator of an intention to leave the profession (Lithuanian University of Health Sciences, 2011).

7.3 Structure of nurses' work

7.3.1 Working conditions

Usually nurses are employed under open-ended contract conditions and only nurse managers (middle and top management) can be contracted for a five-year period. The majority of nursing staff are full-time at 38.5 hours per week, with nursing managers working 40 hours per week/8 hours per day. There are different types of nursing shift in hospitals, depending on the organizational model: morning/afternoon shift of 6–8 hours, day or night shift of 12 hours, and 24-hour shifts on weekdays, weekends and days off. Meal and rest breaks during the working shift, as well as the standard work duration of 48 hours/week, as in Directive 2003/88/EC, differs in each institution and depends on bilateral collective agreements. Registered nurses in Lithuania, in line with other health care specialists, are provided with 36 days of annual leave.

The Report of the Ministry of Health (2001) stated that the workload of nursing staff was very heavy, and the situation has not changed in recent years. In accordance with MoH orders, since 2001 the stakeholders and executive directors of health care institutions take responsibility for determining the workload of their personnel (Ministry of Health, 2001). At the beginning of 2011 five national documents regulating nursing and other health care personnel workloads were validated in the country stating nurse-to-patient ratios in nursing and supportive treatment hospitals, in home care, in palliative hospitals and home care, in neonatal intensive care units and intensive care units for children and adults. Norms for nurses' workloads in those fields were arrived at by working groups at the MoH, which involved nurses and work group members, and were based on economic calculations, supported by the requirements of Labour Law, international standards of nursing practice and negotiation with professional bodies as employees representatives. An official letter was sent from the LNA to the Committee of Health Affairs at the Parliament of the Republic of Lithuania on 12 October 2010 stating that nurses' salaries in Lithuania remain the lowest among the EU countries and the nurses' workload was unsafe. The Committee reacted to the situation with open discussion and recommendations for the MoH, 1) to define the upper limit of the workload of nursing staff, 2) to promote the active and autonomous participation of nurses in health services in the community (home nursing care, health promotion) and 3) to link the funding of health care services with care quality in accordance with patient safety and staff workload (Parliamentary Committee on Health, 2010). Recommendations for nurses' workloads in other fields were also developed by working groups at the MoH in 2012.

The medical community (mainly medical doctors' and nurses' associations) had been pressing the MoH not only to restructure health care institutions and improve infrastructure but also to increase salaries. In 2005 the MoH, the medical associations and the Health Affairs Committee in Parliament signed a memorandum on salary increases (20% annually for medical doctors and nurses in 2005–2008). This is likely to have had a positive influence on attrition to other better-paid professions and on emigration rates (Padaiga, Pukas & Starkienė, 2011).

The Department of Statistics provides annual data by economic sectors but not by profession. In 2014 the average monthly salary in the health care sector was €882.7. However, gender differences were more obvious in the health care sector (men received 28% higher salaries) (Department of Statistics, 2017). Salaries of nurses were €650.2 in 2014 (the latest year for which data are provided). Salaries differ by health care institutions and are determined at the highest management level; there are no mechanisms to regulate salaries at national or regional levels.

In order to retain more nurses in primary health care institutions, the Minister of Health implemented an incentive plan in 2011, stipulating that if the number

of full-time equivalents (FTE) of nurses and midwives (combined) in primary health care institutions is lower than the number of family physicians' FTEs, the basic payment to the institution will be decreased accordingly (Ministry of Health, 2011).

State policy on maternity leave guarantees for each mother or father their previous work place on an open-ended contract up to three years after the birth of their child. During the first one or two years maternity allowance is paid from the Social Insurance Fund using an individual calculation based on previous salary average (100% for one year or, if two-year maternity leave is chosen, 70% for the first year and 40% for the second year). Nurses usually stay out of work for a two-year maternity leave period. Nurses with two or more young children (up to 12 years) also take one day off per month, which is set aside for one of the parents by the Labour Law. There are flexible policies with respect to the family circumstances of workers.

During more than 20 years of independence, there has been an obvious culture change in Lithuanian nurses' values from the socialist principles of equality and collectivism towards the principles of individualism and professional autonomy. To strengthen the political representation of nurses the National Nursing Forum was inaugurated in 2005, where the first nursing policy and strategy guidelines were approved (Lithuanian nursing policy strategy guidelines, 2005). This initiative was continued after five years and policies on Lithuanian nursing education, science and practice development for 2010–2015 were issued with the purpose of reviewing the changes and achievements in nursing education, research and practice development to support the trends of nursing development (Trends in Lithuanian nursing education, science and practice development for 2010-2015, 2010). The main problems highlighted were low wages and high workloads, undifferentiated pay scales by educational level, intensity of the work done, complexity, responsibility, and level of professional experience. Such work conditions for nurses perpetuate attrition from the profession and undermine satisfaction for patients and nurses themselves, as well as depreciating the prestige of the profession.

Multidisciplinary research studies during the last ten years have investigated working conditions and health of nursing staff in Lithuania. The study on the interdependence between work environment and health conditions among nurses found that only 14.5% (n=2101) of Lithuanian nurses evaluated their work environment as positive (optimal), and the most common problems identified were chemical pollution (42.8%), stressors (43.0%), and noise (32.1%) (Januškevičius, 2006). The potential influence of disinfectants, biological factors and latex dust on health care personnel was analysed, and the psychosocial conditions of work (stress, fatigue, burnout and dis/satisfaction with work) and their impact on nurses' health were reported as well. A quarter (25.5%) of medical staff using latex gloves every day, mostly in operating theatres, had experienced allergy symptoms and positive skin reactions (Jankauskas, Dubakienė & Jurkuvėnas, 2002). Evidence is lacking on the negative influence of cytostatics and anti-tumour medications on nurses in Lithuania and there is no regulation of health and safety norms in working conditions and rules, or on the safe level of cytostatic concentration in the air in the working environment of medical staff. Burnout among Lithuanian nurses working in cardiac surgery centres was investigated and it was found that the majority of nurses experience physical fatigue (75%), psychological fatigue (86.1%) and emotional stress (84.4%). All of this drives dissatisfaction in the workplace, causing conflicts between nurses and their job environment (Vimantaitė & Šeškevičius, 2006). The study on work satisfaction among community nurses showed that 636 (62.6%) nurses were satisfied with their work, 143 (14.1%) were not satisfied, and 237 (23%) were undecided about the answer. The main two reasons for dissatisfaction were professional and financial insecurity in the future (Gerikienė, 2007).

7.3.2 Governance and leadership

All public health care institutions must have a supervisory board and councils for medical and nursing practice (Parliament, 1996). The number of members in the collegiate management bodies, the procedure for the formation of these bodies, the rights and obligations of their members, the conditions of remuneration for work, and liability are determined in the statutes of the public health care institutions. The main competences of the nursing council are centred around nursing practice: 1) to discuss the issues of organization of patients' nursing and its improvement; 2) to discuss the issues of working time and remuneration of nurses; 3) to identify the needs of continuing education for nursing personnel; 4) to analyse the workload of nurses. Nursing councils present recommendations to the head of the institution. If the head of the institution does not agree with the recommendations, the nursing council has the right to approach the founder of the institution (MoH or municipality). In many institutions, especially the bigger ones, there are positions of director for nursing, deputy

director for nursing or chief nursing administrator. By requirement, these management positions are retained by nurses after individual nomination by the head of the institution, or they are elected during the public competition.

There is no position of national chief nurse in Lithuania; however, there are chief specialists who are responsible for nursing at several departments including the Department of Management of Health Care Resources at the MoH. In 2011 three chief specialists, all nurses with a professional nursing background, were in charge of nursing affairs at the MoH. In July 2015 the Department for Nursing Coordination was established in the MoH. Nurses are also represented on the National Board of Health and the Board at the MoH.

7.4 Synthesis and policy implications

Over the last two decades the main developments of the health care system in Lithuania were: reformed financing from a centralized service model towards a system of mandatory health insurance; ownership of health care institutions transferred into public and private sectors; and the provision of health services geared towards accessibility and primary care services with further focus and support for expanded home nursing services.

Nursing practice is regulated by the MoH and associated institutions, which are responsible for registration, licensing and compulsory professional qualification improvement. Five-year Nursing Policy Strategy guidelines, approved by academic and professional nursing institutions, support the continuous development of the profession. Professional nurses' interests are represented by the Lithuanian Nurses' Association, which has international visibility.

Nursing education in Lithuania is provided by the universities and colleges (binary education system) according to Directive 2005/36/EC with amendment. Admissions are organized through a centralized system to all institutions of higher education, although the number of places for certain fields, including nursing, are regulated by the state every year. A limited number of state-funded places put those who wish to study nursing in a competitive position, especially in universities. Some students are self-funded. On the other hand, excluding motivation as a criterion for being enrolled in the programme most likely raises the value of school grades and prevents highly motivated persons from being invited onto nursing programmes.

Nursing study programmes are oriented towards students' study achievements with the implementation of ECTS and are accredited regularly by external international experts invited by the Centre for Study Quality Assessment for Higher Education (under the MoES). The attrition rate from nursing studies reaches up to 20%, although it varies between institutions. All three levels of educational degree (bachelor, master's, doctoral) are quality assured in the country.

Over the past decade the number of nurses has slightly decreased with an average annual change of –1% but nurses still remain the largest group of health care professionals in the country. Findings from a Delphi survey revealed that the demand for nurses was nearly 18% higher than the current supply; however, extensive undersupply of nurses is not currently apparent due to previous high enrolment of nursing students. Decreased numbers of hospital beds, shrinking capacity and income for hospitals, and the lack of corresponding development of community services resulted in lower demand for nurses. Projections for 2011–2025 warn that more than a quarter of the current nursing workforce is due to leave the profession, mainly for demographic reasons (retirement). To date, relatively few nurses have emigrated and the inflow of foreign nurses into the country has been negligible. Due to unfavourable retirement conditions (low pensions), half of the nurses who reach retirement age continue their professional activities. Geographical mal-distribution remains an important characteristic of the nursing workforce. Another important indicator is the high physician-to-nurse ratio (0.54 to 1 nurse, 2010), which limits task shifting, especially in primary care. Thus, future strategies should focus on admitting higher numbers of highly motivated students into nursing with constant mentoring throughout the study process and the establishment of nursing positions in the health care sector.

The career structure for nurses is very limited in Lithuania and is mostly linked with managerial positions in health care institutions or academic careers in higher education and research institutions. Special requirements for certain positions in the clinical area are locally determined, thus degrees are preferred but not mandatory in clinical nursing practice. Key future policy strategy is to develop nursing career pathways linked with educational level, professional experience, workload and standards of clinical practice.

The working conditions of nurses have been investigated by several studies, mainly focusing on nurses' opinions related to their working conditions. The studies revealed

that nurses were exposed to the potential influence of biological agents, experienced fatigue, stress and work dissatisfaction, and experienced financial and professional insecurity. The high workload is one of the main complaints of nurses in clinical practice. On the positive side, state policy on maternity leave is quite generous, and nurses raising children are eligible for some social benefits.

The Report of the MoH stated that the workload of nursing staff has been very heavy for some years. Workload still remains a major concern, especially in nursing and supportive treatment hospitals. Another problem raised by health care professionals is inadequate salaries, even though there has been an increase over the past years. The MoH, the medical associations and the Health Affairs Committee in Parliament signed a memorandum on an annual salary increase of 20% for medical doctors and nurses in 2005–2008. This is likely to have had a positive influence on attrition to other better-paid professions and emigration rates. Despite the increases, salaries for nurses are still lower than the national average for all sectors. Currently, Parliament is addressing the existing problems by focusing on defining the upper limit of the workload for nursing staff, promoting the active autonomous participation of nurses in the community, and linking the funding of health care services with care quality in accordance with patient safety and staff workload.

The current challenge for the Lithuanian government, however, is to maintain qualified nurses in Lithuania, to increase salaries, and to improve the physical and psychological working conditions for nurses.

Lithuania has developed several policy documents concerning health workforce planning, the Programme for Strategic Planning of the Health Workforce for 2003–2020 being the most important one. The current workforce forecasting model, especially on the demand side, which assumes the current situation is acceptable, has some limitations and needs to be further revised. One of the main challenges for the future is the establishment of a comprehensive system of nursing workforce planning. So far, there has been no consistent and long-term policy in this area, particularly one that takes account of an ageing nursing workforce, changes in student enrolment mechanisms, and mobility factors, as well as the ageing population. A unified register of health professionals, which is expected to be an effective managerial tool for achieving the objectives, was scheduled for launching in 2015.

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8 The Netherlands

Getty Huisman-de Waal, Theo van Achterberg, Lisette Schoonhoven, Maud Heinen

8.1 Context-organization of the health system, education and regulation

8.1.1 The Netherlands and its health system

The Netherlands is a Western European country with a population of 17.08 million (Eurostat, 2017). The Dutch political system is a parliamentary democracy. The health care system in the Netherlands is rooted in the 'Bismarckian' social insurance tradition, in which there exists a mandatory social insurance for all citizens. In 1967 a social insurance scheme replaced subsidies to inpatient long-term care, mental health and disability services. This system remained unchanged until the health care reform of 2006, which can be seen as a further refinement of the old Bismarckian system. The reform introduced a single compulsory insurance scheme for essential curative care, in which multiple private health insurers compete for insured persons. This reform has radically changed the roles of actors in the health care sector, in particular the roles of health insurers and patients. Supervision and management of the system have been largely delegated from the government to independent bodies. The organization of social support has become a municipal responsibility (Schäffer et al., 2010). The role of the government changed from direct control of volumes, prices and productive capacity to setting the 'rules of the game' and overseeing whether markets are working. The government controls the quality, accessibility and affordability of health care. This leaves health care insurers and health care providers as the market players. In the health care purchasing market

health insurers can negotiate with providers on price, volume and quality of care. In the health care provision market, providers offer care to patients. In principle, patients are free to choose their provider. However, health insurers may impose restrictions upon freedom of choice (Schäffer et al., 2010). Between 1998 and 2007 health expenditure increased in real terms by 38%. Health care spending nowadays totals 10.5% of gross domestic product, or US$5 385 per capita (OECD, 2017).

8.1.2 Regulation and legislation of the nursing profession

The 1993 Individual Health Care Professions Act (BIG) regulated the registration and licensing of health professionals in the Netherlands. According to the Act, anyone holding a licence (from the respective professional association) and BIG registration, whether or not they are a Dutch national, was allowed to practise in the field of health care, taking into account 1) stipulated restrictions and 2) protected professional or academic titles. Stipulated restrictions are reserved acts that may only be performed by physicians or other groups of designated professionals. This list describes potentially high-risk actions, which require a high level of competence. Protected professional or academic titles as in Articles 3–33 of the Act specify the professions to which a system of registration and professional title protection applies. These professions are required to comply with legal educational standards and are included in the so-called BIG register (discussed below), which is an instrument of the Act. A sanction specified in the Act is disqualification from practising (Schäffer et al., 2010) .

The BIG register contains well over 350 000 health care providers (November 2015). Any citizen can access this register by telephone or via the Internet to check the competence of a care provider. In addition to proof of registration, the register provides information, for example on whether physicians or nurses are specialized in certain areas, or whether a health care provider is suspended under a disciplinary law. In January 2009 five-yearly re-registration was introduced. The register includes physicians, dentists, nurses, physiotherapists, midwives, psychotherapists, health care psychologists and pharmacists (Schäffer et al., 2010). Enrolled nurses are not included in this register. To remain on the register, health care professionals are required to have worked at least 2 080 hours or have undertaken the equivalent in educational and professional development.

Traditionally, quality improvement among Dutch health care providers has been largely self-regulated. This began to change with the Care Institutions Quality Act of 1995, which offered a simple framework for quality assurance and improvement. The Act mandated that every profession or organization in health care set its own standards for optimal care; develop strategies for monitoring and improving care; and create systems to enable public reporting to the health care inspectorate. The first major movement to improve quality in the Netherlands focused on the development of national clinical guidelines. This initiative was spearheaded by the Dutch Institute for Health Care Improvement, which stimulated the development of multidisciplinary guidelines in 1983, and the Dutch College of Family Physicians (Nederlands Huisartsen Genootschap), which supported the development of primary care guidelines in 1987. Organizations of medical specialists, nurses, allied health workers and mental health professionals began to develop their own guidelines in the mid-1990s. A large body of guidelines has since been developed and is regularly updated, mainly through systematic and rigorous evidence-based procedures (Grol, 2001). Educational materials and tools have been developed to supplement these guidelines. Furthermore, specific indicators to monitor adherence to the primary care guideline recommendations have been developed and rigorously tested (Grol, 2006).

8.1.3 Nurse education

8.1.3.1 *Pre-registration nursing education*

Registered Nurses can be educated at an intermediate, higher or academic level and are required to register in accordance with the Individual Health Care Professions Act.

The intermediate level of nurse education (MBO-V) takes four years and includes at least 6 400 hours of theory and practice. Students may choose vocational training at school (Beroeps Opleidende Leerweg, BOL), including periods of practical learning, or an apprenticeship training (Beroeps Begeleidende Leerweg, BBL), which involves being employed for at least 24 hours a week and following education for at least one day a week. The higher level of nursing education (HBO-V) also takes four years and results in the Bachelor of Nursing (BN) degree. This includes 6 720 hours (240 ECTS credits), with a minimum of 1 535 hours of theoretical learning and a minimum of 2 300 hours of on-the-job instruction. Nurses who complete the

intermediate educational course become general nurses, while those with a higher education are also prepared for more leading roles in patient care with regard to quality improvement and integrating evidence-based practice, for example. Enrolled nurses are trained in a practice-based programme that takes three years to complete. They receive a diploma but are not BIG registered and are referred to as 'carers'.

8.1.3.2 *Post-registration nursing education*

Continuing education for nurses takes place at the discretion of the health care institutions where they are employed. In order to retain registration as a nurse, only a minimum requirement related to the number of hours worked needs to be met. However, the Dutch Association of Nurses and Carers (V&VN) have taken the initiative to develop a Quality Register for Nurses. On a voluntary basis, nurses can record their training and professional development activities online in a personal portfolio. The register enables individuals to compare their skills with professionally agreed standards of competence.

The V&VN sets the standard for 'sufficient continuing education' at 184 hours over a period of five years. Nurses are encouraged to use the register for job applications, to provide their employers with access to their portfolios, and to establish a personal professional development plan in conjunction with their employer (Schäffer et al., 2010).

To register as a nurse specialist, nurses must have a diploma from a recognized master's level course. Master's in Advanced Nursing Practice (MANP) education programmes have been accredited since 1997 (Roodbol, 2005). At present, there are nine places where the MANP education programme can be followed. In 2011 about 268 students started the programme. In 2009 the first MANP mental health education programme was approved by the Minister of Health.

An academic education in nursing is available at university level. A programme in nursing sciences at bachelor and master's level is offered at the University of Utrecht. Other programmes in health sciences relevant to nursing are offered in several universities (e.g. Maastricht, Rotterdam, Groningen). These academic programmes prepare students for functions in policy and research.

8.1.3.3 *Enrolees in nursing*

Over the past few years the inflow into HBO-V and MBO-V education has increased. In 2012, 7730 students were recruited at the intermediate level (associate degree), while 4696 were recruited at the higher level (bachelor degree). In 2011 about 357 students embarked on master's and doctoral level studies. Nurse education is the most popular vocational form of education (AZWinfo, 2014; www.cbs.nl). However, the total number of persons receiving nurse education has stagnated since 2003. This stagnation is mainly due to a decrease in the number of students who choose to be employed and learn at the same time (BBL students). The numbers of students who successfully complete their programmes range from 95% (2010) among the 'school-based' students (BOL) to 85% (2010) in the practice-based students (BBL) (AZWinfo, 2014). The average proportion of graduates going on to work in health care in the period 2006–2010 was 81% (BOL) and 97% (BBL) respectively (Arbeidsmarktmonitor, 2015). Thus, the sector efficiency in BBL education is significantly higher than in BOL education. Furthermore, 90% of the bachelor-educated nurses (2010) worked in health care after graduation. Efficiency increases with the higher level of education and therefore the return on investment (Arbeidsmarktmonitor, 2015; Prismant, 2008).

8.2 The Dutch nurse workforce

8.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1000 population was 10.5, and the ratio of nurses to physicians was 3.0. General hospitals and university medical centres have 1.22 and 1.50 full-time equivalent (FTE) nurses per hospital bed respectively (Vandermeulen, 2010).

In 2010 almost 258000 nurses were BIG registered, but by 2015 this number had decreased to 188163 BIG-registered nurses. The decrease can be explained by the first re-registration round after more than five years of being registered in 2014, whereas previously registration was 'for life'. Intermediate-educated nurses are on average slightly older compared to nurses educated to a higher level; their mean age is 43 years compared to 38 years. Intermediate-educated nurses have been working for the same employer on average for 13.2 years and higher-educated nurses for almost nine years, possibly reflecting average age differences. An estimated two thirds of registered nurses work in a care or welfare setting (Smeets, Albers-Haye & Van der Windt, 2010).

The precise number of enrolled nurses working is not known. Based on estimates, there were about 150000 enrolled nurses working in 2009. This estimate does not include temporary and independent workers. Approximately 27900 enrolled nurses were working

in home care, 97 100 in nursing homes, 5 100 in hospitals, 1 900 in mental health care, 13 200 in care for the disabled and 5 000 in other care and welfare organizations (Van der Windt, Smeets & Arnold, 2009; www.nu91-leden.nl). The number of enrolled nurses in the job, however, is decreasing and was estimated at about 110 000 by Van der Velden et al. (2013). The mean age of enrolled nurses is 42 years and they work on average almost 11 years for the same employer. Enrolled nurses form the largest group of nurses.

The turnover of nurses leaving their employment (all fields) has decreased significantly. For example, in 2004, 10.1% of nurses left their hospital employment, while in 2010 this was only 4.0%. Almost 90% of the hospital nurses and mental health nurses who left their employer in 2010 continued to work in their own field. Almost 5% of the nurses employed in home care left their job in 2011, and in the nursing homes this figure was almost 4% (AZWinfo, 2014).

The percentage of part-time workers in hospitals increased between 2005 and 2009, from 40% to 42% (Vandermeulen, 2010). The average working hours of part-time workers in general hospitals have been rather stable, with a mean of working hours of 74% of a full-time job in 2012. In the academic medical centres and in nursing homes this was respectively 82% and 63% (AZWinfo, 2014). Nurses working part-time are far more satisfied with the opportunities they have to combine work and their personal lives than nurses working full-time.

At first sight, geographical inequalities in health care labour supply appear to be of minor importance in a small country such as the Netherlands. However, regional differences in demographic development have an increasing impact on the demand for health services. Some regions are ageing rapidly and face a relatively rapid decline in the population. The composition of the largest Dutch cities has also been changing in recent years and is expected to continue to change, most notably in terms of rising shares of foreign-born citizens and single households. These developments have led to a growing geographical variation in the demand for health services (Schäffer et al., 2010).

It is expected that shortages will develop, particularly in the most densely populated parts of the country, particularly the western part of the country, with larger cities such as Amsterdam, Rotterdam, The Hague and Utrecht (Van der Windt, Smeets & Arnold, 2009).

8.2.2 Deployment and skill-mix models

Labour market issues are complicated by an increasing demand for nurses to take on medical tasks. A major issue which has been discussed for many years is the lack of clarity over which training level is required for which level of intensity or complexity of nursing care. This issue has remained largely unresolved within the Netherlands, thus complicating the calculation of workforce planning needs. There are clear profiles and levels of practice available for nurses and enrolled nurses, but these are not really implemented in practice.

Potential solutions for shortages assume greater importance with shortages looming. Investing in the attractiveness of the profession and the quality of the practice environment, clearly defining training levels matched with staff profiles, investing in technology, increasing patient self-management and the retention of older nurses are all promoted as relevant options (Prismant, 2011).

One trend that affects health care professions is commonly called 'substitution'. This can be defined as (partial) 'vertical' transfer of tasks from doctors to nurses, and 'horizontal' task reallocation between groups of health care workers. Substitution is mainly driven by efficiency, but can also be seen as inevitable in order to cope with the increasing physician workload. New occupations such as practice nurses, nurse practitioners, nurse specialists and physician assistants have been trained to fill the gap between physicians (specialists and GPs) and nurses (Schäffer et al., 2010).

8.2.3 Career structures

There are several opportunities for continuing education following general nurse education. Some choose to specialize, for example, in intensive care nursing, paediatric nursing or geriatric nursing.

All registered nurses can apply for specialist training courses (post-basic nurse training). These are designed to develop their competences and skills through a mix of theoretical and clinical training.

Nurses from the higher levels with relevant experience can become nurse specialists. This is a newly recognized segment of the profession laid down in the Individual Health Care Professions Act. Nurse specialists are qualified to treat specific groups of patients independently, such as those individuals who are chronically ill. Nurse specialists play an important role in carrying out tasks that have historically been performed by physicians.

The most important requirement for becoming a nurse specialist is a diploma from a recognized master's level course (Schäffer et al., 2010).

More than half of nurses and enrolled nurses (57%) have followed additional training (mostly including a final test) in the past. Normally this has been voluntary, and overall 79% of enrolled nurses undertook work-based training. Short vocational training courses are more common: 84% of nurses and enrolled nurses (carers) followed some form of short training. Two thirds of nurses and enrolled nurses are satisfied with the training provided by their employer. Almost 40% are (very) satisfied with their career prospects, but 16% report dissatisfaction (De Veer, Spreeuwenberg & Francke, 2009).

For management roles, there are two possibilities. A slow route can be followed by part-time training and several short courses. A faster route involves following a university master's degree that specializes in areas such as policy, management, and health or health sciences. These degree programmes help to prepare students for senior positions in health care, as well as other positions in health policy, education or the human resources departments in health care institutions.

8.2.4 Planning mechanisms

According to Dutch Hospital Data (the official data management of self-registration by Dutch hospitals), the number of nurses per bed is an important indicator of acuity and care intensity. Other indicators need to be developed and explored because of changing productivity structures in hospitals. New indicators, such as the number of care personnel per bed, should be reproducible to monitor the intensity of care required (Vandermeulen, 2010).

Shortages in the Dutch health care workforce alarm policy-makers, the media and patients organizations alike. Suggestions regarding possible initiatives to avert staff shortages are provided through the Care Innovation Platform. This platform describes three important trends and the search for solutions resulting from:

- the increasing demand for care (for an ageing population);
- the decrease of the labour force (through ageing); and
- an increasingly diverse labour supply (because of demographic and social-cultural change.

For the Nursing and Welfare sector there exists a research programme called 'Labour-market Care and Welfare' (Van der Windt & Bloemendaal, 2015), through which national, regional and local organizations can monitor relevant labour market developments and in which forecasts are made on the balance between supply and demand for several types of nursing care professional. This system is an initiative utilized by different organizations in the sector.

The 'Labour-market Care and Welfare' research programme has undertaken a supply and demand analysis, based on some assumptions which include: current workforce, employment trends, available resources and expected growth, turn-over of employees, the part-time factor, sick leave, education, and opportunities in other branches of the sector.

Two scenarios for the period 2005–2019 have been highlighted. Both scenarios show that there will be sufficient enrolled nurses and carers to meet the current demands, but that a shortage of higher-educated nurses is to be expected. This concerns nurses educated at both bachelor and master's levels. One of the main causes of this expected shortage is the tendency for patients to be treated on an ambulatory basis as much as possible, while length of stay in hospital (or other institutions) is reduced. The remaining patients in the institutions demand more complex care from all health professionals. At the same time extramural patients are often in a more complex situation compared to the past, and are therefore also demanding more complex care, and higher-educated professionals (Van der Windt & Bloemendaal, 2015).

8.2.5 Mobility

The Netherlands has experienced frequent shortages of nurses from the Second World War onwards. One way of compensating for these shortages has been recruitment from abroad. Precise numbers are not known but the inflow of foreign-trained nurses has been quite low and even showed a drop between 1996 and 2000. Despite the shortages, international migration into Dutch health care has never been large. The most important reason is that of language, since nurses are required to speak Dutch. Furthermore, this may also be exacerbated by the fact that most EU countries experience shortages, which creates competition for recruiting nurses from abroad (De Veer, Den Ouden & Francke, 2004). Increased demand for recruitment from abroad is very likely for long-term facilities and home care, since these areas are where the shortages will be most serious.

Several studies show that foreign nurses in the Netherlands are generally treated well by their employer. Unfortunately, it is also true that foreign nurses often work below their skill and qualification levels. Such nurses often work as enrolled nurses. The most important reason for this is that the largest shortages occur in care for the elderly.

8.3 Structure of nurses' work

8.3.1 Working conditions

By law there are a number of responsibilities that Dutch employers must adhere to. These include the Minimum Wage Act, the Collective Agreement Act and the Minimum Holiday Allowance Act. There are also legal regulations on the timely payment of salaries, disability and holiday entitlement. In addition, working conditions and safety measures are recorded in law. According to the collective agreement for health and welfare personnel, the maximum full-time hours are 36 hours a week. The employer determines working hours, in accordance with the law. According to the collective agreements of general hospitals, academic medical centres, long-term care facilities/nursing homes and home care, health care employees are entitled to an additional bonus because of their irregular working times. For example, if an individual works between 2000 and 0800 hours, the bonus can range from 22% to 60% of their basic salary (www.loonwijzer.nl; SOVVT, 2010).

In recent years health care institutions have increased their focus on working conditions for health care personnel. Unfortunately, a quarter of hospitals and long-term facilities do not protect their employees against physical overload, aggression and violence. Furthermore, a quarter of hospitals are poorly equipped to deal with risks to personnel regarding toxic substances. Working conditions are regarded as fair in more than half of hospitals (De Veer & Francke, 2010; De Veer, Spreeuwenberg & Francke, 2009; De Veer, Verkaik & Francke, 2010; Harrington, 2001; Peters & De Rijk, 2007).

Nursing wages in the Netherlands are comparable to other Western European countries. The salary of Dutch enrolled nurses is between €1 510 and €2 480 gross per calendar month, depending on the institution, work experience and the collective agreement. The salary of Dutch nurses is between €1 900 and €2 900 gross per calendar month, based on a full-time contract.

Recent research has highlighted that career prospects for Dutch nurses are very important. Nurses feel the need to develop their profession. In contrast, results from Prismant (the Dutch expert centre for transparency in health care) show how the lack of career opportunities for enrolled nurses and nursing personnel leads to individuals leaving the profession. One out of three nurses leaving says that a lack of career opportunities was their main reason for leaving (Schalkwijk & Looijenga, 2009). Role and task differentiation, stimulated by the Ministry of Health, Welfare and Sports, could reduce the numbers of nurses leaving the profession. The introduction of nurse specialists through the master's degree is one such example, as are nurse practitioners and physician assistants.

Role differentiation and task reallocation in nursing both give perspectives on (horizontal) career opportunities. Better career perspectives affect the attractiveness of the nursing profession in a positive way. Otherwise, good career prospects in organizations are of strategic importance for both individual health care workers and institutions.

Research shows that personnel who report higher work demands, lower autonomy and/or less social support on the job are less satisfied with working in day–evening and night shifts (Peters & De Rijk, 2007).

The number of extra contractual hours worked and other work circumstances influence the experience of workload. Nurses and enrolled nurses who are more satisfied with their workload consider the quality of care given by their team is better, they feel more appreciated by their managers, and experience a greater sense of authority at work than those who are less satisfied with their workload (De Veer, Spreeuwenberg & Francke, 2009). Reduced job satisfaction, an increased tendency to leave the job and burnout are also associated with increased workload (Harrington, 2001).

One in ten nurses and enrolled nurses report their work is too busy, more than half of them (55%) feel their work is busy, and 32% evaluate their work as neither busy nor quiet. 'Feeling busy' is most present in enrolled nurses in nursing homes. Almost 30% work overtime (most of whom indicate because of busyness), and 41% indicated that their work was influenced negatively because of workload. Almost 40% of nurses and enrolled nurses reported that steps had been taken to reduce their workload. When nurses experience a high workload, the risk of burnout, or leaving the setting, is significant. These situations are to be avoided wherever

possible, especially as the labour market tightens (De Veer, Spreeuwenberg & Francke, 2009).

Research among more than 4 000 health care workers showed that 15% ran the risk of burnout in the foreseeable future. In addition, 7% were already on sick leave because of symptoms of burnout (Schaufeli & Van Dierendonck, 1995).

A study among European nurses shows that intention to leave (ITL) in the profession is prevalent across Europe, with several countries scoring ITL above 15%. In the Netherlands only 10.4% of the nurses reported an intention to leave the profession (Estryn-Béhar et al., 2007; Heinen et al., 2013).

A Nursing Panel (a group of nurses who have filled out questionnaires) shows that nurses and enrolled nurses in general are very positive about their work. Eight out of ten are proud to work in a health care setting. Extra focus on appreciation by the employer, career perspectives, workload, discussions within the team, and control by management can all impact job satisfaction (De Veer, Verkaik & Francke, 2010).

By the same token, nurses and enrolled nurses are dissatisfied with the lack of appreciation by their employer (Volkskrant, 2010).

8.3.2 Governance and leadership

Nurses' participation in governance arrangements in the Netherlands is rare. In general, health care facilities have a number of advisory boards to inform the decisions of its chief executives. These boards formulate and implement the general policy of the institution. A works council advises on issues of importance to all employees, such as working conditions and training. In addition, there is often a separate medical committee dedicated to medical staffing issues and general medical policy. It is important that health care professionals have influence on policy at all levels. Therefore, nurses and enrolled nurses are essential to providing advice to determine policy.

In Dutch health care nurses are not part of management in most institutions. A nurse advisory council (VAR) comprising nurses and enrolled nurses can help to contribute to general policy. In practice, such nurse advisory councils act as a permanent committee of the works council.

As the name implies, the VAR is an advisory body to the management or board of directors of the health care institution. VARs can give professional advice from a nursing perspective to the management or board of directors to help improve the quality of care. Given this advisory role, VARs help to provide a voice for nursing staff whilst simultaneously helping to encourage professional development.

VARs can help improve quality of care by promoting policies that better reflect professional practice, a greater commitment of health care professionals within the organization, and broadening the base for new policies. Furthermore, VARs provide the vehicle for quality improvement by optimal utilization of nursing expertise already present in the organization. In practice, 65–70% of VAR advice is accepted by the board of directors.

However, VARs have no legal power or status and employers are not obliged to establish a VAR. In the Netherlands several professional associations for nurses and enrolled nurses exist. The Dutch Association of Nurses and Carers (V&VN) is an important professional association for nurses and enrolled nurses. One of its main goals is to ensure that its members can work effectively in their role. It is important to work in a congenial, supportive environment and to be proud of the profession. V&VN tries to ensure that the numbers of nurses and enrolled nurses is adequate, well prepared and educated. In addition, the voice of the V&VN is an important dimension in major policy decisions. V&VN describes quality of care and offers ways of promoting it. Finally, V&VN aims to help to strengthen the position of the nursing profession (2010a).

8.4 Synthesis and policy implications

One of the major factors shaping health care delivery in the Netherlands is the fundamental health reform that came into effect in 2006. With the introduction of a single compulsory health insurance scheme, the dual system of public and private insurance for curative care became history. Managed competition for providers and insurers has become a major driver in the health care system. This has resulted in fundamental changes to the roles of patients, insurers, providers and the government. Insurers now negotiate with providers on price and quality, and patients choose the provider they prefer and join a health insurance policy which best fits their situation. To enable patients to make these decisions, much effort has been made to make information on price and quality available to the public. The role of the national government has changed from directly steering the system to safeguarding the proper functioning of the health markets. With the introduction of market mechanisms in the health care sector and the

privatization of the former sickness funds, the Dutch system presents an innovative and unique variant of a social health insurance system (Schäffer et al., 2010).

Two laws define the framework for individual providers and care institutions in the Netherlands: the Individual Health Care Professions Act (BIG, 1993) and the Care Institutions Quality Act (KZI, 1996). Legislation stipulates that primary responsibility for quality lies with health care providers and professionals. The Individual Health Care Professions Act regulates the provision of care by professional practitioners, focusing on the quality of professional practice and patient protection. The purpose of the Act is to foster and monitor high standards of professional practice and to protect the patient against professional negligence and incompetence. The Care Institutions Quality Act provides a functioning quality system mandatory for all health care institutions. The Act enforces various initiatives for internal quality system development and for external reporting and evaluation. This Act no longer seeks to regulate in minute detail how parties involved in health care should interact, but instead gives greater responsibility to providers, patients and insurers (Legido-Quigley et al., 2008). A nursing and care advisory board (VAR) can help to guarantee or improve quality of care by giving advice from the nursing perspective to the management or board of directors.

One of the characteristics of the professionalization of nurses is the development of guidelines. Unfortunately, numerous examples from daily nursing practice show how the implementation of evidence in practice is often not accomplished (Pittet et al., 2000; Van Achterberg, Schoonhoven & Grol, 2008). Studies on hand-hygiene prescription and pressure-ulcer prevention are two examples that show difficulties in implementing evidence (De Laat et al., 2006; Pittet et al., 2000). In the future implementation of evidence-based interventions is crucial to professional nursing and the quality and safety of patient care (Van Achterberg, Schoonhoven & Grol, 2008).

Nurses and enrolled nurses are educated at different levels. For registered nurses, intermediate and higher education is available. Nurses at both levels carry out patient care, but higher-educated nurses are also required to display capacities with regard to improving patient care and informal leadership. Differences between the levels concern responsibility, complexity and transferability. In practice, there is no formal differentiation between the roles of higher-educated and intermediate-educated nurses. Higher-educated nurses are supposed to distinguish themselves from their intermediate-educated colleagues, but in daily practice this is often not the case (Hageman, 2007). There are no national guidelines for this, and job descriptions are only available at, and applicable to, the institutional level.

The Master's degree in Advanced Nursing Practice (MANP) education programme has been recognized since 1997 and these nurse specialists have proven their added value. Nurse practitioners (NPs) are trained to fill the 'gap' between physicians (specialists and GPs) and nurses. These professionals have received more training related to clinical treatment and help provide support and information to their patients. Nurse Practitioners are able to increase quality of care, undertake nursing research and implement evidence-based practice. Research shows that patients are very satisfied with NP communication. Patients trust their NPs, value their expertise and appreciate that they take time to listen to concerns and help them obtain health care resources (Broers et al., 2009; Hayes, 2007; Van den Hoed-Heerschop, 2005; Veldhuisen, Koopmans & Jaarsma, 2006). Registration of Nurse Practitioner status is recorded under the Individual Health Care Professions Act.

In the Netherlands nurses are involved in coordination of direct patient care, directing units in primary care, and sometimes play a role in leadership of several units, divisions or services. Direct participation in decision-making and participation in governance arrangements to improve quality of care by nurses in the Netherlands, however, remain poor and not ad hoc. We do not know how many nurses are involved in other management roles, but the number is likely to be small. Equally, the number of nurses working on the board of directors is decreasing (Kersten & Van de Pasch, 2009). However, the introduction of nursing advisory councils (VARs) at the institutional level has given nurses a voice and a vehicle through which nurses can articulate their concerns. At present, there are 133 VARs in the Netherlands, and this number is growing, and 90% of the VARs draw support from the board of directors. Almost 70% of the advice from the VARs is taken on by the boards of directors. Important subjects include patient safety, electronic patient records and the 'Quality Registry for Nurses' (V&VN, 2010b).

Future shortages in the Dutch health care workforce are a concern amongst policy-makers, the media and patients organizations alike. The problem may manifest itself in high workloads for physicians and nurses. Various initiatives have been implemented to combat workforce shortages, in particular by changing governance structures, health workforce planning,

financial regulation and logistics (Schäffer et al., 2010). Bottlenecks mentioned in 2009 are recruitment of nurses, controlling workload and ageing employees (Van der Windt et al., 2009). Over the last decade, however, the accent has moved towards the shortage of higher-educated personnel to meet the demand for more complex care in hospitals, home care and nursing homes (AZWinfo, 2014).

8.5 References

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9 Norway

Ingeborg Strømseng Sjetne, Christine Raaen Tvedt, Ånen Ringard

9.1 Context-organization of the health system, education and regulation

9.1.1 Norway and its health system

Norway is a Northern European country with a population of 5.3 million (Eurostat, 2017). It is a constitutional monarchy with a parliamentary form of government. There are three independent government levels – national government, county councils and the municipalities. The Norwegian health care system has traditionally been described as a decentralized national health system (NHS) model. Funding is raised by taxation and the main actors are public entities (Rice & Smith, 2002; Hagen & Kaarboe, 2006). The decentralized nature of the system is most visible in the provision of municipal care services (including preventive health care, public health, general practitioners and nursing care), as the responsibility for these services lies with the 422 municipalities (Statistics Norway, 2018a). The Ministry of Local Government and Modernization (2017) currently oversees a municipal reform that will reduce the total number of municipalities to 356 by 2020. A pronounced aim of this reform is strengthened coordination of welfare tasks and primary health care through improved integration between social and health care sectors. Following the hospital reform that took place in 2002, specialist care (i.e. hospitals) has become the responsibility of the national government. Responsibility for the day-to-day running has, in turn, devolved from the government to four regional health authorities. These oversee all hospitals in their region, and are led by an

executive board appointed by the Minister of Health and Care Services. They are also the purchasers of privately provided specialist care services. Provision and financing of health care is thus based upon two separate administrative tiers: state-owned health authorities and the municipalities. It has, based upon these changes, been argued that the current Norwegian health care system more accurately may be described as a semi-decentralized than a decentralized NHS (Hagen & Kaarboe, 2006).

The most important mechanisms for governing the health care system are the national budgetary and legislative processes. Based on the political signals expressed in these documents, the Ministry of Health and Care Services provides through 'letters of instructions' different financial means and strategic aims and creates working plans for specialist care. Municipalities have similar responsibilities for locally provided health care within their financial frameworks and based upon local priority setting.

Health care spending totals 10.5% of gross domestic product, or US$6 647 per capita (OECD, 2017). Over the past 15 years it has increased significantly. This increase has caused political concern, as the main part (i.e. approximately 85%) is funded from public sources (Ringard et al., 2013). Concerns have also been raised about the system's capacity to ensure access to health care to various groups on an equitable basis (Directorate of Health and Social Affairs, 2005), and how to provide care in a coordinated manner (Ministry of Health and Care Services, 2008).

9.1.2 Regulation and legislation of the nursing profession

At the national level, the political decision-making body is Norway's parliament (Stortinget). The executive body is the Ministry of Health and Care Services. There are four main legal regulatory tools for health care services: laws, directives, circular letters and advice letters. The Storting passes the laws. Directives, circular letters and advice letters are the government's responsibility. The Norwegian health services are based upon a large number of Acts (Johnsen, 2006; Ringard et al., 2013). Each Act regulates a large part of the health system. Use of legislation as a tool to control and deliver health care services has increased (Molven, 2006). Legislation not only defines who is responsible for what, but also gives instructions to professionals on how to carry out their responsibilities.

The Ministry of Education and Research is responsible for regulating nursing education. The regulation is done according to a framework plan. The current plan was adopted by the Ministry in 2005 and describes the aims, scope and content of the curriculum as well as evaluation requirements and required skills on completing the programme (Ministry of Health, 2008. The focus of the education is to enable nurses to provide total care for patients and to develop clinical methods for nursing patients with different conditions and assisting medical treatment (Råholm et al., 2010). Nurses are educated for 'knowledge-based' work, which means using evidence-based nursing, experience-based nursing and focusing on client-participation (Ministry of Health and Care Services, 2012–2013).

Having completed a bachelor degree, nurses have to apply to the Norwegian Directorate of Health for either authorization or licence to practise as a nurse. Its mandate is found in the 1999 Health Personnel Act. Nurses who have successfully completed their training are granted authorization. The conditions for authorization can be found under §48 in the Norwegian Health Personnel Act and include that the applicant has: 1) passed an examination in the relevant subject at a Norwegian university or college or through occupational training at a secondary level; 2) has completed practical training in accordance with regulations laid down by the Ministry; 3) is under 75 years of age; and 4) meets the regulatory requirements in terms of 'fitness to practise'. Licence, on the other hand, represents permission to work as a general nurse, but under certain conditions. The validity of a licence can be restricted in terms of duration, locality, specific tasks, etc., and can only be granted after an assessment of whether the licensee is deemed capable of practising their profession responsibly. After a specific assessment a licence may be granted to general nurses with qualifications obtained outside the EEA (see below) and to specialist nurses with professional education/training at college/university level, who do not have general nursing as part of their training corresponding to Norwegian basic nursing training, and who must consequently confine their professional practice to their field of specialization. A licence may also be awarded to a general nurse who has earlier had their national authorization withdrawn, but who is in the process of regaining accreditation.[1]

As soon as a nurse fulfils the requirements for authorization and starts practising, a new set of requirements come into play and regulate how they are expected to

1 Norwegian Directorate of Health website: https://helsedirektoratet.no/english/authorisation-and-license-for-health-personnel#apply-for-authorisation-.

behave professionally. The most important requirement is found in §4 of the Health Personnel Act, which states that "health personnel shall conduct their work in accordance with the requirements of professional responsibility and diligent care that can be expected based on their qualifications, the nature of their work and the situation in general". This duty is a legal standard, meaning that its content has not been further described in law or secondary legislation (Molven, 2006). The standard implies, however, that a nurse shall act as a reasonable, competent practitioner would have acted under the same circumstances. It will also reflect developments in medicine and in current social values. The optimal standard will be above the basic requirement, and malpractice will fall short of it (Jordal, 1999). In addition, the Act also contains more specific requirements on: use of public resources; emergency care; duty of abstinence; ban on receiving gifts; information to patients, etc.

The Norwegian Board of Health Supervision has several reactions towards personnel who breach the Health Personnel Act. The least stringent response is to "give a warning to personnel who intentionally or through negligence contravene duties stipulated in the act … if the breach of duty is liable to endanger the safety of the health service or impose considerable burden on patients" (§56). The Board can also revoke an authorization or licence "if the holder is unfit to practise his profession in a responsible manner for reasons of severe mental illness, mental or physical impairment, prolonged absence from the profession, use of alcohol or narcotics or substances with a similar effect, a gross lack of professional insight, irresponsible conduct, gross breach of duty pursuant to this act … or due to behaviour considered to be incompatible with professional conduct" (§57). The authorization or licence may also be temporarily lost (§58) or limited to the performance of certain tasks (§59). In 2012 and 2013 the Board investigated 211 and 228 'fitness to practise' cases. The main recommendation was warnings, followed by revocation of authorization/licence. In 2013, 39 nurses lost their authorization/licence. The main reasons for loss of authorization were use of illegal substances or theft of pharmaceuticals (Board of Health Supervision, 2014).

9.1.3 Nurse education

9.1.3.1 *Pre-registration nursing education*

There are registered nurses (RN) and practical nurses (PN) in Norway. The two groups differ according to the length of their education and their responsibilities. Registered nurses obtain licensure and a bachelor degree at university colleges or universities. Practical nurses obtain a craft certificate upon completion of vocational training in upper secondary school (Ringard et al., 2013).

Human resources are an important source of capital in the Norwegian health care system (Johnsen, 2006). In order to ensure a continuous supply of new nurses, a comprehensive educational system spanning bachelor to PhD studies has been established. The education that qualifies for accreditation as a registered nurse has been a three-year programme since 1948, and since 2003 leads to a bachelor degree (180 ECTS credits). Half of this time (i.e. 60 weeks) is devoted to practical work (i.e. clinical studies) of which between 32 and 42 weeks are spent in a health care institution (either within municipal services or in a hospital).

There are about 30 educational institutions in Norway offering basic nursing education. The majority of the institutions are university colleges, but some are incorporated into universities. The standard minimum requirement for entering higher education is general study competence, which used to imply that the student had completed three years of secondary education. Through the 1994 Competence Reform, the entrance requirements are fulfilled also for persons 23 years and older who have taken a certain set of courses in upper secondary school level, and also have extended work experience.

9.1.3.2 *Post-registration nursing education*

After completing the bachelor degree (three years full-time/180 ECTS credits) nurses can obtain further education in four categories:

1. For the last three decades some universities/ university colleges have offered programmes leading to a master's degree for nurses and allied health professionals. These master's degree programmes have traditionally had a theoretical or leadership/ management approach accredited on the European Credit Transfer System (ECTS) as comprising 120 ECTS credits, of which the master's thesis comprises 60 ECTS credits.
2. Further formal education programmes leading to a clinical nursing specialty (operating room nurse, nurse anaesthetist, psychiatric nurse, intensive care nurse, neonatal care nurse, palliative care nurse, etc.) normally require clinical work experience and take from one to two years to complete. Normally such

programmes comprise 60 ECTS credits, but they may vary from 30 to 90 ECTS credits.

3. In line with national policy initiatives, several of these further education programmes have been established as master's degree programmes in advanced practice nursing (APN), comprising 120 ECTS credits, of which the master's thesis comprises 30 to 45 credits. These programmes are offered as part-time studies (three to four years) or as full-time studies (two years). In addition, APN-programmes in geriatric care nursing and general practice nursing have been established to provide the increasing municipal sector with specialised nursing personnel. APN services in Norway is adapted to national legislation and the health care setting, with currently (2019) very limited prescription rights. APNs work independently and as parts of multiprofessional teams in the municipalities.
4. Nurses with a master's degree may attend a PhD programme offered by universities and university colleges. The PhD degree is obtained after three years' full-time studies (=180 ECTS credits), or, normally, four years (part-time).

It is common for students attending the further education or master's degree programmes to be paid an allowance by the employer during their studies. In exchange, students commit themselves to work for the same employer for an agreed period of time after having completed their specialist education. Bachelor students and some of the students enrolled in further education finance their studies through loans at the Lånekassen (the Norwegian State Educational Loan Fund). Several of the education institutions offer decentralized or part-time programmes. These programmes provide an opportunity to acquire a nursing degree even if students live in rural areas and have family obligations. The development of modern information technology has made it easier to organize such courses. Those attending often have work experience in the health care sector and are to some extent supported financially by their employer.

9.1.3.3 *Enrolees in nursing*

The only way to qualify to be an authorized/registered nurse is through a bachelor programme. The Norwegian Universities and Colleges Admission Service coordinates admission to ordinary undergraduate study programmes at all universities, university colleges and some private university colleges in Norway. The general basis for admission is called the Higher Education Entrance Qualification. The majority of applicants qualify by completing upper secondary school, but some qualify through age (over 23 years), experience (more than five years) or having passed a limited set of important secondary school courses. A large number of students leaves the programme before completion.

The numbers of nurses who have followed programmes of specialization or further education are difficult to obtain since a variety of programmes exists. Relevant further education will in many cases build on basic education in nursing, or they can be interdisciplinary.

9.2 The Norwegian nurse workforce

9.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 17.3, the second highest in the OECD35 region (average 9.0) after Switzerland (18.0), and the ratio of nurses to physicians was 3.9.

The workforce in health care is dominated by women. Numbers from 2009 show that of 518 000 individuals in the health care services, 428 000 were female (Rønning, 2010). Gender distribution is relatively stable among nurses in Norway, the gender split bringing almost 10% men into the profession. Efforts to reach a more equitable distribution in occupations dominated by one gender seem to have been most successful in attracting women to male-dominated areas, but less successful the other way. Of the students in nursing bachelor programmes 90% are women, compared to 62% women in medical school.

Specialist health care employs 50% registered nurses and 40% work in municipal health care. For practical nurses, the majority are employed in municipal health care (80%), and 11% in specialist health care (Statistics Norway, 2012). In long-term care, run by the municipalities, there is also widespread use of unqualified staff (Holmeide & Eimot, 2011).

Retiring practical nurses will leave a void in the workforce supply side (Statistics Norway, 2012) that will need to be filled by increased recruitment or by substitution.

Since the turn of the millennium there has been a large growth in municipal health care (Statistics Norway, 2012). During the observed period the increase reached 17% in preventive care delivered by nurses (2002–2009), and in home nursing and long-term care facilities it was 28% (2003–2010).

In specialist health care there has been a trend towards replacing practical nurses with registered nurses. Among registered nurses there is also a trend towards differentiation and specialization through new specialties that supplement their general nursing education (e.g. cardiology, nephrology). So the trend is towards more registered nurses, with higher education.

9.2.2 Deployment and skill-mix models

There is no agreed method for adapting staffing levels to a varying workload, and no minimum staffing to secure safe services and a sustainable work environment. There is little, if any, evidence of what are good or less good solutions in terms of patient safety, working environment and productivity. Most managers rely on historical data and, with some adjustments, replicate the previous year's budget. Therefore the deployment and skill-mix of nurses vary between hospitals.

The Office of the Auditor General (OAG) attracted much attention when an audit in hospitals demonstrated significant variation in the autumn of 2015 (Office of the Auditor General, 2015). The OAG focused specifically on productivity, but improved information systems regarding the dynamics of staffing and service quality would likely benefit nursing care performance.

9.2.3 Career structures

About 3 400 registered nurses were following different programmes of specialization or formal further education in 2009 (Database for Statistics on Higher Education, 2011). There is an underlying logic in the Norwegian labour market that higher education shall be rewarded with higher salaries. A survey conducted in 2009 showed that 56% of nurses in municipal health care and 63% of hospital nurses had at least one specialist or formal further education qualification, evenly distributed between women and men. The proportion of nurses who did not receive a rise in pay or change in position after completing their special education was 22.5% in hospitals and 36.7% in the municipalities. The proportion of nurses who have taken part in courses or organized training during the last three to four years is greater in hospitals (87%) than in municipal health care (78%) (Dæhlen & Seip, 2009).

An annual appraisal interview is considered good human resources practice and is a widespread tradition in Norway. These interviews also acknowledge the employer's obligation, created by the Work Environment Act, to assess the employee's need for development and further education. One third of nurses who had a special education had been granted paid study leave to undertake this education. About half of the nurses both in hospitals and municipal health care confirm that the employer encourages them to undertake further education, especially nurses within a specialty (Dæhlen & Seip, 2009).

Resources invested in personnel development and qualifications can be considered as investments in human capital that enable health care workers to deliver a high standard of care and service. However, information about how much the Norwegian specialist care use for this purpose is not publicly available. This is symptomatic of a broader issue that services themselves seem to be lacking in fundamental knowledge about what resources are applied and where, and also the effect of resources that are used (McKinsey & Company Inc. Norge, 2011).

9.2.4 Planning mechanisms

Health and care services need to influence the content and capacity of educational programmes that qualify students to deliver high-quality services. The assessment of the capacity of educational programmes for health care workers is part of the government's budgetary process. The Ministry of Health and Care Services, supported by the Norwegian Directorate of Health, provide regular contributions to the Ministry of Education and Research on this matter. The Directorate's suggestions are based on consultation from various underlying departments. There are councils and committees to organize cooperation between practice and education institutions at local, regional and national levels (Directorate of Health, 2014). The projections of HELSEMOD (the Norwegian model for forecasting the demand for personnel in health and social care) represents important prognostic information to the assessment (Texmon & Stølen, 2009).

9.2.5 Workload (hours/satisfaction/burnout/intention to leave)

Among the purposes of the Working Environment Act are to secure a working environment that provides a basis for a healthy and meaningful working situation, that affords full protection from harmful physical and mental influences, and that has a standard of welfare at all times consistent with the level of technological and social development of society, and to ensure sound conditions of employment and equality of treatment at work (Directorate of Labour Inspection, 2013). Working

hours are also regulated by this Act. In general, a full-time position is 35.5 hours per week for nurses who work shifts and 37.5 hours for those who work daytime only. Nursing personnel work a maximum of every second public holiday (for example, Sundays, Christmas and Easter) and every third weekend. The latter has become since the mid-1980s a universal and routine practice, but it remains controversial. The staffing needs for weekends cannot be met by the one third of the staff who are on duty, and the use of temporary or part-time employees is common. While employing organizations call for more flexible working hours regulations (and more flexible employees), the NNO has called for higher staffing levels in general (Norwegian Nurses Organization, 2012).

Among the respondents to the RN4CAST survey, 52% did not have a full-time position. Part-time employment is considered a challenge for both the employee and the employer. There is an extensive use of part-time work in health and social services. It involves registered nurses and practical nurses to a large extent, and in these groups in 2010, 45% and 65% respectively were working part-time (Køber & Vigran, 2011).

The Ministry of Health and Care Services explicitly expected that underemployment in hospital trusts would be reduced, by 20% during 2011, but so far success has been limited (Ministry of Health and Care Services, 2011).

In the RN4CAST survey, 60.6% of Norwegian respondents disagreed with the statement 'Enough registered nurses on staff to provide quality patient care' as a valid description of their work place. At hospital level this proportion ranged from 28% to 93%. This is confirmed by Norwegian surveys of work environment and health from 2011 demonstrating that nurses are among the occupations with the highest perceived workload (National Institute of Occupational Health, 2011).

Nurses in Norway are responsible for a small number of patients compared to nurses in many other countries (on day shift: mean 5.8, min 3.4, max 9.1), but provide most of the care themselves. The perception of high workload is therefore most likely explained by the scope of the responsibilities and the degree of support from other personnel groups. Another phenomenon with potential influence on perceived workload is 'corridor patients'. Because of limited capacity in Norwegian hospitals, many patient beds have been – and still are – placed in corridors, bathrooms, etc., with a negative effect on quality of care, patient integrity and work environment. Prevalence varies between hospitals and is reported as one of the hospital quality indicators (www.helsenorge.no). Despite many strategies tried in order to solve the problem, this situation has become 'normal' in some hospitals. Among the measures taken to end this seemingly perpetual situation are fines issued by the fire chief because of beds blocking emergency exits.

Most RN4CAST respondents (79.2%) were satisfied with their current job, in general. In a Norwegian population survey, registered nurses were slightly less satisfied with their job (88%), compared to the total sample (90%) (Statistics Norway, 2012). However, the proportion who answered 'moderately satisfied' or 'very satisfied' varied between hospitals from 91% to 51%.

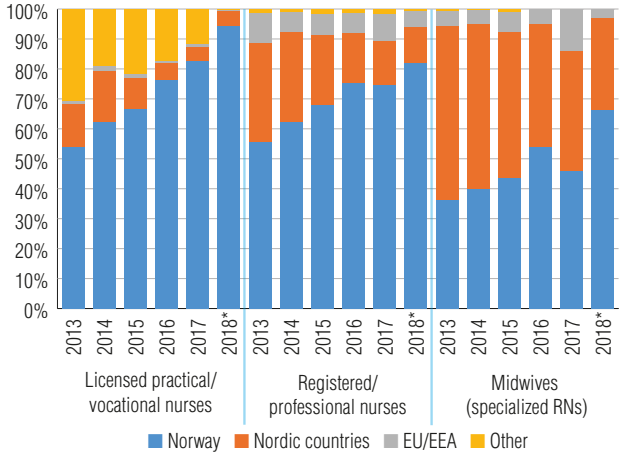
Finally with respect to RN4CAST data, when asked "If possible, would you leave your current hospital within the next year as a result of job dissatisfaction?", 25.4% answered Yes. Among these, 27% would seek work as a nurse in another hospital, and 37.3% as a nurse but not in a hospital, while 35.8% would seek non-nursing work. These results imply that about 10% of the respondents would leave nursing, if possible.

9.2.6 Mobility

For several groups of healthcare workers the increased educational capacity has not been sufficient to meet society's demand. Norwegian health services would have faced greater staffing problems than observed so far, without the immigrants with health and social education. In 2014 over 37 000 full-time equivalent roles were carried out by immigrants, which represents a 2.5 times increase since 2002. In full-times equivalents, the number of immigrants is especially high for registered nurses and licensed practical nurses with nearly 10 000 for each of these groups in 2014 (Stølen et al., 2016).

Norwegian authorities have signed the WHO Global Code of Practice to promote voluntary principles and practices for the ethical international recruitment of health personnel (Directorate of Health, 2010). The largest single country contribution to healthcare worker immigration in 2015 was from Sweden (14.3%) (Statistics Norway, 2018b). The extent of nurses' immigration from Sweden varies over time, and is closely linked to the countries' respective fluctuations in job opportunities, pay and working conditions.

Figure 9.1 *Authorizations issued by the Directorate of Health to nurses in accordance with the Health Personnel Act, by educational region*



*To October 2018

Nordic countries: Sweden, Denmark, Finland, Iceland, Greenland, Faroe Islands, Åland

Source: Directorate of Health, 2018

9.3 Structure of nurses' work

9.3.1 Working conditions

The Working Environment Act and collective agreements between employee unions and employers' organizations serve as a framework for working conditions related to remuneration, employment, work and shift hours (Ministry of Labour, 2005). For health care workers there are detailed regulations for protection against biological hazards, etc., but biological, chemical, mechanical and physical aspects of the work environment are not covered in this overview of working conditions for Norwegian nurses.

Women constitute a large proportion of the nurse workforce, and about 55% of working nurses are less than 44 years old (National Institute of Occupational Health, 2011). This indicates that the majority of nurses are in their child-bearing years, and social welfare agreements and day care possibilities are important for participation in the labour force. Many hospitals offer day care for children to attract and recruit personnel, and the general day care coverage is almost 100%. According to the Working Environment Act, Norwegian parents are entitled to leave of absence of 12 months to care for a newborn child. Employees having a child in care are entitled to leave of absence for a sick child up to ten days per year per child (double for single parents or for children with a chronic disease).

Employees have the right to paid sick leave if illness is documented by a doctor or self-certified sick-leave note. The IA Agreement (Agreement on a more inclusive working life) is a strategy the government, employers and employee organizations have worked out to reduce and prevent sick leave. The agreement aims to reduce sick leave by 20%, to increase employment of people with reduced functional ability, and to extend active employment after the age of 50. Through the Agreement, employees on sick leave, employers and persons granting sick leave are obliged to follow up more closely, and strive for solutions such as partial sick-leave and facilitation of work (Ministry of Labour, 2010).

The Annual Holiday Act ensures that employees have annual holidays and holiday pay. The Act gives employees the right to 25 days holiday a year, and employees aged 60 years and above have an additional six days of holiday (Ministry of Labour, 2009). The retirement age for staff nurses is 65, with early retirement at 62. Results from the Norwegian RN4CAST survey show that a majority of nurses are satisfied with the rights related to vacations and sick leave with a favourable response at 70.2% and 91.2% respectively.

The social welfare agreements described above provide Norwegian employees with basic protection and rights related to their work life, and from general questions about work satisfaction a majority of Norwegian nurses evaluate their work environment positively compared to nurses in other European countries (Hasselhorn, Tackenbegr & Müller, 2003). However, as shown in the RN4CAST data, nurse satisfaction varies considerably between Norwegian hospitals.

Remuneration of nurses in hospitals is below that of other professions with the same educational level (Table 9.1). In studies of lifetime salaries, length of education is taken into account, and nurses and preschool teachers have the lowest lifetime salaries compared with other professions at bachelor degree level (Kirkebøen, 2010). In the RN4CAST survey only 22.8% of nurses answered that they were satisfied with their salary (see Table 9.1), and corresponding results were found in the national surveillance of work environment as 68% of nurses do not agree when asked if their salary reflects their efforts and achievements at work. Compared with Norwegian employees in other occupations, nurses are more dissatisfied with their salary than others (National Institute of Occupational Health, 2011).

About 70% of nurses work shift hours, and for 38% of nurses this includes night shifts (National Institute of Occupational Health, 2011). Collective agreements provide special compensation for irregular working

Table 9.1 *Average income per month for employees in hospitals, 2009*

	Average monthly income (NOK)	Compensation for irregular work hours (NOK)	Overtime pay (NOK)
Physicians	48 000	11 900	3 100
Registered nurses with specialty	33 100	4 100	1 400
Registered nurses	28 300	4 200	1 100
Clinical laboratory technicians	30 000	2 000	1 000
Physical therapists, occupational therapists	30 700	500	300
Practical nurses	26 100	3 400	900

Source: Statistics Norway, 2012

hours; nurses working shifts are compensated with shortened week hours of 35.5 (from the normal 37.5), and between 17pm and 6am a night shift differential pay is estimated from the individual salary. Compensations for working weekends are fixed and are the same for all nurses independent of their basic salary (Norwegian Nurses Organization, 2012).

Unsocial working hours constitute a considerable threat to the health and welfare of employees (Hasselhorn, Tackenberg & Müller, 2003; Harrington, 2001). Employees working shifts in Norway consider their work environment poorer in quality compared with other employees (Andersen, Køber & Rønning, 2008). In the Norwegian survey of work environment and health, 20% of respondents from the nursing profession reported work-related sleep problems and 42% answered that the possibility of resting properly between shifts was not sufficient. This puts the nursing profession among the top two occupations with these specific work-related health problems (National Institute of Occupational Health, 2011).

In the RN4CAST study 76% of respondents answered that they were satisfied with flexibility of shift hours and roster. Work hour reductions, payment for irregular working hours and overtime are probably important elements of remuneration for nurses trying to cope with the inconvenience of working shifts. In an economic study in 2002, the authors concluded that wages, when corrected for shift work, were important to keep Norwegian nurses in their profession (Holmas, 2002).

Results from the RN4CAST study show that a large majority of nurses perceive their relationship and collaboration with physicians as good (70%–90%). The same proportions relate to their assessment of the competence and capability of the nurse leader to shape policy at department or ward level (79%), and 56% agree that they get praise and recognition for a job well done. Considering that the role of chief nursing officer has been gradually discontinued up to the present (2015) non-existence in hospital management, it is not surprising that only 27% of nurses agree that a chief nursing officer is highly visible and accessible to staff. The consequences of hospital management without chief nurses have not been evaluated, even though 63% of nurses agree that the management listens and responds to employee concerns. Norwegian nurses are dissatisfied with some work environment qualities that are assumed to be fundamental:

career and professional development: compared to other occupations in Norway, nurses are among the top ten in terms of their dissatisfaction with increased career possibilities (National Institute of Occupational Health, 2011), and in the RN4CAST study more than 50% reported dissatisfaction with both professional development and career possibilities.

resource allocation: more than 40% of Norwegian nurses indicated that they performed "non-nursing tasks" on their most recent shift, and 71.2% performed tasks "sometimes" or "often" that should have been done by others. On their last shift 25% of nurses in the survey answered that adequate patient surveillance was left undone because of lack of time.

restructuring of work places: about 23% of nurses reported that organizational changes had substantial influence on their work situation and about 25% had experienced downsizing in their own department. The proportion of nurses experiencing such changes were among the highest compared to other occupations in Norway (National Institute of Occupational Health, 2011).

Nurses constitute a large proportion of the workforce in hospitals, and the problems addressed above are most likely to impact other professions as well. A chief nurse role in hospital management with an explicit responsibility for nurses could represent an important

source of support and expertise to enable nurses, as the largest workforce in hospitals, to perform at their best.

9.3.2 Governance and leadership

A number of different interest groups, such as patient and professional organizations, are active in health care in the Nordic countries (Enjolras & Waldahl, 2009; Winblad & Ringard, 2009). Health professionals (doctors and nurses) and their unions are especially important for policy development because of their specialized knowledge and central position in policy implementation. Policy-makers often depend on the skills and knowledge of professionals for designing and implementing policies, and have therefore provided a voice for these groups in the policy-making process (Vrangbæk, 2009). The mutual dependency and relative integration of professions and the state in the Nordic countries has deep historical roots (Berg, 1982; Jespersen, 2005). These relationships have been interpreted in terms of the Nordic institutionalization of a basic social contract, where the state guarantees relative autonomy and a monopoly on employment, while the profession in return provides crucial assistance in the practical priority setting and rationing of services (Blank & Burau, 2004). Unions typically aim to exert influence upon the health care system through the health policy agenda (Vrangbæk, 2009).

In Norway the main professional organization for nurses and midwives is the Norwegian Nurses Organization (NNO) (Melby, 2000). The NNO, which was established in 1912, has more than 100 000 members since 2013 (i.e. between 80% and 90% of all nurses working in Norway). The organization consists, as with the Norwegian Medical Association, of two distinct 'arms'. First of all it is a traditional labour union, focusing broadly upon promoting the interests of nurses with respect to "organizational, professional, educational, economic and work conditions". Secondly it also has a professional arm working to improve nurses' education in order to align it to the current need for knowledge within the services (www.sykepleierforbundet.no). In this sense it resembles the medical colleges for doctors found in many countries. In addition to these two arms, the NNO has explicitly stated social policy ambitions (e.g. by influencing society in order to improve public health), aligning it to a broad-based interest group (Buse, Mays & Walt, 2005).

Norwegian hospitals do not have a chief nursing officer, and there is no national chief nursing officer. The position previously known as 'county nurse' on the county medical officer's staff (traditionally manned by a public health nurse) is increasingly becoming profession neutral, i.e. staffed with advisers from various backgrounds. There are no specific directives regarding hospitals' internal organization. A circular prescribes that the lines of responsibility must be clear and that responsibility and authority must be consistent (Ministry of Health, 2002). The Specialist Health Services Act specifies that hospital trusts must have a responsible leader at all levels, with only one leader being required at the level of hospital departments. The services offered shall be professionally responsible, and the Health Personnel Act mandates that trusts delivering health services shall be organized such that personnel are able to perform their duties.

Before the turn of the millennium most hospital wards had dual leadership. Nursing services were led by a nurse and medical services by a physician, with lines of authority from the front-line level to top management. In 2004, after the implementation of the Specialist Health Services Act, 67% of managerial positions at department level were held by physicians, 28% by nurses and 5% by persons from other professional backgrounds. This change was controversial, and much of the discussion was linked to medical accountability in departments where the leader was not a physician. Conflicts were often solved using bespoke local solutions (Gjerberg & Sorensen, 2006). A survey in 2009 showed that an average of 13 persons reported directly to the hospital trust chief executives (n=17). Among these were 22% registered nurses, a relatively stable proportion since 2003. Most trusts had four management levels, and at the unit/ward level 89% of the leaders were registered nurses (Kjekshus & Bernstrøm, 2010).

The Specialist Health Services Act allowed subunits led by lower level managers to be established within departments. The prevailing practice in Norway today is that ward management is formally a profession-neutral position, but is most often filled by a registered nurse. Nurse managers are expected to stay up-to-date in their specialty field and to use the professional competency at hand for the benefit of patients; this includes interdisciplinary cooperation. They are expected to assess what training and education are needed to maintain and develop the performance of the nursing services. Although the ward nurse managers have overall responsibility for the activities that they lead, they occupy a lower level managerial position within the organization, and so their scope of action is determined by the decisions made in the upper echelons of the

organization. There is no ongoing monitoring of these positions with regard to maintaining the balance, as management solutions are based upon local decisions. A survey conducted in hospitals in 2005 by the Norwegian Labour Inspection Authority (2006) found that the front-line managers' situation was often harmful to their health and unsatisfactory.

A group interview with twelve front-line nurse managers in hospital trusts showed that their activities were directed mainly towards administrative personnel management, such as following up on sick leave, and controlling timesheets. Their opportunity to act as leaders of nursing services at group or individual level was perceived as being very limited (unpublished data). When nursing services in municipal health care were compared to municipal primary schools with regard to control span, the results showed that the 'leader density' was far higher in the schools (control span 17 persons) compared to municipal nursing services (36 persons) (Resource centre for restructuring in the municipalities, 2004). It is likely that the chances for nurse leaders to build personal relations and act as professional role models are limited and strained under these circumstances.

The NNO's policy regarding leadership is that nursing services from front line to national level should be led by nurses in order to ensure high quality services, in line with statements by the European Region of WHO (World Health Organization, 2002). It is tempting to state as a paradox that for the moment in Norway the Auditor General and the fire chiefs are in a better position to influence the conditions for delivering high-quality nursing services than nurses themselves are.

9.4 Synthesis and policy implications

Two groups of Norwegian health care personnel are termed nurses: registered nurses and practical nurses. Nurses are employed both in municipal and specialist health care. Norwegian nurses are generally satisfied with their work life and quality of care in their workplaces. However, there are individual variations and – more importantly – variations between units/hospitals.

The main challenges currently facing the Norwegian health care system are the demographic changes taking place, including the ageing of the population and the decline in the proportion of the population of working age. These challenges, which are shared with several other Western countries, will both increase the demand for health care and at the same time limit the ability of health services to respond to this demand. These challenges are illustrated by using HELSEMOD, the Norwegian model for forecasting the demand for personnel in health and social care. According to HELSEMOD, a shortage of 13 000 registered nurses may be expected by 2030. If the strategies for municipal health care are to be followed, i.e. to increase the proportion of nurses in home- and long-term care, the shortage will grow to be 18 000 whole-time equivalents (WTEs) in 2030 (Texmon & Stølen, 2009). These figures are based upon the assumption that growth in demand will correspond to the development in GDP. More precisely, it is assumed that the same proportion of GDP is used for health and social care and that GDP growth decreases gradually from 2020. Due to the ageing of the workforce, the shortage of practical nurses is likely to begin first and by 2030 it is predicted there will be a shortage of 41 000 practical nurses. However, to increase the general level of education in municipal health care, it is an objective to substitute practical nurses with registered nurses to some degree (Ministry of Health and Care Services, 2006) and this will alter the basic assumptions of the forecast.

Thus, the capacity to recruit and educate both registered nurses and practical nurses constitutes – and will continue to be – a great challenge. Initiatives are being implemented by national authorities in order to meet the shortage of nurses. The Directorate of Health has over the past few years campaigned in order to recruit applicants to practical nurse education, and at present the main problem seems to be reducing the attrition from the programmes. Of the pupils in question, 55% of those recruited do not continue from school to apprenticeship and hence do not obtain a craft certificate. Offers of further education for practical nurses through the vocational schooling scheme are especially important in order to raise the level of expertise, reduce the number of personnel leaving the sector, and contribute to recruitment in health and social education at upper secondary school level. Providing opportunities in this regard will weaken the 'dead end' feature of this career choice.

Nursing education at bachelor level also has a surplus of applicants. In 2011 there were 15 801 applicants to 4 196 planned places nationally (Norwegian Universities and Colleges Admission Service, 2012). To maintain the balance between supply and demand, the number of students should be increased by about 800. Changes in the health services (e.g. reduced number of hospital beds) introduces new difficulties for the education system, as fewer suitable practice arenas are now available.

A major gap is that there is no national strategy for nursing. Discussion of the looming workforce shortage

is integrated in documents from central authorities that debate the different sectors of health care services. However, prioritization of action to realize the stated intentions is often left to local initiatives and in competition with other urgent societal needs (Aamodt & Tjerbo, 2012).

Another strategy which could help to meet the shortage would be to recruit nurses from abroad. This strategy would, however, conflict with the explicitly stated political aim saying that Norway should be self-sufficient in health care personnel and not recruit from countries that are already under- supplied. Norwegian authorities have agreed to the WHO Global Code of Practice on the International Recruitment of Health Personnel. How exactly this obligation is to be enacted is not yet decided upon (Directorate of Health, 2012). Currently, as found in the RN4CAST survey, about 5% of nurses had received their education outside Norway. The majority were trained in Sweden, Denmark, Australia and Germany. Of the annual increase of about 1000 registered nurses in municipal health care, about 40% are foreign, mainly from Sweden and the Philippines. Immigration is an important source also for practical nurses in this sector (Aamodt & Tjerbo, 2012). Some cases of serious exploitation of foreign health care workers have been observed.

The Norwegian authorities have begun to realize that the proportion of the national budget spent on health care services does not necessarily provide the desired health outcomes. In order to improve the situation, the Government launched the 'coordination reform' (Samhandlingsreformen) in 2008. The initiative identifies three main challenges: 1) the already mentioned demographic changes in the population will cause shortages in health care personnel and a shift in disease distribution; 2) the growing magnitude of lifestyle diseases implies a need for health care services to shift from a traditional 'cure-oriented philosophy' towards an emphasis on disease prevention and coping; and 3) better coordination between hospitals and municipal health care is needed.

With the 'coordination reform', changes in legislation related to both municipal and specialist health care have been made. Implementation has been under way since 2012. The 'coordination reform' emphasizes profession neutrality, and a high degree of multidisciplinary cooperation is expected. The new role of municipalities, emphasizing disease prevention and early intervention efforts, could challenge the traditional roles of professionals in health care, suggesting changes involving task-shifting which in turn may impact upon qualifications as well as responsibilities.

A government report to Parliament has recently been published (Ministry of Education and Research, 2012). The aim of the report is to present a consistent national policy of knowledge for future education within the health and social care sectors. The report focuses upon upper secondary levels, vocational schools further training, universities and university colleges; education for research in the mentioned field will also be included.

The principle of professional neutrality is also expressed in the report. More specifically, the government argues in favour of a shared curriculum for health and welfare students in bachelor programmes. A shared curriculum is thought to be a means to strengthen interdisciplinary teamwork. Role substitution and role clarification are other important issues which are addressed in the document. The aim is to establish educational programmes and recruitment procedures to ensure a good mix of skills and competencies at all levels (from vocational training to university programmes). The proposals of the report will be debated by Parliament before being transformed into actual policies, although implementation of these policies lies somewhere in the future. What they signal, however, is that strong professions provide the basis for successful team working and reinforce the need to build professional confidence and competence as a condition for successful interdisciplinary working, thus paving the path for more integrated models of care now and in the future.

9.5 References

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10 Poland

Maria Kózka, Tomasz Brzostek, Anna Ksykiewicz-Dorota, Teresa Gabryś, Dorota Kilańska, Maria Ogarek, Maria Cisek, Lucyna Przewoźniak, Piotr Brzyski

10.1 Context-organization of the health system, education and regulation

10.1.1 Poland and its health system

Poland is an Eastern European country with a population of 38 million (Eurostat, 2017). In 1999 a reform of the health care system introduced a statutory obligation to provide universal health insurance, and established the National Healthcare Fund, which finances health care services. The reform initiated development of the private sector and greater financial autonomy for the system (Masłowski, 2002; Act on health care institutions, 1991). The Act granted insured citizens the right to select a service provider from those holding contracts with the National Healthcare Fund for which they incur no treatment costs. The rights of the patient are guaranteed by the Act, and secured by the Patients' Rights Commissioner (Act on patient rights and Patient Rights Ombudsman, 2008].

The Ministry of Health is the key institution involved in formulating national health policy and financing health programmes (Constitution of the Republic of Poland, 1997; Act on health care services financed from public funds, 2004). Supervision of government policy remains with the region's governor (voivode). Responsibility for catering for the health care needs of the population operates at the territorial level of the commune, county and region (voivodeship) (Act on central administration in the regions, 1998; Act on therapeutic activity, 2011).

The municipality is responsible for providing ambulatory services in primary health care, and regional authorities are responsible for specialist ambulatory and inpatient care (Act on central administration in the regions, 1998; Act on therapeutic activity, 2011).

An innovative element of the current situation is that the health care system is financed from three sources: the National Healthcare Fund (NHF), regional and local authorities, and private contributions. The main payer is the NHF, which operates in all 16 administrative regions (Act on health care services financed from public funds, 2004). Service providers include both public and non-public (private) institutions. The non-public ones are financed not only through revenues from individuals but also from contracts signed with the NHF (Act on health care services financed from public funds, 2004; Act on therapeutic activity, 2011). Health care spending totals 6.4% of gross domestic product, or US$1 798 per capita (OECD, 2017).

10.1.2 Regulation and legislation of the nursing profession

In Poland nursing and midwifery are two separate, autonomous professions. The Act of 15 July 2011 of the Polish Parliament, which replaced the previous Act of 5 July 1996, regulates both professions. Nursing practice is defined as the provision of health care services, which include: recognition of health conditions and needs; nursing problems; exercising nursing care; carrying out physicians' orders in the diagnostic process, treatment and rehabilitation; independent provision of a defined scope of preventive, diagnostic, treatment and rehabilitation services, as well as health education. Moreover, teaching, conducting scientific and research work in the field of nursing, and managing the work of teams of nurses also fall within the scope of nursing duties (Act on the professions of nurses and midwives, 2011).

Since 19 April 1991, according to the Act of the Polish Parliament, a single independent professional body to regulate nurses' and midwives' professions has been established (Act on professional self-government, 1996). The structure of self-government includes the Central Chamber of Nurses and Midwives (at the national level) and regional chambers of nurses and midwives. Self-governance involves the right to develop nursing and midwifery by supervising and monitoring the performance of professional duties, defining and disseminating principles of ethics, professional standards and qualifications of nurses and midwives for different roles, approval of educational programmes, professional responsibility, and providing oversight of professional discipline. Registering with the regulator is mandatory for practice.

The tasks of the regional chambers of nurses and midwives include keeping a register of nurses and midwives, negotiating working conditions and wages, evaluation of training programmes (particularly with regard to specialization), participation in the committee appointing senior hospital and ward nurses, providing professional advice on proposed legislative acts concerning the professions and related health care matters.

The professional responsibility of nurses is defined in three Acts: 1) the Act on the professions of nurses and midwives (2011), 2) the Act on professional self-government (1996), 3) the Professional Code of Ethics of Polish Nurses and Midwives, approved by the professional self-government organization (2003).

Besides obligatory membership of the professional regional chamber, nurses are free to organize into trade unions, and professional or research associations, for example in epidemiological, diabetes, cardiology, nephrology or stoma care.

There is no chief nurse position in Poland. National decisions on matters of nursing remain in the hands of the Department of Nurses and Midwives situated at the Ministry of Health (created in 2005) and the Central Chamber of Nurses and Midwives. Policy documents regulating the nursing and midwifery professions, prepared by the above bodies, are signed by the Minister of Health.

The planning of nursing staff in health care units is based on the regulation of the Minister of Health issued in 28 December 2012 (Resolution of the Minister of Health, 2012). The minimum standards for hospital employment of nurses are defined by the director of the hospital, having consulted the heads of organizational units representing the regulator and trade unions. Besides national regulations on the performance of the occupation, the scope of activities of a nurse in a given position and the principles of working within the unit are defined by the director of the health care unit.

10.1.3 Nurse education

10.1.3.1 *Pre-registration nursing education*

Until 1991 different nurse education systems prevailed in Poland, including five-year secondary nursing schools,

and colleges with two-year, two-and-a-half year and three-year programmes. Since 1991 changes in the Polish nurse education system have aimed at meeting EU standards (Ministry of Health, Department of Science and Higher Education, 2002; Kózka, Brzostek & Ksykiewicz-Dorota, 2011). Changes in the health care system in the context of shrinking the financial assets for care have resulted in a reduction in nursing jobs.

Until 1999 the education of nurses in Poland was conducted in 129 medical vocational schools. Since 2000, to meet the requirements of the EU, nurse training has been advanced to a higher education level (Kózka, 2004). Since 2005 nurse education in Poland has met the requirements set up in Directive 2005/36/EC (7 September 2005), and was further modernized in 2013 according to regulation set up by the European Commission, the European Parliament and EU Member States (European Commission, 2013). Currently it is conducted at 74 institutions of higher education. There are 22 public universities and 52 higher schools of vocational education (including 27 public and 25 non-public ones). Studies at public higher education institutions are fully financed from the state budget; public universities operate on a 'not-for profit' principle. Private universities are geared for profit and draw funds primarily from tuition fees (Chamber of Nurses and Midwives, 2015).

The education of nurses is conducted within the structure of bachelor (first-cycle) and master's (second-cycle) studies. A candidate for the first cycle must have completed at least 12 years of general education, have a certificate of completion of secondary school education (maturity certificate), and a medical certificate approving the candidate for the course of studies. Student recruitment is carried out by each university according to criteria set by its senate (Kózka, 2008). The programme of education is developed by universities in accordance with the standards defined in the regulations of the Minister of Higher Education. The bachelor programme encompasses 4 720 hours, of which 4 600 hours constitute clinically oriented education and training. Half of this time is devoted to practical training. Bachelor level lasts three years and encompasses 180 ECTS credits. It is completed with a diploma examination which consists of theoretical and practical parts, to assess professional competence. The diploma examination is harmonized throughout the country. The graduate receives a bachelor degree in general nursing. Graduate level study lasts two years, covers 1 300 hours and 120 ECTS credits, and is completed with a master of nursing degree. Master graduates are entitled to teach nursing and to apply for doctoral studies.

The university authorities make decisions concerning the number of admissions of students to study nursing every year. The basis for defining the cap relates to planning considerations, linked to the number of staff, premises and facilities for education. The quality of education is assessed by the State Accreditation Committee which reports to the Minister of Higher Education and the National Council for Accreditation of Schools of Nurses and Midwives, which report in turn to the Minister of Health (Act on changing the act on higher education, higher vocational schools and certain other acts, 2001; Resolution of the Minister of Health, 2001). Obtaining accreditation from the National Accreditation Council means that the higher education institution meets the standards of the Regional Chamber of Nurses and Midwives to license its graduates to practise nursing (Act on the professions of nurses and midwives, 2011). Costs of accreditation are covered by the higher education institution.

Early in 2004 so-called 'bridging' studies to upgrade nurses to bachelor degree level were introduced for certified nurses who held diplomas from various types of school (five-year medical upper secondary schools, and two-year, two-and-a-half-year and three-year post-secondary schools). The duration of the bridging studies depended on the type of school the candidates had graduated from, spanning from 2 410 to 1 150 hours (over two or three semesters). Graduates receive the title of bachelor, and their qualifications are recognized in EU Member States (European Commission, 2013; Act on the professions of nurses and midwives, 2011). The provision of bridging studies enabled all universities and high schools (public and non-public) to access funds from the Human Capital Operational Programme of the EU until 2015. By 2015 around 60 000 nurses had completed the bridging studies. In Poland more than 100 000 nurses have a university degree (bachelor and master's) (Chamber of Nurses and Midwives, 2015).

10.1.3.2 *Post-registration nursing education*

Post-registration nurse education is regulated by the Nurses and Midwives Act (Act on the professions of nurses and midwives, 2011). It comprises specialist training and different courses (Resolution of the Minister of Health, 2003]. Specialist training lasts from 18 to 24 months, and is available to nurses with at least two years' professional experience. The qualification courses last from three to four months; conditions for entry require at

least one year's experience working as a nurse. Specialist courses last for one month, and are designed for nurses with a minimum of one month's experience (Resolution of the Minister of Science and Higher Education, 2007). Postgraduate education is run by various organizations including universities, professional associations and foundations. Prior to starting a course, the organizer must obtain a licence to run the course and make an entry in the register managed by the professional chamber in the region and the Centre for Postgraduate Education of Nurses and Midwives (Resolution of the Minister of Health, 2003). Postgraduate education is financed from various sources: the state budget, professional organizations and sponsors such as the European programmes (Human Capital OP), employers and participants. The demand for specialists in a given field is determined in consultation with the Central Chamber of Nurses and Midwives, the regulatory body for nurses. The Minister of Health sets the quotas for numbers of enrolees and the amount of co-financing for the given year. Every year the state budget finances training of approximately 1 000 specialists. Supervision of postgraduate education is overseen by the Minister of Health. Supervision focuses on compliance with the curriculum, the provision of education and training to the standard required for final exams, specialist training and value for money. Supervision is administered by the Centre for Postgraduate Education of Nurses and Midwives, persons authorized by the Minister of Health, national and regional consultants, and representatives of the professional self-government (Resolution of the Minister of Health, 2003; Act on consultants in health care, 2008; Act on professional self-government, 2011).

10.1.3.3 *Enrolees in nursing*

Together with the decline in employment, there has been a significant drop in the numbers of nurses being admitted to universities stemming from the changes introduced in the system of education. A drastic drop in the number of graduates of nursing schools was observed between 1995 and 2000 (from 14 000 in 1995 to 2 500 in 2000) (Minister of Health, 2000; Kózka, Brzostek & Ksykiewicz-Dorota, 2011). The lower interest in studying nursing and the drop in candidates applying to universities were associated with the deterioration of working conditions, relatively low remuneration, and more competitive career opportunities in the labour market. Deteriorating conditions in the nursing labour market have provoked protest and strikes by nurses but resulted in few tangible improvements to date, for example in the standardization of education, increased wages, and employment standards regulations. Clearly the widening generational gap, like the supply and demand gap, is a major cause for concern for the sustainability of the health system.

10.2 The Polish nurse workforce

10.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 5.2, and the ratio of nurses to physicians was 2.2.

As of 31 December 2014 there were 282 522 nurses (98% women) registered by the Central Chamber of Nurses and Midwives. However, there are only 182 566 nurses employed in public and non-public health care centres. They account for 58% of the entire personnel employed in the health care system (Chamber of Nurses and Midwives, 2015). Thus a significant proportion of nurses are not actively participating in the workforce, potentially further exacerbating shortfalls in supply, as we shall see.

The Central Register of Nurses holds no data concerning the additional employment of nurses, the period of their employment, or their marital and family status. Nurses are employed in health care units through employment contracts, and civil-law contracts, or through individual or group nursing practice contracts. Private nursing organizations employ 16% of nurses. The employment ratio of nurses varies across the country; it is lowest in the Małopolskie region (5.8) and highest in the Śląski region (7.8) (Chamber of Nurses and Midwives, 2015).

The average age of nurses is 48.43 years (Chamber of Nurses and Midwives, 2015).

The low proportion (9%) of registered nurses aged 21–35 suggests a generation gap is beginning to open up. Attention needs to be paid to the fact that decreasing numbers of nurses are registering in the younger age groups, thereby accentuating the ageing of the workforce. Following the forecasts of the Central Chamber of Nurses and Midwives, between 2010 and 2020 around 80 814 nurses will retire but only 19 954 will enter the labour market, which will reduce capacity in the system by 60 860 nurses (Chamber of Nurses and Midwives, 2015). These data point to the need to undertake urgent and systematic action to ensure a pipeline of sufficient numbers of nursing staff in Poland if an impending crisis in the provision of care in the future is to be avoided.

10.2.2 Deployment and skill-mix models

The functions of nurses, both in primary health care and in health care institutions, derive from the goals and mission of the profession and are defined in the Act on the professions of nurse and midwife released by the Polish Parliament in 2011 (Act on the professions of nurses and midwives, 2011). The services that a nurse may provide independently, without a physician's orders, are defined in the regulations of the Minister of Health (Resolution of the Minister of Health, 2007). The tasks conducted by nurses vary, and result from the type of postgraduate education obtained and the position held by the nurse in the system (Resolution of the Minister of Health, 2003). Besides tasks related to patient care, the nurse organizes their own work and that of the team, collaborates with patients' families and with other members of the health care team, undertakes tasks in their province of practice, and participates in scientific research (Act on the professions of nurses and midwives, 2011).

Currently, the minimum hospital nurse employment norms have been defined by the Regulation of the Minister of Health (Resolution of the Minister of Health, 2012), which replaced the previously Regulation of 1999 (Resolution of the Minister of Health, 1999). The current regulation has tidied factors which determine the minimum standards of employment, and incorporated methods categorizing nursing care according to the patient's conditions. Defining the level of employment and nurse staffing is still left to the discretion of main managers of health care institutions.

In primary health care, the standards of employment for physicians and nurses are set up in regard to the number of patients under care, size of the territory, demographic structure, scope and type of health care services provided at the place of residence, and the need for education. The family doctor and community nurse provide care to around 2 500–3 000 people. In the educational school system nurses provide care to about 800–1 000 pupils or students (Resolution of the Minister of Health, 2001).

10.2.3 Career structures

According to the Act of 15 July 2011 and the Professional Code of Ethics of Polish Nurses and Midwives, nurses are obliged to update their knowledge and skills regularly (Act on the professions of nurses and midwives, 2011; Professional Code of Ethics of Polish Nurses and Midwives, 2003). However, Poland has no legal regulations concerning requirements for continuous professional development (CPD), post-qualification credentials or revalidation schemes for nurses and midwives.

To obtain new occupational qualifications nurses have to complete a specialist postgraduate qualification course (Resolution of the Minister of Health, 2003; Resolution of the Minister of Health, 2007). The highest level of continuing professional development is the specialist training currently available in one of the 15 fields of nursing (for example surgical, paediatric, anaesthesia and intensive care). Specialist training lasts from 18 to 24 months, and ends with a state examination.

The demand for specialist nurse training is left to the decision of the regional consultants, who hand on these data to national consultants and the Minister of Health (Act on consultants in health care, 2008). The limit for specialist training enrolment in a given year, the fields of training and the amount of co-financing are set by the Minister of Health in agreement with the professional organizations for nurses and midwives. Co-financing by public funds is possible in the form of an agreement with the training provider (Resolution of the Minister of Health, 2003).

In primary health care services the financial regulations of the National Healthcare Fund (NHF) require nurses to have specialist qualifications (Act on universal insurance in National Healthcare Fund, 2003; Resolution of the President of the National Healthcare Fund, 2008). Specialized services at hospital level are provided by nurse specialists (for example surgical, anaesthetic and intensive care, psychiatric and paediatric nursing). However, currently there is no official requirement from the NHF concerning the qualifications of nurses while contracting health care services in hospitals.

At present an annual employee evaluation system is being implemented in the health care system in Poland.

10.2.4 Planning mechanisms

In 2002 the Government's Centre for Strategic Studies conducted an analysis of the demand for professions allied to medicine, which included nurses. They estimated a shortage of about 80 000 nurses by 2010 (Government's Centre for Strategic Studies, 2002). Based on these data, the Ministry of Health developed a programme, adapted to EU standards and designed to boost the education of approximately 53 000 nurses at 59 higher education institutions by 2010 (Minister of Health, 2000; Ministry of Health, Department of Science and Higher Education,

2002). Even though nursing education has been launched in 70 higher education institutions, by June 2010 only 27 320 graduates had completed the courses (Kózka, 2008). Data from the Central Council of Nurses and Midwives indicate, however, that in the last 15 years only 18 149 nurses have actually registered to join the profession and entered practice (Chamber of Nurses and Midwives, 2010). Recognizing the alarming gap opening up between supply and demand, professional leadership has been lobbying to raise the profile of nursing as a priority for a number of years, and even adopted more militant tactics such as strikes, as mentioned above, but with little impact. The crux of the recruitment crisis seems to be the conditions under which nurses are working, rather than the educational programme through which they are prepared. Policy solutions need to focus on making working conditions more attractive and involving nurses in the design of those solutions if the current critical levels of shortage are to be relieved. The shortage of nurses has the potential to put the sustainability of the health system at risk.

Until 1999 hospitals planned nursing posts solely on the number of hospital beds. This method satisfied neither managers nor staff, and nor did it ensure safe patient care. In 1999 the Minister of Health issued a directive on minimum standards for the employment of nurses, based on the ratio of direct to indirect nursing time (Resolution of the Minister of Health, 1999). Dissatisfaction with its practical implementation among the nurses, the regulator, trade unions and regional nurse consultants resulted in the Minister of Health's decision, on 9 July 2009, to appoint a new team to develop a new legal framework for the norms of employment of nurses and midwives (Resolution of the Minister of Health, 2009). The result of the team's work was the development of guidelines issued by decree of the Minister of Health on 28 December 2012 concerning minimum employment standards in hospitals (Resolution of the Minister of Health, 2012); (*see also* Section 10.1.2).

10.2.5 Mobility

Before Poland's accession to the EU, the migration of nurses did not pose a threat to the national system of health care. Data held by the European Commission demonstrate that in 1981–1997 the qualifications of 229 Polish nurses were recognized in the EU countries (European Commission, 2011; Petterson et al., 2001), and a further 39 in Australia (Hawthorne, 2011). In 2004 there were 3 500 Polish nurses working in the United States (International Migration of Nurses, 2011).

An increased interest in leaving Poland to work abroad has been evident among Polish nurses since 2000. In 2003–2004, 91 Polish nurses worked as assistant nurses in the Netherlands (Petterson et al., 2001). In 2004–2007, Polish nurses also worked in the United Kingdom (1013), Italy (820), Ireland (158), Norway (111) and the Netherlands (37) (International Migration of Nurses, 2011). Poland is one of the main source countries for the UK to recruit nurses from (Wiskow, 2006).

In May 2004 the Ministry of Health began analysing the scale of, and reasons for, the migration of medical personnel and the potential impact of this phenomenon on the national health care system. The data demonstrate that migration affects 1% of nurses, mostly below 35 years of age. The Ministry of Health considered migration of nurses a negative phenomenon for the national health care system and defined its internal and external drivers. Work environment, low wages, difficulties in improving professional qualifications, and the need for continuing professional development and the expenditure it incurred were counted among the important internal reasons for migration (Goździak, 2008). This realization prompted the government to raise salaries slightly and promote competition between the public and private sectors.

Ongoing monitoring of nurse migration is currently undertaken through registration of the recognition of professional qualifications statements, which are required for nurses to work in other EU and EEA Member States. The regulator also monitors the statements of occupational qualifications issued to nurses leaving for the United States, Canada, Australia, the Republic of South Africa and Saudi Arabia. However, the numbers of certificates issued by the regional chambers of nurses and midwives do not tally with the number of nurses working abroad, one possible reason being insufficient command of the language of the host country. From 1 May 2004 to December 2014 the regional chambers of nurses and midwives issued 15 916 statements, which amounts to 6% of nurses employed in health care institutions. The age of nurses who were issued with documents ranged from 30 to 40 (Chamber of Nurses and Midwives, 2015). The European Commission states that in 2001–2010 the qualifications of 2 367 Polish nurses were recognized in EU countries (European Commission, 2011).

Data from the Central Register of Nurses and Midwives indicate that only an insignificant number of nurses from abroad decide to work in Poland. The total number of foreigners and citizens of EU Member States is 145 people (Chamber of Nurses and Midwives, 2015).

10.3 Structure of nurses' work

10.3.1 Working conditions

Nursing in Poland has suffered a drop in applications due to demographic changes and a decline in the number of young people interested in studying nursing. This results in failure to enter new employment in the profession, and a low and falling ratio of nurse employment per 1000 residents (Chamber of Nurses and Midwives, 2015). The reduction in interest is mostly due to unfavourable working conditions and low remuneration (see also Section 10.2.4), but also to the weak position of nursing with respect to the profession's status and policy position, despite its legal standing.

On the formal plane, there are a number of regulations in force that refer to the health care system (Act on health care institutions, 1991; Act on health care services financed from public funds, 2004), the professional card (Act on professional self-government, 2011), regulation (Act on the professions of nurses and midwives, 2011), patient rights and the Patients' Rights Commissioner (Act on patient rights and the Patient Rights Ombudsman, 2008), health care consultants (Act on consultants in health care, 2008), and qualifications required from the nursing staff in individual types of job (Resolution of the Minister of Health, 2011). Nurses are responsible for performing a wide range of roles stretching from direct patient care to research, service in armed forces and prison services, employment in social aid centres, nurseries and children's clubs, and holding positions in professional organizations and trade unions. Nurses can be employed or self-employed, work as entrepreneurs, and organize individual, group and specialist nursing practices (Act on the professions of nurses and midwives, 2011; Act on professional self-government, 2011).

The Central Chamber of Nurses and Midwives and the regional chambers supervise the administration and certification of recognized qualifications, provide consultation on draft acts and regulations concerning education and training, and the occupational practices of nurses and midwives (Act on professional self-government, 2011). The Central Chamber of Nurses and Midwives generates reports related to human resources in nursing, the demand for care, and education and training. Moreover, it represents the professional interests of nurses and midwives in Parliament, the Ministry of Health, and the Ministry of Science and Higher Education. It also promotes the image of nurses and midwives publicly (Act on professional self-government, 2011).

The Department of Nursing and Midwifery at the Ministry of Health constitutes an important formal organ of nurse organization. Its director and staff have the power to influence the final shape of legal acts and documents concerning nursing practice, and graduate and postgraduate education. It also collaborates with the regulator, nursing consultants and the National Council for Accreditation of Schools of Nurses and Midwives and manages matters concerning European nursing. The Polish Nurses Association (PNA) represents Polish nurses in the International Council of Nurses.

The national and regional consultants in nursing were appointed on the basis of the Act, issued in 2002, which formally established the position of nursing among the medical occupations (Act on consultants in health care, 2008). The task of the consultants was to advise the Minister of Health and the regional governors in matters concerning nursing practice, education and professional training, supervise nursing practice, control nursing care in matters related to good practice, and introduce changes designed to improve the quality of care (Act on consultants in health care, 2008).

Research and postgraduate training and education enjoy relative autonomy. Nurse lecturers holding academic degrees are responsible for the education of nurses and midwives. The curricula and programmes of teaching comply with EU standards. Nurses supervise the drafting of the programmes, and participate as members in the National Council for Accreditation of Schools of Nurses and Midwives at the Ministry of Health, which ensures high-quality education for nurses and midwives (Resolution of the Minister of Health, 2001, 2002).

The Centre for Postgraduate Education of Nurses and Midwives is responsible for postgraduate training. It designs and updates teaching programmes, and approves institutions responsible for leading the programme, monitoring the courses, examining participants and issuing specialist certificates. Postgraduate education is provided by higher education institutions and also by other institutions which are recognized by the Centre of Postgraduate Education. The Centre is a unit subordinate to the Department of Nurses and Midwives and the Minister of Health. However, it is relatively independent in its selection of content for the postgraduate training (*see also* Section 10.1.3).

Remuneration in health care has been the subject of investigations by both Central Statistical Office (GUS) research and the compensation portal (i.e. remuneration survey). Approximately 80 000 people participated in

two rounds of this non-governmental study, the largest of its kind, conducted in 2008 and 2010. It has to be emphasized that the data pertained mostly to young people (up to age 35) with higher education (75%) and access to the Internet. Analysis of the data proved that health care – much like science and higher education, and culture and art – is a sector with low levels of remuneration. The minimum wage in Poland currently amounts to PLN 1 750. People employed in the health sector earn 30% less than those employed in other sectors. The median nurse salary in Poland amounts to PLN 3 277 before tax. By comparison, earnings of employees in insurance companies amount to around PLN 4 000 before tax and in IT technology business to between PLN 4 000 and PLN 9 200. The monthly salary of a head nurse ranges from PLN 2 150 to PLN 4 550 (Resolution of the Minister of Health, 1999). At every level men earn more than women; in the case of staff nurses the difference remains at 3%, yet in managerial positions it amounts to approximately 16%. Earnings in large health care institutions (hospitals, mostly public) are generally lower than those in small, non-public units.

The RN4CAST study was the first project undertaken in Poland on a country level, and focused on the nursing profession in the hospital context. The context includes both national policy and local in-hospital working environment conditions. This national cross-sectional study allows also for comparison of Polish results with those from other European states, thanks to a standardized international study methodology. The RN4CAST results are expected to provide data to support policy-makers, hospital managers, nurse leaders and nurse professionals in efforts aimed at improving the nursing work environment and practice, and potentially to encourage young people to take this career path.

The Polish arm of the RN4CAST study highlighted the number of hours worked by nurses during their last shift, which averaged 11.3+2.4. In total, 12% of nurses worked longer than their contracted hours. On average each nurse was responsible for 11.1–20.4 patients. The average number of other support personnel was 2.1 persons. Nearly three quarters of the respondents mentioned that they performed most care on their own, and 14% supervised care provided by others. A significant part of nurses' working time was spent on activities unconnected with direct patient care, i.e. routine testing of blood, technical and administrative jobs, transporting patients within the hospital, cleaning rooms and keeping equipment in appropriate order, receiving equipment deliveries and preparing patients for discharge and transportation.

Other studies have indicated that 46% of nurses consider they do not have sufficient time to devote to their patients, mostly because of the small number of nurses (20%) and the need to fill in paperwork (9%) (Lawendowska & Litwin, 2009).

The results of the RN4CAST study suggest that over 60% of nurses are moderately satisfied with their work, one in four is dissatisfied, and nearly a third would not recommend their hospital as a place of treatment. Emotional exhaustion was confirmed in 45% and depersonalization in 20% of the nurse-respondents, while burnout levels and patient loads for Polish nurses were amongst the highest of the RN4CAST countries.

Lack of job satisfaction and high burnout levels may influence the desire to leave the job and were reported by nearly one in every ten Polish nurses covered by the RN4CAST study. The desire to change their place of work but remain in the profession was reported by every fifth respondent. The desire to leave their job was related to lack of support from managers and colleagues, the high level of stress and low income (Radkiewicz et al., 2014; Kosińska & Pilarz, 2005). Moreover, three in every four nurses were not satisfied with their salary (Zielińska-Więckowska & Buśka, 2010).

10.3.2 Governance and leadership

There are two dimensions to leadership in nursing in the Polish system of health care: formal (or legal) and actual.

Officially, the position of nurses and leaders of nursing is guaranteed by a number of legal acts (Act on health care institutions, 1991; Act on health care services financed from public funds, 2004; Act on the professions of nurses and midwives, 2011; Act on professional self-government, 2011). However, the impact of leadership on the management of nursing services in Poland is lower than might be anticipated based on the numerical strength of the profession, solely on a formal, legal perspective. There are two main reasons for this: 1) poor preparation and investment in nurse leadership; and 2) weaker decision-making processes and opportunities as a group compared to other hospital managers. Evidence suggests that maintenance of high-quality care, ensuring the security of the environment of care and the work of nurses, is facilitated by well-educated nursing staff (Kunecka, Kamińska & Karakiewicz, 2007; Resolution of the Minister of Health, 2011). This evidence is not

being translated into managerial posts in hospitals or public health care units (Kilańska, 2007). According to this regulation, any qualification such as a master's degree in nursing or midwifery, any specialist qualification in nursing not only in organization and management, or a bachelor degree in nursing/midwifery is sufficient to make a person eligible for the post of deputy manager for nursing, chief or head nurse. Thus, at present little attention is paid to the preparation of nurses for management. Furthermore, master's degree diploma holders in biology, biotechnology, electronic engineering, physiotherapy, physics, IT, environmental engineering, mechanics, education, psychology, sociology, food and nutrition technology who simultaneously possess a bachelor degree in nursing but none in management in nursing can become the head of the nursing services sector. By contrast (Kilańska, 2007), only people with the title of medical doctor or doctor of dentistry are eligible for such posts as 'deputy head of treatment'.

The second reason hinges on the unfavourable position of nursing in the hospital organizational structure. Clearly defined responsibilities, rights, duties and detailed tasks for individual managerial positions are lacking. In the Polish health care system a hospital deputy manager for nursing is formally equal in status to the hospital deputy manager for treatment. Nevertheless, in practice the most important decisions concerning nursing are taken by the hospital manager, or by the deputy for treatment. Similarly, the ward head nurse reports to a physician who is the head of the ward, rather than to the hospital deputy manager for nursing. In a number of hospitals, nursing management has no independent budget for nursing care, and final decisions with respect to staffing, payment, postgraduate education and provision of nursing equipment remains with the head of the hospital and the ward.

To conclude, ensuring high-quality care requires improvement in the working conditions of nurses, as well as strengthening leadership among nurse-managers. In Poland the unsatisfactory working environment is associated with low investment and the relatively weak position of managing nurses in the health system, despite the existing regulations. Without changing the status quo there is limited prospect of improvement in nurses' conditions of work and in patient care.

10.4 Synthesis and policy implications

To achieve the objectives of the national health policy, including the provision of quality health care services provided by nurses, it is necessary to ensure appropriate staffing. A monitoring system which surveys demand and supply at both regional and national level needs to be introduced. Monitoring professional education should be undertaken to adjust the structure and design of educational programmes to meet the needs of the health care system. This will also impact future graduates from nursing programmes. The main premises in forecasting employment should be the structure of demand in the country, if not in Europe. The Ministry of Health should be the central hub of monitoring, as it defines the limits of enrolment in nursing studies, finances education and coordinates the health care system.

Changes in legal regulations concerning nursing practice that have taken place in recent years are significant. However, further steps are necessary to tighten regulation with respect to postgraduate education, workplace protection rights – obtained at the level of basic and especially specialist education, norms of employment, accounting for individual positions, running a register of training, paths of career development, the system of employee assessment using occupational competencies, and implementation of a classification system for nursing practice.

There is a need to identify nursing leaders and to support them in their endeavours to develop the profession and national health care policy. Powerful leadership at national and regional level is of vital importance for management in health care institutions and the development of nursing practice. Groups of nurse leaders should initiate, plan, support and monitor actions and results related to the implementation of an approach focused on primary health care, and on the creation of the role of nurse to support health care needs in future. Collaboration with other occupational groups and society should be an important role for nurse leaders.

Despite the low level of nurse migration, the problem requires further analysis and implementing measures both in Poland and at the European level to promote retention of staff. Actions within the country should aim at establishing conditions which incentivize nurses to stay both in the country and in the profession. Current working conditions for nurses in Poland are not favourable and urgent efforts are needed to create conditions to attract capable young people to this profession, and to build a robust career ladder capable of supporting the health care needs of tomorrow.

This section aims to synthesize the main lessons learned from the study, highlight the best practices and policy

tools used (especially innovative ones – both successful and unsuccessful), and assess the conditions of their transferability to other contexts.

Despite significant reforms in the health care system in recent years, such as upgrading nurse training and changes in postgraduate education, progress in daily nursing practice has still been slow. The reasons for this are highly complex, and result, among other things, from: the weak position of nurse management and nurses themselves in the health care team structure, the lack of equipment in the nurses' environment, shortages in human resources and funds, the low remuneration of nurses, and dominance by managers from other professions, especially physicians in governance matters related to nursing. This case study has highlighted that many aspects of reform are necessary to secure a sustainable health care workforce for the future. A change in the self-identity of nurses, enhancing the autonomy of the occupation and their professional self-image; adopting an evidence-based approach to nursing practice; better management and support for leaders of the occupation; development of cooperation with other members of health care teams; and improvement in the conditions of work (remuneration included) are all necessary to develop the future progress of the profession and secure the workforce and quality of care for the future.

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11 Slovenia

Eva Turk, Ana Habjanič

11.1 Context-organization of the health system, education and regulation

11.1.1 Slovenia and its health system

Slovenia is a Southern European country with a population of 2.07 million (Eurostat, 2017) of which approximately half live in urban areas. The health care system in Slovenia is a public service provided through the public health service network. Public institutions or private practitioners hold rights to provide treatment financed by public funds. Insured individuals are entitled to choose their own primary care physician. In the event that a hospital admission is required, individuals have the right to choose which hospital/specialist facility provides their care. The current system came into force in 1992 with the Health Care and Health Insurance Act (1992). Since then, Slovenia has had a Bismarckian type of social insurance system, based on a single insurer for statutory health insurance, fully regulated by national legislation and administered by the Health Insurance Institute of Slovenia. Slovenia's health care has changed significantly, with the reintroduction of private practice and the introduction of both a compulsory and a voluntary health insurance system. Under the compulsory health insurance arrangements, insured individuals are entitled to receive certain rights up to predetermined amounts specified by law (Article 23 of the Health Care and Health Insurance Act). Insured parties are entitled to preventive services (general health check-ups, measures for preventing contagious diseases, measures for early detection of certain diseases, etc.), treatment and health care at home and in special social institutions and elderly

homes, transport by ambulance (up to 60% of the charge), medicines (from the positive and intermediate list) and medical devices. In financial terms, the rights to prescription-only medicines represent one of the most expensive items of compulsory health insurance in Slovenia. Compulsory health insurance provides access to prescription medicines included in one of the lists (positive or intermediate) with a 15% or 50% co-payment for supplementary health insurance. This is not required for children, pupils and students, and individuals with certain diagnoses. For example, this includes women's health (including family planning, contraception and pregnancy), HIV/AIDS, cancer, epilepsy, multiple sclerosis and advanced forms of diabetes. Health care spending totals 8.6% of gross domestic product, or US$2 835 (OECD, 2017).

11.1.2 Regulation and legislation of the nursing profession

As in other EU countries, nursing and midwifery are two of the regulated professions in Slovenia, and are regulated by the Health Services Act[1] and other executive regulations, such as the Registration and Licensing of Nurses and Midwives Regulations.[2] According to these, nurses and midwives are required to have appropriate professional qualifications and training, such as a degree from one of the faculties or university colleges of nursing or a degree from some comparable foreign educational institution. These must meet the regulatory standards on the qualifications recognition procedure for nationals of member states of the European Union for regulated professions or professional activities in the Republic of Slovenia. Secondly, they also need to be fully registered with the Nurses and Midwives Association of Slovenia and they need to hold a valid licence of the Nurses and Midwifery Association of Slovenia.

Nurses or midwives are required to use the Slovenian language when practicing nursing or midwifery. When working in the bilingual areas of the Italian or Hungarian national minority, they also have to use Italian or Hungarian.[3]

11.1.3 Nurse education

Educational standards are set by universities. After a temporary suspension between 2012 and 2015, in 2016, the Nurses and Midwifery Association of Slovenia, regained authorization for the registration/licensing of nurses and for revalidation of qualifications through continuous professional.

11.1.3.1 *Pre-registration nursing education*

The entry point into nursing education in Slovenia starts with high school (secondary education). This represents grades 10 to 13; it follows after nine grades of elementary school education and is therefore pre-tertiary education. The pupils in high school are 15 to 18 years of age. In 2012 there were eleven high schools to train nursing assistants, who can, after four years and upon the successful completion of their maturity exam, enrol in an undergraduate nursing study programme. Successful entry depends on the number of points achieved at the maturity exam and on the students' performance in the last two years of high school. It is also possible to enrol in an undergraduate nursing study programme from other high schools by completing an 80-hour introductory course into nursing. Nursing high schools are well distributed across the country with only a small proportion of pupils needing to travel more than 50 kilometres to their nearest one. Between 2007 and 2012 approximately 1 000 pupils enrolled each year in high school and 95% graduated (Ministry of Education and Sport, 2012).

Nursing assistants are required to complete 1 000 hours of clinical practice in hospitals, health care centres and/or nursing homes while attending high school. Clinical practice is undertaken in the final two years of high school. While nursing assistants achieve knowledge and skills in the provision of basic nursing care, medication handling, administration, etc., registered nurses who complete their undergraduate study also achieve knowledge and skills in nursing interventions (assessment, implementation, evaluation).

11.1.3.2 *Undergraduate nursing programmes*

A nursing degree is obtained through a three-year undergraduate study programme, comprising 180 ECTS credits in total. The bases for the programme are various directives and regulations, such as nursing services as established by EU sectoral directives, the Strategy for European Higher Education (Bologna Declaration), Higher Education Act Regulations in the Republic of Slovenia, present and anticipated demands

1 Health Services Act *(official consolidated text, Article 55). Official Gazette of the Republic of Slovenia, No. 23/2005*

2 Pravilnik o registru in licencas izvajalcev v dejavnosti zdravstvene ali babiške nege, *Official Gazette of the Republic of Slovenia, No. 3/2016*

3 http://www.zbornica-zveza.si/sites/default/files/doc_attachments/professional_image-2.pdf

and needs for nursing care, taking into consideration the latest professional developments, past employment and experiences of nurses and related health-care professionals, WHO directives on health protection and promotion (e.g. Health in the 21st Century), and initiatives of professional associations such as the International Council of Nurses and the Nurses and Midwives Association of Slovenia (Vettorazzi & Pajnič, 2011).

The nursing degree consists of 4 600 hours of theoretical education and clinical practice, of which the theoretical part must include at least 1 200 hours and clinical practice at least 2 300 hours (Official Journal of the European Union, 2005). In 2011 there were eight educational institutions approved to teach undergraduate nursing programmes. Three of these institutions were faculties and five were colleges. Five of those institutions were public and three private. Undergraduate students have the option to enrol on a full- or part-time basis but they must still complete the same number of hours of theory and clinical practice. The fundamental difference between public and private educational institutions is that private institutions depend entirely on private tuition fees and funds from the sponsors, for example private companies; there is no funding from the Ministry of Higher Education, Science and Technology. In case of full-time study in public institutions, the Ministry of Higher Education, Science and Technology is responsible for paying tuition fees (Ministry of Higher Education, Science and Technology, 2011).

The first undergraduate educational institution for registered nurses in Slovenia was established in 1954 in Ljubljana, the capital city of Slovenia. The undergraduate nursing programme took three years to complete. Almost two decades later, in 1975, the College of Nursing joined the University of Ljubljana and in 2009 was transformed into the Faculty of Health Sciences, University of Ljubljana. The second nursing educational institution, the University College of Nursing Studies, was established in 1993 as part of the University of Maribor and was subsequently transformed into the Faculty of Health Sciences in 2007. The Faculty of Health Sciences, University of Maribor in 2007 was the first Slovenian educational institution to start an undergraduate nursing programme developed according to European guidelines and the Bologna Declaration. In 2002 the College of Health Care, Izola was the third nursing educational institution to be established in Slovenia. A year later it joined the University of Primorska and in 2011 the Nursing College, Izola became the Faculty of Health Sciences, University of Primorska. All three faculties operate in the public sector (Ministry of Higher Education, Science and Technology, 2011).

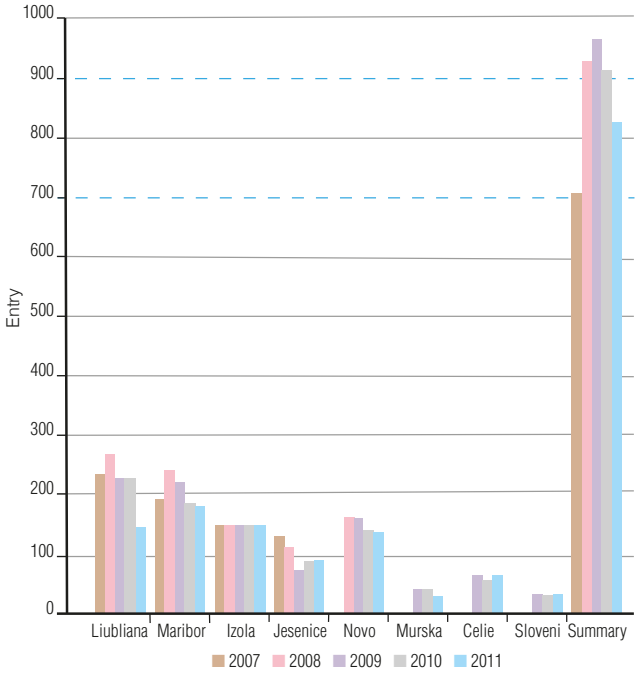
In 2004 a study was conducted by the National Institute of Public Health (Albreht, 2004) to analyse the workforce implications of the education of nursing personnel in Slovenia. The study predicted a shortfall of registered nurses until 2033, and served as a background document for the additional establishment of undergraduate institutions. Recently, five additional nursing educational institutions were established to meet the growing demand for nurses due to regional shortages of registered nurses in the workforce.

In 2006 the College of Nursing, Jesenice started to operate under the jurisdiction of the municipality of Jesenice and the Gorenjska development agency as a public institution (in 2014 it was transformed into the Faculty of Health Care, Jesenice). One year later, in 2007, another public institution was established: the School of Health Sciences, Novo Mesto (which was transformed in 2013 into the Faculty of Health Sciences, Novo Mesto). Also in 2007 the first private educational institution, the European Centre Maribor (ESM), now Alma Mater Europaea, was established and began to enrol students in 2009. Further nursing colleges (bringing the total number to 8) were established in 2009 and became operational in the same year. These were the College of Nursing, Celje and the College of Health Sciences, Slovenj Gradec. Both of these, like Alma Mater Europeae, are private institutions and have no state concessions, which mean that there is no financial support from the government. Nonetheless, all five recently established institutions have accredited undergraduate nursing study programmes according to European guidelines and the Bologna Declaration (Ministry of Higher Education, Science and Technology, 2011). Undergraduate and postgraduate study programmes are accredited by the Slovenian Quality Assurance Agency for Higher Education (2010). After successful completion of undergraduate study, a (Bologna) bachelor degree is awarded.

Prior to 2000, college nursing education in Slovenia was provided by only two institutions located in the cities of Ljubljana and Maribor. Enrolments in Ljubljana and Maribor were much higher at that time compared to 2011. For example, enrolment in Ljubljana and Maribor in 2008 was 240 and 267 students respectively, between 30% and 40% more than in 2011. This was due to higher numbers of part-time students. The enrolment figures for full-time students remained more or less unchanged. The majority of part-time students are employed and are studying to acquire higher qualifications, for example

to improve their working conditions or chances of promotion and career opportunities. Recently established regional nursing colleges entirely assimilated the reduced part-time enrolment numbers in Ljubljana and Maribor. In 2009 enrolment resulted in its historic peak at about 40% higher than 2007. Full-time enrolment figures were reduced in 2010 by lowering enrolment of part-time students and in 2011 also by fewer full-time students. In 2011 the Ministry of Higher Education, Science and Technology recognized an over-supply and started to limit tuition fees to a smaller number of students, so some faculties in 2012 decided to reduce full-time enrolment. Figure 11.1 represents the enrolment figures of nursing students in eight Slovenian undergraduate nursing institutions in the period between 2007 and 2011.

Figure 11.1 *Undergraduate nursing study entries from 2007 to 2011, arranged by location*



Source: Ministry of Higher Education, Science and Technology, 2011

In the period when the University of Maribor started providing nursing education, enrolment figures were higher due to the large numbers of part-time students employed in health care institutions who had embarked on education to improve their career opportunities or to ensure their current position with their employer. For example, from 1993 to 2009 all available part-time places had been filled. However, part-time enrolment figures from 2010 to 2012 revealed a fall of more than 50%, as a shift to regional nursing colleges has been observed. The two-semester part-time study fee in Slovenia amounts to approximately €4 000. This amount is still 10% below the Ministry of Higher Education, Science and Technology's contribution for full-time nursing students. In 2011 the Ministry of Higher Education, Science and Technology contributed €4 300. Part-time study has the advantage of flexibility and efficiency in its usage of the same technical equipment, classrooms and administration services.

The current trend in Slovenia shows an increase in the numbers of undergraduate nursing students enrolling at regional institutions, as fewer are willing to travel to the major university cities of Ljubljana and Maribor. This trend is not surprising given that the average Slovenian salary is approximately €1 000 net per calendar month and unemployment rates have risen above 13% (Statistical Office of the Republic of Slovenia, 2014). In that respect, additional travel and accommodation costs associated with studying are significant. In 2011 part-time enrolment remained at a similar level to what it had been five years before, and full-time students produced the higher overall enrolment figures. These 20–30% higher enrolment figures may substantially increase the chance of graduates gaining employment as a registered nurse.

Unemployment of registered nurses and nursing assistants was negligible in Slovenia in 2011. Employment Agency of Slovenia (2014) figures showed that 2% of registered nurses were unemployed in 2011 and unemployment of high school graduates (nursing assistants) stood at 1%. However, the percentage of unemployed registered nurses rose to 3% in 2012 and to 4% in 2013. Unemployment of nursing assistants rose to 4% in 2012 and 6% in 2013. Between 2002 and 2011, for example, the total nursing workforce grew by 18% and that of registered nurses grew by 36% (Statistical Office of the Republic of Slovenia, 2013). Between 2002 and 2005, and based on the growth of student numbers, it had become increasingly difficult for nursing assistants with a high school education to find employment. By increasing places for Bologna bachelor degree students on a yearly basis, universities and colleges each year were educating substantially more registered nurses. According to statistical data, in 2007 approximately 35% of high school graduates were applying for full-time undergraduate study. In 2009 this figure was approaching almost 50% until 2012, when it fell slightly to 45 (Ministry of Higher Education, Science and Technology, 2012). Enrolment figures to undergraduate study increased not only because of more entry places but also because as employment of nursing assistants practically stalled between 2002 and 2005, employment of registered nurses grew. After this period the employment of nursing assistants started to grow again, although at slower rates compared to registered nurses. This was due to elderly care institutions not being

financially able to employ registered nurses. In addition, many services for the older population started to expand, e.g. home care. How the nursing workforce will develop in the next years is difficult to predict because Slovenia is in the middle of austerity cuts.

In contrast to undergraduate study enrolment, the data on current Bologna bachelor graduates are more difficult to obtain. In 2012 Slovenian undergraduate studies produced approximately 650 registered nurses (Bologna bachelor degree). However, it is expected that this number will grow in the next few years to approximately 750 Bologna graduates per year (to 85–90% of the total enrolment in 2011), because four of the recently established institutions have so far produced only a small fraction of Bologna graduates to the entire pool.

In terms of university education for midwifes, the adoption of EU directives when Slovenia joined the EU provided midwives with the opportunity to obtain the essential competencies as defined by ICM and to establish their own department and chair, responsible for the autonomous development of midwifery education, which had originally been joined with nursing.[4] Midwives can learn new skills and competencies and most of the theoretical part of the curriculum, covered originally by obstetricians, is now taught by midwives. These evolutionary changes substantially contributed to the professionalisation of midwives.[5]

11.1.3.3 *Post-registration nursing education*

Bologna-accredited postgraduate nursing programmes were launched in Slovenia in 1999. Specialist gerontological nursing and perioperative nursing programmes were the first of their kind to be offered to registered nurses providing specialist knowledge and skills in these areas of practice. Specialist perioperative courses were developed on the basis that undergraduate programmes lacked sufficient in-depth knowledge associated with the preparation of patients for surgery and procedures and interventions in anaesthesiology. Specialist study programmes were endorsed with 60 ECTS credits. The first institution to offer a postgraduate master's degree in nursing (2nd level Bologna study programme) was the Faculty of Health Sciences at Maribor in 2007. Recently, all faculties and colleges have begun their own postgraduate master's programmes which are equivalent to 120 ECTS credits.

There are limited numbers of nursing students in receipt of a master's degree in Slovenia. The master's programmes only began in 2007 and there are currently fewer than 100 graduates. The programme provides students with the theory of nursing science and can serve as the basis for a career in lecturing or to pursue further doctoral studies. The study programme is also popular amongst head registered nurses or nursing team leaders interested in obtaining knowledge in nursing research, as well as the opportunity to strengthen their current working position. In the last twenty years Slovenia has produced only three doctoral dissertations in nursing science, and all were defended outside Slovenia at European nursing faculties. At present, Slovenia does not offer doctoral studies in nursing science.

The first professional organization of nurses in Slovenia was the Organization of Nursing School Graduates, founded in Ljubljana in 1927. In 1951 it changed its name to the Nurses' Society of Slovenia. In 1963 the Society was reorganized to form the Nurses Association of Slovenia (NAS), which was affiliated to the Nurses Association of Yugoslavia. In 1992 the Association assumed the role and functions of a national nursing and midwifery chamber and adopted its present name: the Nurses and Midwives Association of Slovenia (Nurses and Midwives Association of Slovenia, 2012a).

The Nurses and Midwives Association of Slovenia is a professional, non-governmental and non-profit-making association, comprising eleven regional societies and thirty professional sections. Its objective is to provide safe nursing and midwifery practice and to protect the professional interests of its members. Membership is voluntary and there are approximately 17 000 members who pay a monthly subscription fee. The Nurses and Midwives Association of Slovenia is affiliated to the International Council of Nurses, the International Confederation of Midwives and the European Federation of Nurses Associations (Nurses and Midwives Association of Slovenia, 2012b).

The Nurses and Midwives Association of Slovenia is the national regulatory body for nursing and midwifery. It maintains a national register of registered nurses and nursing assistants, and is responsible for issuing, renewing and withdrawing licences in this field. In addition, it is in charge of negotiating salaries for nurses and midwives. According to the regulations, all registered nurses and nursing assistants in Slovenia must obtain a valid licence and need to be registered with the association to practise (Nurses and Midwives Association of Slovenia, 2012c). In this case the nursing chamber is the regulator, a situation

4 Mivšek, P., Pahor, M., Hlebec, V., & Hundley, V. (2015). How do midwives in Slovenia view their professional status?. *Midwifery*, 31(12), 1193-1201.

5 Mivšek, P.(2015). Meeting the challenges of midwifery education in Slovenia: a historical overview. Essentially MIDIRS 5 (4), 19-22.

which is shared by some former communist countries. Following higher education or graduation, in order to obtain their initial licence to practise, registered nurses and nursing assistants are required to sit an examination set by the Ministry of Health. This usually occurs nine months after an individual has been employed in their initial post. The licence must then be renewed every seven years by obtaining the requisite number of points. These points can, for example, be obtained through an individual's involvement in research, by publication in scientific journals, or by attending seminars and conferences. Collection of licence points is administrated by the Nurses and Midwives Association of Slovenia. If registered nurses or nursing assistants have obtained insufficient licence points in the seven years after qualifying, additional examinations relating to emergency care and their specialist area of practice must be passed. The renewal licence examination is commissioned by the Nurses and Midwives Association of Slovenia (2011a).

11.2 The Slovenian nurse workforce

11.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 8.8, and the ratio of nurses to physicians was 3.1.

In a study supported by the Ministry of Health, Skela Savič & Pagon (2008) examined the relationship between nursing staff and physicians in terms of their perceptions of organizational culture. Findings demonstrated that both professional groups understood the relationship differently. While both groups estimated that they had a low level of personal involvement in their organizations and indicated insufficient involvement in teams, nursing staff expressed the view that they were more subordinate to physicians than the physicians themselves thought they were. Nursing staff also perceived doctors as the group who created and perpetuated hierarchical relationships between team members. The authors concluded that nursing staff subordination could be explained by their level of education and organizational barriers such as hierarchy, control orientation, and the lack of cooperation and team building between physicians and nursing staff, as well as insufficient inclusion of both physicians and nursing staff in the process of change and implementation activities.

11.2.2 Deployment and skill-mix models

We need to look at the nurse numbers in Slovenia in two ways. On the one hand, the Nurses and Midwives Association of Slovenia does not agree with the current inclusion of nursing assistants (called health technicians) when officially counting the number of nursing professionals. According to the Association, the number should include only those nursing professionals who have successfully completed at least three years of study in post-secondary education (e.g. registered nurses).

The Nurses and Midwives Association of Slovenia which represents both registered nurses and health technicians, also advocates that the ratio between registered nurses and health technicians, which is currently 35:65 in favour of the latter, should be reversed. This means that Slovenia would need to downsize the population of health technicians and introduce or educate another 7 000 to 8 000 registered nurses. Notwithstanding this dissonance about the number of nurses, Slovenia shows a high number of nursing professionals (both registered nurses and nursing assistants; 8.8 per 1 000 population in 2015) when compared with Austria (8.03), Croatia (6.68), Estonia (6.48) and the average for the EU13 (6.22).[6]

Nurses are considered to be key members of health care teams in outpatient settings, particularly in primary care, where their numbers are expected to rise further through the progress made in establishing family medicine reference clinics (FMRCs). Since the introduction of FMRCs in 2011, registered nurses with specific knowledge and skills have started to undertake important tasks in the FMRCs (i.e having an additional 0.5 full-time equivalent registered nurses in the primary care team for preventive activities). Initially, the Nurses and Midwives Association of Slovenia wanted such work to be carried out systematically and under supervision. This represented an innovation upon implementation since registered nurses in primary care did not receive additional training when starting to work in paediatric, school health or gynaecology clinics. Yet this method has proven to be extremely useful: the wealth of new experience, many new skills and professional sovereignty contribute to comprehensive patient treatment, which has naturally yielded positive benefits.[7]

In Slovenia, about one third of all nurses work in outpatient settings. Comparatively, the number of nurses

6 Albreht, T., Brinovec, R. P., Jošar, D., Poldrugovac, M., Kostnapfel, T., Zaletel, M., ... & Maresso, A. (2016). Health systems in transition. *Health*, 18(3).

7 Susič, T. P. (2017). The family medicine reference clinic: an example of interprofessional collaboration within a healthcare team. *Obzornik zdravstvene nege*, 51(2), 112-115.

Table 11.1 *Foreign nurses in Slovenia in 1992, 2000 and 2005–2008*

	1992	2000	2005	2006	2007	2008	Total
Austria	0	0	0	4	0	0	**4**
Bosnia and Herzegovina	0	22	2	21	9	3	**57**
Canada	0	1	0	0	0	0	**1**
Croatia	3	20	0	6	4	8	**41**
Former Yugoslav Republic of Macedonia	0	12	0	3	1	1	**17**
Germany	0	3	1	2	1	2	**9**
Hungary	0	0	0	0	0	1	**1**
Ireland	0	1	0	0	0	0	**1**
Montenegro	0	4	0	0	0	1	**5**
Serbia	2	24	0	7	6	9	**48**
Switzerland	0	0	0	3	0	0	**3**
Ukraine	0	0	0	0	0	0	**1**

Source: Albreht, 2011.

working in hospitals is somewhat lower than in some, more hospital-oriented, health systems.[8]

11.2.3 Career structures

Currently there are no organized career centres in health care institutions that are responsible for the development and progress of individual nurses. Nevertheless, career development of nurses contributes significantly to the advancement of health care systems and the profession of nursing by increasing professional competence. 'Nurse career' means the development, advancement, education and upgrading of knowledge in nursing, thereby achieving greater visibility in wider society. It can occur in three different areas of activity: education, research and nursing practice. With the increase of possibilities for higher education, nurses can decide to continue their studies at university or to follow postgraduate programmes, acquiring additional skills in organization and management. These are necessary for carrying out work in senior positions. Some nurses choose to pursue a research path in their field, and they do so combined with practice work, which is very important for the ongoing development of the area. The third direction for the career development of nurses takes place in the field of education, where a nurse can develop their own academic career (Kelbic et al., 2015).

11.2.4 Planning mechanisms

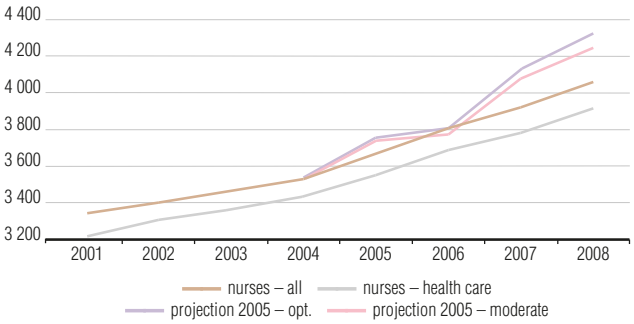
There are three main bodies involved in workforce planning. These include the Ministry of Health, the nursing chamber and the Ministry of Higher Education. For the most part, the Ministry of Education consults on the proposed numbers of students admitted to different university programmes and the *numerus clausus* (Albreht, 2011). According to Albreht (2011), nursing staff coming from abroad to work in Slovenia have not always been correctly accounted for in the workforce planning process. Historically, the number of foreign nursing staff employed in Slovenia has been very low, with the majority coming from Bosnia and Herzegovina, Serbia and Croatia (see Table 11.1).

In a study of health care human resources, Albreht (2004) predicted a shortfall in the number of registered nurses required in Slovenia by 2033. Based on these data, increased enrolments into undergraduate education programmes had taken place by 2005. There has been a paucity of research regarding the development of nurse education in Slovenia. One study conducted by Skela Savič (2009a) contended that the major challenges to its development include insufficient and inadequate preparation and qualifications of the teaching and academic workforce in these new schools of nursing, a situation not uncommon across other parts of Europe where the transition to higher education has been rapid. Moreover, there has been some debate as to whether nurses with a master's degree are employable at all, given the implementation of national saving measures and the restrictive employment policies in hospitals. According to some academics, the Slovenian health care system "should not fear an increased number of nurses with a master's degree and should not view this as only an additional cost, but should instead aim at constantly increasing the ratio between nursing staff with a secondary school

8 Albreht, T., Brinovec, R. P., Jošar, D., Poldrugovac, M., Kostnapfel, T., Zaletel, M., ... & Maresso, A. (2016). Health systems in transition. *Health*, 18(3).

degree and those with higher education degrees so that the latter continues to increase" (Skela Savič, 2009a). In 2010 Albreht presented the development of registered nurses in Slovenia, which is shown in Figure 11.2 below.

Figure 11.2 *Development and dynamics of nurses since 2001*



Source: Albreht, 2010

11.2.5 Mobility

So far, professional mobility has been observed only in sporadic cases, but anecdotal evidence shows that health care managers from abroad, particularly Austria, come to the graduation of registered nurses and offer them positions in their health institutions. Also, recent years have seen a growing number of commuters to the neighbouring regions of Austria and Italy in particular, where Slovenian nurses are valued primarily due to their sound professional knowledge and competence. It is estimated that commuters to both countries total roughly 200 (Mlakar, 2014).

11.3 Structure of nurses' work

11.3.1 Working conditions

According to the Statistical Office of Slovenia, the ratio between one- and two-shift work is worrying in the nursing profession. Only 35% of nurses work one shift, 27% work double-shifts and about 38% of them work three shifts or more. Because of absenteeism among nurses, their substitution and reallocation cause additional burdens for nurses endeavouring to ensure quality health care and continuity of care for patients.

11.3.2 Governance and leadership

Slovenian health care services are organized into three levels. Primary health care is organized according to the size of each of the municipalities. General practitioners (GPs) are responsible for patients at a primary health care level. Registered nurses operate as community nurses. They visit patients at home to carry out prevention activities and nursing interventions such as the dressing of surgical wounds, provision of intravenous therapy, etc. Nursing interventions are carried out according to the instructions of the GP. As community nurses typically operate from regional health care centres, services are coordinated via both written and telephone requests.

In 2011 model practices were introduced in Slovenia to provide improved health care for patients suffering from diabetes. The introduction of the model practice meant up-skilling and an upgraded working manner for registered nurses. The responsibilities of registered nurses in the model practice are expanded, and include preventive screenings and establishment of registries for diabetic patients, as well as organization of work (changes in team structure and division of labour) (Poplas Susic & Marušič, 2011). Model practices enable integrated care that adheres to chronic patient treatment protocols, complete prevention, quality indicators, optimal use of laboratory services, performing optimal scope of services and procedures at primary level as well as the performance of certain activities on the part of the registered nurse within their scope of practice.

For the most part the role of the registered nurse is to create and maintain patient registers and provide measurements of medical data that are part of nursing competencies (nursing interventions). Model practices will be introduced into both public institutions and those with contracts. The aim of these practices is to increase quality, safety and cost-effectiveness in patient treatment by transferring certain tasks from secondary to primary care (Ministry of Health, 2011a). The first of these new practices was introduced in April 2011 and by the end of that year there were 114, and by the end of 2013, 230 model practices were operational, representing one quarter of all GP practices. The Ministry of Health is aiming to ensure that all GP practices in Slovenia become model practices. For registered nurses working in these practices, it will involve increased levels of responsibility in the future. Each practice employs an additional 0.5 full-time equivalent (FTE) qualified nurse. The idea of achieving the same structure of GP teams across the country means almost 400 newly employed qualified nurses in the coming years (Health Systems and Policy Monitor, 2013).

Regarding the workforce situation, in the medium term model practices will alleviate the rising unemployment of nurses (Health Systems and Policy Monitor, 2013).

Secondary health care comprises specialized practices and clinical health care. In hospitals, nursing staff are organized into nursing teams, and registered nurse specialists may also be part of surgical medical teams. The duties of nursing staff in specialized practices (in contrast to general practices) are generally oriented towards nursing interventions.

Tertiary level health care provides health care services for populations as well as providing educational work and scientific research (Ministry of Health, 2011b).

Hospital nurses and community nurses are well integrated into the Slovenian undergraduate study process. They are actively involved in clinical practice as mentors to nursing students, as well as providing teaching input at nursing faculties and colleges. The hospital nursing chamber and health care centres are also involved in research, usually as co-investigators whilst the principal investigators and project leaders are typically members of staff working in the various educational institutions. As part of the general health care and prevention initiatives, registered nurses also provide activities linked to patient education. Nursing care provision is closely connected to all the health activities of various health institutions and represents a vital part of the entire health care services for the population (Nurses and Midwives Association of Slovenia, 2010).

Nursing care provision comprises planning, organization, leadership, nursing intervention and its organization and oversight according to current doctrine and ethical codes (Slovenian version of the ICN Code of Ethics). Nursing care activities are, in detail, connected to assessments of patient health care needs and procedures to achieve health improvements and their implementation. An important part of nursing care provision comprises documentation, which involves the recording of nursing interventions, personal care activities and evaluation of activities of daily living. In addition, the documentation must show a record of any use of physical restraint, or other incidents, for example falls, which must be discussed with patients. Scientific research, primarily in connection to the health care needs of the population and their satisfaction with the services and programmes provided, is also a priority for the profession (Nurses and Midwives Association of Slovenia, 2010).

The Health Insurance Institute of Slovenia occupies a central position as the main funder and provider of health care for the majority of Slovenians. However, in the past decades a growing number of private practices have become involved in the provision of health care. Until the mid-1990s there were almost no private practices but their number increases on a yearly basis (Hvalič Touzery, 2004). In 1992 the first tranche of providers entered into a partnership agreement with the HIIS to ensure a stable public financial agreement. However, the public network of social welfare and health services in Slovenia is still much more extensive in comparison to the private network.

11.4 Synthesis and policy implications

The development of nursing education in recent years has been based on the Albreht study (2004), which predicted a shortage of registered nurses until 2033. In a more recent study, Skela Savič (2009b) concluded that registered nurses were not employed in accordance with EU guidelines and that nursing assistants were taking on tasks that were previously the remit of registered nurses. This practice has been used as a cost-saving exercise. The problem is that from 2009 to 2012 the economic climate in Slovenia worsened, forcing the government to save money in an effort to meet EU budget deficit rules. As a consequence, a freeze on public employment was implemented. If the economic situation fails to improve, Slovenia currently educates far too many registered nurses. So far, the over-production of registered nurses has not shown increased unemployment rates among registered nurses, or migrations out of Slovenia to seek employment elsewhere.

Based on the influential study conducted by Albreht (2004), the Ministry of Health allowed the accreditation of new nursing colleges in various regions. In this way, the nursing colleges in Ljubljana and Maribor were joined by new nursing colleges, both public and private. In professional circles there has also been a debate surrounding the quality of the education provided by these new colleges, given the problems they experienced in finding competent staff to provide adequate standards of nursing education.

The Nurses and Midwives Association of Slovenia (2011b) prepared a Strategy for the development of nursing in Slovenia 2011–2020, stating the importance of the development and enhancement of both horizontal and vertical education of nurses. The Strategy outlined activities to promote autonomy in the profession through continuous education and the development of clinical, applied and basic research, as well as evidence-based nursing. It foresaw the development of nursing at all levels of the health care system, as well as in health information, policy and legislation.

There has been an enormous increase in the number of registered nurses in the past five years. With approximately 650 registered nurses graduating on a yearly basis, the projection by Albreht (2004) will soon be outdated. In the past, strategy and planning for health professionals were almost non-existent and there is now a need for a strategy for planning key health professionals (Albreht, 2010).

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12 Spain

Cristina Hernández-Quevedo, María Teresa Moreno-Casbas

12.1 Context-organization of the health system, education and regulation

12.1.1 Spain and its health system

Spain is a Southern European country with a population of 46.53 million (Eurostat, 2017a). The Spanish National Health System (SNS) has two fundamental characteristics. First, it is almost universal, providing access to free services at the point of delivery to 99.1% of the population (OECD, 2017a). Secondly, its nature is essentially public, with 94.5% of resources being funded by taxes. The universal national health system coexists with Mutual Funds catering for civil servants (MUFACE), the armed forces (MUGEJU) and the judiciary (ISFAS), as well as Mutualities focused on assistance for Accidents and Occupational Diseases (Bernal-Delgado et al., 2018). The SNS is organized as a set of health services of the state administration and health services of the autonomous regions. The authority of the central administration is embodied by the Ministry of Health, which is in charge of: establishing the basis and general coordination of the health system; implementing all the activities associated with external health (that is, surveillance and risk control, development and accomplishment of international standards, research); deciding, managing and evaluating the public financing of drugs and medical devices; and financing and governing health care for the autonomous cities of Ceuta and Melilla, through the Institute for Health Care Management (Instituto de Gestion Sanitaria, INGESA) (Ministry of Health, 2010a).

Spain has a decentralized health system, coordinated by the central administration, whose responsibility it is to ensure that health services are governed and coordinated appropriately and distributed equitably throughout the country. Spain is divided into 17 regional administrations (Autonomous Communities, ACs) and since 2001 the authority and responsibility for health services have been fully transferred to all the ACs. Through the regional ministries (departments), each AC has jurisdiction over the territorial organization of health services (that is, regulation and planning of health policy and care delivery). Coordination between the central state administration (Ministry of Health) and the ACs is done through the Inter-Territorial Council of the National Health System (CISNS). The CISNS is composed of the Minister of Health (the board president) and 17 representatives of the health ministries (departments) of each region (Ministry of Health, 2018).

Health care spending in Spain was slightly below the EU average in 2015, at 9.0% of GDP, or US$3 248 per capita (OECD, 2017a). The Autonomous Communities manage 92.2% of these health resources, which correspond to 64% of total expenditure in health (Bernal-Delgado et al., 2018).

12.1.2 Regulation and legislation of the nursing profession

The basic legal framework of the SNS is based on the General Health Act 14/1986, of 25 April 1986, which defines the SNS as the ensemble of "all structures and public services at the service of health" and "the combination of state administration and ACs' health services" (BOE, 1986). Law 16/2003, of 28 May 2003, on the cohesion and quality of the SNS, established the basis for coordination and cooperation of the public health authorities to ensure equity, quality and social participation in the SNS (BOE, 2003a). The enactment of the SNS Quality Plan in 2005 (Ministry of Health, 2005) provided mechanisms to enhance quality of care, to develop strategies to promote professional excellence, and to introduce technical and scientific practices in public health organizations, such as the 'Guía-salud' for the creation of clinical practice guidelines. More recently, Royal Decree Law 16/2012, of 20 April 2012, on the sustainability of the health system (BOE, 2012) was introduced as a response to the economic crisis, aiming to regulate the coverage conditions of the SNS, the basket of benefits and the participation of patients in its funding (for more information, see OECD/European Observatory on Health Systems and Policies, 2017).

Regarding the regulation of health professionals within the SNS, Law 44/2003, of 21 November 2003, on health professions' management, regulates the education of health professionals in both undergraduate and specialized training, and also provides the quotas for the health technical school areas (non-university studies). This Law states that: "it supports registered nurses in terms of the direction, evaluation and provision of nursing care aimed at the promotion, maintenance and restoration of health and prevention of disease and disability" (BOE, 2003b). While this Act is fundamental for nurses as it regulates both nursing and the health professions in general, the basis for formal education has been lately revised according to the European Higher Education Area (see Section 12.1.3).

Further, Law 55/2003, of 16 December 2003, on the Framework Statute of Statutory Professionals in the Health Services, establishes general criteria for defining the career path of health professionals. In particular, the SNS Commission on Human Resources (under the CISNS) is mandated to deal with the homologation of career systems across ACs. This Law aims to guarantee transferability of career stages for health professionals moving between regional health services. According to this Law, each AC is responsible for the design of a career system consistent with the general framework, the organization and provision of merits assessment and accreditation procedures, and facilitating the negotiation with professional stakeholders within their respective territories (Article 40 of Law 55/2003) (BOE, 2003c).

It is worth mentioning Royal Decree (RD) 639/2014, of 25 July 2014, which introduced a reform to provide a common base of knowledge for all health professionals, including nurses, aiming to improve their response to patients' complexity, overcoming fragmentation in care and facilitating human resources' management. In particular, the 2014 RD "regulates the core module, core re-specialization and specific training areas, establishing the applicable norms of the annual tests to access training places and other aspects of the system of specialized training in health sciences and creating and amending certain specialist titles" (BOE, 2014). However, the reform was highly criticized by the health profession (General Council of Nurses, 2018) and at the time of writing RD 639/2014 has been voided by the Courts of Justice.

More recently, a regulation on prescriber nurses has been introduced. Following an agreement reached between nurses, doctors and the Ministry of Health on 24 October 2017 nurses will be allowed to prescribe

certain medications, subject to medical prescription, following protocols and guidelines of medical practice, which will be agreed within a special commission created with that objective. According to the new legislation, further training for nurses to become accredited as prescribers will not be required, as it is assumed that all the requirements should have been accomplished in their degree. The new legislation will also include a new section defining medications and indications that nurses can prescribe without a previous medical diagnosis (e.g. flu vaccine) (Ministry of Health, 2017a).

12.1.3 Nursing education

12.1.3.1 *Pre-registration nursing education*

The Ministry of Education is responsible for the regulation of health professionals' undergraduate training and, in association with the Ministry of Health, of postgraduate training and human resources planning. Several joint commissions and a number of expert bodies support this activity.

The nursing profession became provided by universities in 1977, through a long and complex negotiation process. The objective of creating nursing as a university subject was based on the need to highlight and claim nursing as a discipline in its own right, independent of other disciplines related to the health system, and responding to the health care challenges of an ageing population with increasingly complex co-morbidities. In fact, if nursing had continued as a technical profession, the image of nurses would remain that of physician's assistants.

Before that point, nurses were known as Health Care Technical Assistants (*Ayudante Técnico Sanitario*, ATS). From 1953 ATS studies covered the curriculum of those with the role of medical assistants, nurses specialized in giving injections, dressing wounds, etc. (known as '*practicantes*'), and midwives, as well as nurses. In 1977 schools providing ATS studies were given two options: to either join universities as Schools of Nursing, or remain as centres offering courses in technical training (non-university studies).

Schools that chose to provide technical studies prepared students to become Health Care Technical Assistants, with 169 ATS schools in the country in 1977. Nowadays, these studies relate to the role of Nursing Care Assistants and can be accessed without an entrance exam if compulsory secondary education is completed or the 2nd grade of high school is completed, or the applicants already have another non-university technical degree. It also can be accessed through an entrance exam if the student is 17 years old (or will be in the year during which the test is taken) or more. These studies last one year. Those professionals with the title of ATS had the opportunity to upgrade their studies to a nursing diploma via a bridging course. Those schools which joined universities as Schools of Nursing in 1977 developed partly also in response to the rising demand for qualified professionals following the creation of new hospitals. This also required the hiring of nurses into faculty positions. To facilitate the participation of nurses in teaching activities, a Ministerial Decree was passed in 1978 that enabled nurses to become part of the School of Nursing through "venia docendi" (permission to teach), a one-year renewable certificate. From 1983 a university reform was passed to enable the appointment of professors in Schools of Nursing. This title could be achieved through the attainment of a postgraduate nursing degree.

Before 2009, students wishing to pursue university studies in nursing had to finish high school and the subsequent university orientation course (*Curso de Orientación Universitaria*). Hence, nurses followed their training at specialist university schools and their studies lasted three years, as regulated by Law 44/2003 (BOE, 2003b).

Since 2009, university studies have adapted to the European Higher Education Area (EHEA). Nursing studies therefore have become a four-year degree with the option to progress to a master's degree and then a PhD in nursing. Currently, some universities in Spain offer a bridging course to bring their nursing studies up to the level of the recently created degrees and three-year nursing studies continue to coexist with the four-year nursing studies (graduate). Although each School of Nursing has the ability to develop its own curriculum, it has to conform to the set number of 4600 hours of teaching, of which 50% was to be practical, in keeping with the EU Directive which sets out the educational specification for nursing education. The nursing degree entails four years (210 ECTS credits) of study, which fulfils the criteria set in EU Directive 2013/55/EU. This qualification is entitled to be automatically recognized by other EU Member States according to EU Directive 2005/36/EC.

12.1.3.2 *Post-registration nursing education*

Before 2009, and before nursing education was assigned university status (three-year studies, see above), it did not translate into progression to the postgraduate arena, thus

preventing professional nurses accessing postgraduate and PhD studies. In Spain three-year studies students were not allowed to continue with postgraduate studies (this applied not only in nursing; it also occurred in teacher studies). To enable postgraduate studies in nursing, nurses first had to take postgraduate studies in areas of interest other than nursing and then use this as an access point for their PhD, which meant, in many cases, integrating PhD studies into nursing.

From 2009, the nursing degree was adapted to the European framework (four-year degree, see above) and hence, once the degree is obtained, it is possible to progress to a master's degree and then a PhD in nursing. Access to postgraduate studies is seen as a major breakthrough for the nursing profession, and they are regarded as key to increase research in nursing and, hence, improve the evidence on the discipline.

Further, nurses can obtain the title of Specialized Nurse, which was created in 1987. To access the specialty, the nurse should have a university degree in nursing. The nursing specialty title is obtained by passing a written test and two years of residency. While initially the specialties of obstetric nurse and mental health nurse were the only ones on offer, currently there are six officially recognized specialties for nurses: midwifery, mental health nursing, occupational health nursing, paediatric nursing, family and community nursing, and geriatric nursing. In this regard, the trend appears to be towards increasing specialization.

Regarding the general principles of professional development, for nurses in particular and health professionals in general, Law 44/2003 on the Regulation of Health Professions (Article 38) organizes the health profession in four stages or degrees: a health professional can be assessed in order to obtain the first level in their professional career if they have at least five years of professional practice; applications for assessment to obtain the next upgrade and consecutive upgrades (to degree 4) are subject to a lag of five years between the awarding of the degree and the next assessment; in the particular case of negative assessment, the professional can apply for reassessment after two years. The career path is voluntary; the professional is the one applying for the assessment. Progress through the degrees is based on assessment of merits linked to knowledge, competences, accredited continuous training, teaching and research activities. Performance in terms of clinical results and compliance with quality standards, as well as involvement in clinical management, are considered additional merits in the assessment. In addition, upgrades are linked to financial complements, which each AC regulates (García-Armesto et al., 2010; BOE, 2003b).

12.2 The Spanish nurse workforce

12.2.1 Composition and configuration

Spain is characterized by a high number of doctors and a low number of nurses. According to OECD (2017c), in 2015 the number of practising nurses per 1 000 population was 5.3, below the EU average of 8.4, although this does not include nurse assistants. The ratio of nurses to physicians was 1.4 in 2015, far below the OECD countries' average ratio (2.5). According to Eurostat data (2017b), there were 245 533 practising nursing professionals employed in 2015. In the case of primary care, where nurses are supposed to play a major role in health promotion and prevention as well as in the care of chronic care patients, the ratio is even lower, with just 0.85 nurses per doctor (OECD, 2016). However, it is relevant to note that nurse assistants, who are not recognized as nurses, are not included in the comparative data, although in Spain the number of these nurse assistants is almost twice the number of nurses and they perform similar tasks to those attributed to associate professional nurses in other countries (OECD/European Observatory on Health Systems and Policies, 2017). In addition, the rate of formal long-term care workers (4.2 workers per 100 people aged 65 and over) remains below the OECD average of 6.1 (2013).

Despite being a net supplier of nurses to countries such as the United Kingdom and Portugal, the last decade has been characterized by the relatively low number of nurses per capita becoming the main issue in health care personnel planning in Spain. The number of students entering into nursing education has remained relatively stable, with the number of new graduates averaging around 10 000 per year between 2009 and 2014. However, the economic crisis has had a relevant impact on nurse emigration, following budgetary and personnel reduction policies. In fact, in 2014 and 2015 more than 2000 Spanish-trained nurses moved each year to the United Kingdom to take advantage of better job opportunities (OECD/European Observatory on Health Systems and Policies, 2017).

Regarding primary care nurses, the figures have remained stable, with 62 staff nurses per 100 000 assigned insurees in 2010, rising to 65 in 2014. Further, staff nurses working in hospitals and outpatient specialized premises have remained stable at 320 staff nurses per 100 000

inhabitants (Ministry of Health, 2017b). The percentage of women in the case of staff nurses has remained stable in the period, with 80% in primary care and 90% in specialized care (Ministry of Health, 2017b). The intermediate age ranks have experienced a small increase, as has the population above the minimum retirement age, according to the rise in ageing in the general population. It is estimated that within 10 years there will be 40 000 nurses who will have retired or are eligible for retirement (CGE, 2011a).

The distribution of nurses in 2015 showed a fairly low variation across ACs, although lower in the case of primary care nurses (ranging from 50 to 88 nurses per 100 000 assigned insurees) than in the case of specialized care nurses (ranging from 231 to 437 nurses per 100 000 inhabitants) (Ministry of Health, 2017b).

The observed differences are coherent with the different levels of regulation; physicians and nurses are distributed according to health authorities' planning and redistributive policies (the smallest variation across ACs) (Bernal-Delgado et al., 2018).

12.2.2 Planning mechanisms

The main workforce planning drivers for the SNS are the *numerus clausus* which limit the entrance to undergraduate education, and the access barriers to the residency (doctors) and specialization (nurses) programmes.

The institutions responsible for producing official data and information on workforce planning and forecasting are the Ministry of Health, the Ministry of Economy and the General Council of Nursing[1] (*Consejo General de Enfermería*), which collates data about registered nurses both from the regions and at the national level.

Stakeholder groups that exert a strong influence on decisions regarding the workforce and the issues facing nursing include the Ministry of Health, Regional Health Care Governments, the Ministry of Economy, the General Directorate for Universities, the General Nursing Council and the Spanish Nursing Unions, such as the Spanish Union of Nursing (*Sindicato de Enfermería de España*, SATSE).

The General Nursing Council is the integrative body of nursing professionals, committed to the health and well-being of citizens (CGE, 2011b). It promotes the advancement of nursing practice and quality of professional excellence. The General Nursing Council supports practice based on ethical criteria, scientific evidence, autonomy and professional responsibility. It focuses on the following basic aspects of its role: the management of the nursing profession, representation of the profession, defence and protection of the interests of nursing, and defence and interests of patients' and clients' health and well-being. Furthermore, nursing unions, for example SATSE, have to defend the professional aspects. They pursue professional development and social and scientific recognition within the health system, and they encourage the development of nursing specialties. Within this broad field, unions are involved in areas related to occupational health, employment, training, etc. (Nursing Union, 2011).

12.2.3 Mobility

Despite the fact that in Spain there is migration of nurses to other countries in the European Union, the data are difficult to track. Destination countries for Spanish nurses are primarily England, Italy, France and Portugal. In Spain, migration is primarily temporary, due to the desire of nurses to return to Spain after a few years with new knowledge and skills to apply.

Currently, besides the present emigration of health professionals, the migration of nurses into Spain has increased. In 2009 nine regions reported foreign care professionals in the National Health System: Andalucía, Aragón, Canarias, Castilla-León, Cataluña, Valencia, Madrid, Navarra and La Rioja. This amounted to about 0.2% of the total of nurses, i.e. around 279 persons. However, although there are no conclusive data about the number of nurses and migration patterns, the trend is reflected in the increase of nurses from Latin America. The recent economic crisis is affecting international migration of health professionals, especially nurses. It is obvious that cuts in human resources in the public health field are due to the financial situation in Spain. Budgetary and personnel reduction policies have translated into an increasing outflow of nurses seeking employment abroad, following the increasing rate of unemployment in the health sector in the country (Bernal-Delgado et al., 2018). In 2011, 2.1% nurses (out of 250 277) had been trained abroad, mainly in Latin America, Portugal and Romania (OECD, 2017b). In the period 2010–2013, 4 580 nurses requested a 'competence certificate' from the Ministry of Education to work in other EU countries; in 2014, 8 000 nurses were working abroad. The main destinations were the United Kingdom, France, Italy, Portugal and Belgium (Galbany-Estragués & Nelson, 2016).

1 http://www.cge.enfermundi.com.

Each region is responsible for health funding from the general state budget. A percentage is allocated to each AC to manage its own resources, and there are differences, although they are not substantial, in the need for nurses and migration. That is why migration is more noticeable in certain regions than in others.

The latest data on health workers' mobility show that in 2011, 2.1% (out of 250 277) nurses had been trained abroad, mainly in Latin America, Portugal and Romania (OECD, 2017b).

12.3 Structure of nurses' work

12.3.1 Working conditions and work environment

The European Higher Education Area (EHEA) has introduced major changes in nursing in Spain, with the aim of creating a dynamic university sector and with the possibility of allowing mobility between European countries. Through the restructuring of theoretical learning, it seeks to transform the practical content of the craft. The system is based on three levels of qualification: bachelor, master's and doctoral. This third level opens a new pathway for nurses to pursue doctoral studies. Although some universities have created a bridging course from the old to the new grade to adapt the scope of nursing studies, academic levels and economic remuneration have not been adapted to the new academic situation.

Salary levels are dependent on nursing collective agreements specific to particular settings. These agreements are set nationally, but each region has some leeway (i.e. if the base salary is fixed, they can modify certain supplements). All health professionals in the SNS are salaried workers. However, more precarious part-time and day contracts to cover shortages or emergency services are also in place in the SNS. The average annual salary for nurses in Spain is slightly lower than the average annual salary for highly educated workers in the country (INE, 2017), but above the average for the OECD countries (OECD, 2017c). Further, differences among ACs in supplementary remunerations for nurses follow a similar trend to differences for physicians (CECOVA, 2012).

As an overview of the terms and conditions in which nursing is practised in Spain, the average number of hours per year contracted by health care workers in Spain was 1650 in 2009 (32 hours per week) (Ministry of Health, 2010b). There are no specific national data on the mean yearly hours for which nurses are contracted. We can consider this an interesting issue in terms of the data gap regarding the number of hours worked – specifically – by nurses, taking into account that they are the largest group among health professionals. At this point, at national level, the missing data could be very useful in supporting future labour policies, particularly with regard to aspects such as nurse-to-patient ratios or the professional needs in particular units or settings.

At the time of the RN4CAST study (2009–2010), Spain did not have conclusive data relating to the nursing work environment. Thus, nurses' feedback from the RN4CAST survey in terms of their working conditions revealed 90% (2943) of full-time workers within the sample and 10% part-time. The average age when they first became a professional nurse was 22.9 years (SD=3.64), and the average number of years working as a nurse was 14.4 (SD=9.13). The average number of hours worked on the last shift was 8.32 hours (max. 18 hours), which was not beyond their contracted hours as declared by 85.2% of the nurses. In all, 43.8% of them worked on the morning shift, 26.7% on the afternoon shift and 29.4% on the night shift. The average number of patients for which each nurse was directly responsible on the last shift was 11.6 (max. 36).

When nurses were asked about their job satisfaction, the average was between the categories 'a little dissatisfied' and 'moderately satisfied'. When asked about certain aspects of their jobs which influenced their satisfaction, such as work schedule flexibility, opportunities for advancement, autonomy at work, professional status, wages, educational opportunities, annual leave and study leave, at least 70% of the nurses agreed they were either 'a little dissatisfied' or 'moderately satisfied'. With respect to sick leave, 77% of them agreed with the categories 'moderately satisfied' and 'very satisfied'. Of the nurses surveyed, 73.7% declared they would not leave their current hospital within the next year as a result of job dissatisfaction.

Regarding patient safety issues in their employment setting, 56.1% of sampled nurses were in the categories 'neither' and 'agree' when asked if the staff felt like their mistakes were held against them; 56% were in the categories 'strongly disagree' and 'disagree' when they were asked if the staff felt free to question the decisions or actions of those in authority; 64.8% agreed with the categories 'neither' and 'agree' when they were asked if, in their unit, they discussed ways to prevent errors from happening again; 49.3% were between 'agree' and 'strongly agree' with respect to whether they were given

feedback about changes put into place based on event reports; and 53.6% were between the categories 'neither' and 'agree' when asked whether the actions of hospital management showed that patient safety was a top priority.

The RN4CAST study also asked about career prospects, having a new horizon of educational perspectives with nursing specialization paths, and especially with opportunities to study a PhD representing a significant step forward. When nurses were asked about opportunities for advancement, 79.2% 'strongly' or 'somewhat' disagreed about there being opportunities for advancement, while 80.7% were 'moderately satisfied' and 'very satisfied' with their choice of nursing as a career. More than 82% held a master's degree or equivalent, almost 18% a further degree, and just 0.4% a PhD. Almost 53% graduated before 2000, and 61.5% of them had received within the last 24 months between 5 and 120 hours of training.

With regard to the Spanish policy context, after efforts to increase the number of nurses in the last few years, the current financial shortages have also struck the Spanish health care system. The figures shown at the Spanish Senate in November 2008, which highlighted the nursing shortage in Spain, have not improved. Among EU countries, Spain has the second highest number of physicians and the third lowest number of nurses. In the wake of these figures, the Senate acknowledged the need for human resource planning in the National Health System, especially in relation to nurses. These data had shown alarming ratios compared to Europe: 531 000 nurses per 100 000 inhabitants in Spain versus 800 000 nurses per 100 000 inhabitants in Europe. In the Senate it was explained that the increase to a 30–70% physicians to nurses rate has not been reached. To make it happen, the number of nurses would have to rise to 500 000. In the RN4CAST study, the patient-to-nurse ratio obtained across Spanish hospitals was 10.3 on average (SD=1.6), the highest (along with Germany) among the participating countries. The European average was 7.2 (SD=2.5), while the lowest patient-to-nurse ratios were those of Norway and the Netherlands (3.8 and 4.9 respectively).

In terms of satisfaction with their salary, 67.6% of the nurses surveyed in the RN4CAST study were between 'a little dissatisfied' and 'moderately satisfied' with their salary. Meetings to establish collective agreements concerning health care workers are the forums in which salaries are negotiated between state representatives, the employer's business representatives and professional unions. These agreements are not reviewed every year and the yearly salary increase is given in proportion to the consumer price index. However, the financial crisis has slowed down this trend, and in the case of all public workers government actions have been taken to reduce public expenditure, so that all nurses working in public hospitals have suffered a mean decrease in their annual wage of 5%.

In fact, as a reaction to the austerity measures, public expenditure constraints, wage cuts and the worsening of working conditions following the economic crisis in Spain, both the General Council of Physicians and the General Council of Nursing, together with other health professionals and civil society, led protests against budgetary cutbacks and policy reforms affecting the SNS, and in some cases promoted judicial actions against specific reforms (Bernal-Delgado et al., 2018).

12.3.2 Governance and leadership

There is a Chief Nursing Officer at the Ministry of Health, Consumption and Social Welfare who is in charge of issues relating to the nursing workforce at the central government level and acts as a representative of Spanish nursing at international forums. Since health care management in Spain is the responsibility of the ACs, the operational issues of the nursing workforce are handled at regional level. However, there is no equivalent to the Chief Nursing Officer in regional government. Only at the municipal level or health area can one find a nursing director or nursing manager. As has been demonstrated above, the Senate has reflected on the need for regulation regarding the national nursing workforce and also the need to establish regional linkages.

However, there is an essential and historically active body setting national nursing policy: the Spanish National Nursing Council, which licenses nurses to work as nurses through their professional register. This organization has regional delegations in all the Spanish ACs and is a key actor in all the decision-making processes concerning nurses' scope of practice, education and qualifications. The General Nursing Council has the capacity to make recommendations, but they are not binding. The regional offices of the General Nursing Council regulate daily aspects regarding ethics, employment issues and continuity of care (in short, the professional interests of the members). Moreover, although the General Nursing Council and its delegations are also conscious of these demands, the purposes and responsibilities of unions are to provide more emphasis, as a pressure mechanism, on demands, for example, to reach an 'Agreement on Health'

(*Pacto por la Sanidad*), the effective development of all nursing specialties, and the need to establish mechanisms aimed at work-life balance.

12.4 Synthesis and policy implications

The macroeconomic conditions in Spain in the last decade have had an impact on the SNS, and nurses are no exception. The shortage of nurses and the deterioration of their job conditions are some of the implications of the economic crisis.

Nurses have a fundamental role in the provision of primary care in Spain, which is essentially provided by public providers, specialized family doctors and staff nurses, providing care through multidisciplinary primary care teams. In the case of primary care, where nurses have a major role in health promotion and prevention as well as in the continuity of care for chronic patients, the ratio is even lower, with just 0.85 nurses per doctor (Ministry of Health, 2017b).

The absence of health professionals data, especially about nurses, makes it difficult to adequately plan human resources within the SNS. The Ministry of Health created a document called 'Report on nursing professionals. Supply – Demand 2010–2025', which includes figures and forecasts regarding nursing workforce data in Spain (Ministry of Health, 2012). This document has acknowledged the need to understand the status of nursing in Spain in order to arrange sufficient numbers of suitably qualified professionals. At the same time, the document reflects the demand for equating the ratio of nurses per patients with European data. However, due to the Spanish financial situation, the need to increase the number of nurses has not been supported by policies at the national or regional level in the last decade, but rather the reverse. The budget cuts have affected the nursing workforce. The unions and the General Nursing Council are among those seeking a consensus to reduce the cuts since these affect the quality of care. It is for this reason that the General Nursing Council presented several proposals to the Senate. In addition to requesting an 'Agreement for Health' to bring the nurse-to-patient ratio in line with Europe, they emphasized implementing strategies to reduce the imbalances in nursing human resources between different regions, as well as establishing retention strategies.

The RN4CAST study explored the daily working conditions of nurses and showed that the remuneration of these professionals was considered insufficient. In addition, nurses saw few prospects for career developments, despite the new educational advantages on offer at the university level in Spain. The findings reflected a sense of pessimism that education was not going to be translated into salary increases or better working conditions (reduced prospects for career promotion). Data extracted from the RN4CAST study demonstrate that despite the issues, almost 75% of Spanish nurses stated that they do not intend to leave their current hospital due to dissatisfaction. Nurses were satisfied with their chosen profession and most of them had a master's degree, a specialization or a PhD, putting them among the best educated groups of nurses in Europe. Perpetuating this position in the long term, however, is likely to lead to frustration and reinforce the desire to migrate in the long term. Spanish nurses are in high demand overseas and 'brain drain' will continue unless robust retention strategies are secured.

12.5 References

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13 Sweden

Lisa Smeds Alenius, Rikard Lindqvist, Carol Tishelman

13.1 Context-organization of the health system, education and regulation

13.1.1 Sweden and its health system

Sweden is a Northern European country with a constitutional monarchy and a parliamentary government (Anell, Glenngård & Merkur, 2012) and a total population of 10 million (Eurostat, 2017). Cornerstones of the Swedish health care system are the principles of human dignity, need and solidarity, and cost-effectiveness, with an emphasis on equal access to care regardless of socioeconomic status or geographic location. This principle is mirrored in the organization of health care in Sweden at three independent governmental levels: national government, county councils/health care regions and municipalities. Overall goals and policies are set at the national level by the Ministry of Health and Social Affairs, while county councils are responsible for the development, organization and provision of health care for residents in their respective regions. The county councils' responsibility for planning also includes health services provided by other actors, such as private practitioners and physicians in occupational medicine (Anell, Glenngård & Merkur, 2012). In addition to Sweden's seventeen county councils, there are also four health care regions with the same functions and responsibilities as the county councils (Anell, Glenngård & Merkur, 2012). National health care spending totals 11.0% of gross domestic product, or US$5 488 per capita (OECD, 2017) .

The Health and Medical Services Act (Hälso- och Sjukvårdslag (SFS 2017:30)) forms the basis for the organization of responsibilities between county councils/health care regions and municipalities. The county councils mainly provide hospital/inpatient care and primary/ambulatory care, while 290 municipalities are responsible for nursing-home care, social services and the housing needs of the elderly, as well as care for the physically and intellectually disabled. The responsibility for home medical services in regular housing, i.e. home nursing, has been changing from being mainly the domain of the county councils to becoming a responsibility for municipalities instead (Szebehely & Trydegård, 2011) – this is now the case in 90% of the 290 municipalities (Socialstyrelsen, 2017). In 1992 a major reform took place, known as the ÄDEL-reform, which changed responsibility for long-term inpatient health care and care for the elderly from county councils to municipalities (Anell, Glenngård & Merkur, 2012). As a result of this shift in responsibility, a new Registered Nurse function (Medicinskt ansvarig sjuksköterska) was instated in the municipalities with responsibility for maintaining patient safety and quality of care in all the municipal health care services (Hälso- och Sjukvårdslag (SFS 2017:30)). The county councils and municipalities enjoy a high degree of self-governance; this results in different practices depending on the political composition of the representatives on each county council board, on the specific health care needs of the residents, and on the health care infrastructure in the area (Palier, 2006).

13.1.2 Regulation and legislation of the nursing profession

The National Board of Health and Welfare (NBHW) is responsible for the registration and licensing of registered nurses and other licensed professions in health care. The licence does not have a time limit, meaning that health care personnel do not have to reapply to maintain their licence (Anell, Glenngård & Merkur, 2012). The NBHW can revoke a licence to practise and/or other authorization or invoke a trial period of three years in the case of malpractice. In nursing, licensure is granted for registered nurses, midwives and radiology nurses. Licensure is applied for by the individual nurse, after successfully completing education, and granted without further requirements. Nurse specialists, for example in surgery, anaesthesia and intensive care, do not have specific licensure. However, the registered nurse title is a 'protected professional title' in Sweden, and can only be used by those with particular qualifications. Eleven different nurse specialties also are considered to have 'protected professional titles' (see below). The right to use the title of registered nurse or specialized nurse is also applied for by the individual nurse and granted by the NBHW when applicants demonstrate appropriate qualifications.

Under Swedish law, all health care staff must work in accordance with scientific knowledge and proven experience of practice (Patientsäkerhetslag (SFS 2010:659)). This means that research results and extensive clinical experience should guide the delivery of health care in Sweden. The NBHW publishes evidence-based guidelines and recommendations for practice for health care professions, including registered nurses and midwives, to make delivery of health care as equal and safe as possible throughout the country. These guidelines and recommendations are produced in collaboration with, among others, the Swedish Council on Technology Assessment in Health Care. The Swedish Higher Education Authority reviews the quality of higher education, including nursing education, and ensures that higher education institutions comply with relevant legislation, based on the Higher Education Act (Högskolelag (SFS 1992:1434)) and the Higher Education Ordinance (Högskoleförordning (SFS 1993:100)). The Authority reviews the quality of higher education in four-year cycles and can revoke the accreditation of a particular educational programme which does not meet the quality standards at a university or university college (Swedish Higher Education Authority, 2018b).

13.1.3 Nurse education

13.1.3.1 *Pre-registration nursing education*

In 1982 the educational system for registered nurses went from being a non-academic/vocational education to a two-year academic education. In 1993 the educational programme leading to a degree in nursing was lengthened to three years. In addition to resulting in registered nurse licensure, the programme could then also lead to a bachelor of science degree in nursing. Since 2007, as a part of the Bologna process, all registered nurse education in Sweden leads to a bachelor of science degree in nursing.

All registered nurse education in Sweden takes place in a university or university college, with 21 public sector universities or university colleges and four independent education providers across the country. As of 1993, each facility for higher education is responsible for its own educational programme, which means there are variations across the country (Kapborg, 1998).

Despite this, all nursing education must comply with national regulations set by the Higher Education Ordinance (Högskolelag (SFS 1992:1434)) and the Higher Education Act (Högskoleförordning (SFS 1993:100)), which state that registered nurse education should contain 180 ECTS credits and list a number of requirements regarding skill, knowledge, proficiency, professional attitude and ethical considerations. As a member of the European Union, Sweden is also obliged to follow the directives of the EEC Agreement (European Parliament & Council of the European Union, 2013) which states that nursing education should be composed of at least one third theoretical education and at least 50% clinical education. In 2005 the NBHW published a description of competency for registered nurses which further elaborated requirements in the higher education laws and integrated the International Council of Nurses' ethical code. The competency description was used in all registered nurse education programmes as guidance to professional standards. As it is no longer the responsibility of the NBHW to update and publish the competency description, the Swedish Society of Nursing, a non-profit organization, has taken over the responsibility and has published an updated description (Svensk sjuksköterskeförening, 2017).

Sweden has a special category of nurses, radiology nurses, who are a distinct professional group with a different educational basis from registered nurses, and are not a further specialization based on previous education in general nursing, as is the case in some other countries. Completed education in radiology nursing does not allow for practice as a general registered nurse, nor can registered nurses practise radiology nursing. A three-year educational programme (180 ECTS credits) leads to licensure as a radiology nurse and a bachelor degree in radiology nursing.

Requirements for admission to registered nurse educational programmes include completed upper secondary school education, with specific requirements in mathematics, natural sciences, Swedish and English. While the minimum requirements are nationally determined, each higher education facility has the right to determine additional requirements, for example increased course work in mathematics.

13.1.3.2 *Post-registration nursing education*

In postgraduate education registered nurses can either pursue a one-year master's degree (in Swedish: Magister) consisting of 60 ECTS credits or a two-year master's degree (in Swedish: Master) based on 120 ECTS credits. Since 2007, current regulations state that to qualify for PhD studies the applicant needs either 60 ECTS credits in addition to a bachelor of science degree in nursing, or else a two-year master's degree based on 120 ECTS credits (Råholm et al., 2010). Transitional regulations apply to older degrees.

In addition to these academic degrees, there are a number of different programmes for clinical specialization as a registered nurse, including those for midwives, nurse anaesthetists, critical care nurses, surgical nurses and ambulance nurses. These educational programmes, ranging from 60 to 90 ECTS credits, are provided by most universities and university colleges. In Sweden there are no formal demands on continued education after receiving a licence as a registered nurse. As noted previously, a licence is received without time limit or demand for further accreditation. The responsibility for continuing education lies with the employer (Anell, Glenngård & Merkur, 2012).

There are three categories of licensed nurse in Sweden: registered nurses are general nurses with a basic education, midwives are registered nurses with a specialist qualification in midwifery, and radiology nurses have a basic education in radiology nursing. Other categories of specialized registered nurse can apply to the NBHW for the right to use a protected professional title, without further licensure. In Sweden, at present, there are 11 categories of specialist registered nurse with protected professional titles: nurse anaesthetist, critical care nurse, operating room/surgical nurse, ambulance nurse, surgical care nurse, oncology nurse, medical care nurse, psychiatric care nurse, district nurse, elder care nurse and paediatric nurse.

In all nursing programmes, assessments are performed of both clinical skills and theoretical knowledge in the form of bedside tests with simulated or real patients, written exams and/or projects. Every educational facility decides on the timing and format for competency assessments, thereby producing variation across the country.

In 2007 a three-year pedagogical project, involving the Swedish Society of Nursing and basic registered nurse programmes at four educational facilities, led to the establishment of a clinical final examination for nursing graduates (National Clinical Final Examination for the Degree of Bachelor of Science in Nursing) (Athlin, Larsson & Söderhamn, 2012). The examination consists of two parts: 1) a written exam, given at the same time-point in all affiliated facilities, with a standardized form in order to ensure a correct and fair assessment,

and 2) a bedside test performed with a patient enrolled in hospital or in community care, with systematic assessment by an observing registered nurse. Significantly, patient satisfaction with the care is also a criterion for consideration. To date, a total of 16 of 25 educational facilities have integrated this final exam into their educational programmes for registered nurses (Nationell klinisk slutexamination, 2006).

Higher education in Sweden is free of charge for students with permanent residency in Sweden and for students from other Member States of the European Union or the European Economic Area. Funding for higher education in Sweden comes mainly from government grants according to the number of students and students completing courses and programmes at basic and advanced level. The universities and university colleges also receive partial funding for postgraduate programmes and research. In addition, research and postgraduate programmes are also funded by external sources, e.g. foundations, local government, county councils and the private sector (Anell, Glenngård & Merkur, 2012; Swedish Higher Education Authority, 2018b).

13.1.3.3 *Enrolees in nursing*

The number of enrolees in basic nursing education programmes has increased from approximately 4 000 matriculating students in 2000 to approximately 6 000 in 2017. The number of students successfully completing basic nursing education has also increased from 2 900 students in 2000 to approximately 4 200 students in 2017 (Swedish Higher Education Authority, 2018a). These numbers are likely to increase even more in the coming years as a result of government initiatives to increase the number of educational seats in both basic nurse education as well as specialist nurse education.

13.2 The Swedish nurse workforce

13.2.1 Composition and configuration

According to OECD (2017), in 2015 the number of practising nurses per 1 000 population was 11.1, and the ratio of nurses to physicians was 2.7, which is just below the OECD average. Among the Nordic countries, Sweden has the lowest number of registered nurses per 1 000 population and the increase of registered nurses per 1 000 population was only 12% between the years 2000 and 2015, compared to both Finland and Denmark where the number of registered nurses increased by 35% and 37% respectively (OECD, 2017).

During the past two decades the composition of the nursing workforce under the control of Swedish county councils has changed. In 1993 registered nurses made up 57% of the total nursing workforce, while nurse aides and assistant/practical nurses made up the rest. In 2007 the proportion of registered nurses had increased to 71%, due to a decrease predominantly in nurse aides (Sveriges Kommuner och Landsting, 2011). The proportion of assistant nurses has remained fairly stable during this period. In the municipalities the composition patterns are similar, except for a slight decrease in the total workforce, which might be due to privatization of the health care provided by municipalities. Palier (2006) argues that the increased proportion of registered nurses may in part be a means of better meeting challenges related to demographic changes with an increasing ageing population and technological developments in the health care sector.

In the period 2000–2015 there has been little change in the distribution of registered nurses among geographic regions, with all regions increasing the number of registered nurses per 100 000 inhabitants (Socialstyrelsen, 2018a). The overall number of registered nurses per 100 000 inhabitants working in health care increased by 12% during this period. The range of registered nurses per 100 000 inhabitants across the country in 2017 ranged from 965 in Södermanland county in the population-dense southeast of the country to 1 392 in the relatively rural Västerbotten county in northern Sweden. The nurse-to-physician ratio in Sweden is 2.7 (OECD, 2017) while the nurse-to-patient ratio was just over 7 patients per registered nurse involved in direct patient care according to the RN4CAST Swedish data (Sermeus et al., 2011).

The total number of employed licensed registered nurses in Sweden has increased by 13%, from just over 110 000 in 2005 to approximately 123 000 in 2015 (Socialstyrelsen, 2018c). Male registered nurses have increased from 10% in 2005 to 12% in 2015, from approximately 11 100 to 14 600 (Socialstyrelsen, 2018c). The median age range of registered nurses in both public and private health care is 45–49 years old for women, with male registered nurses slightly younger, 40–44 (Statistiska Centralbyrån, 2018). In 2015, 4 754 licences were granted by the NBHW. Of these, 85% received their nursing education in Sweden, and 13% had an education from within the EU/EEA area (Socialstyrelsen, 2018b).

Registered nurse employment in Sweden in 2015 was approximately 64% (of the total population of licensed registered nurses, including those unemployed, retired,

etc.) and of those, most registered nurses work in health care (69%) or in care and social services (14%), and approximately 5% work within education or administration (Socialstyrelsen, 2018c). The proportion of male and female registered nurses is equal between the public and private sectors, with 12–13% men in both sectors (Socialstyrelsen, 2018c). From 2004 to 2015 the largest increase in employment was for male registered nurses, with a 40% increase in the nine years, compared to female registered nurses (12% in the same period) (Socialstyrelsen, 2018c). The International Council of Nurses reports an unemployment rate of less than 1% among registered nurses in 2015 (International Council of Nurses, 2015). For women in general, national unemployment in 2015 was 7.2% compared to 7.5% for men (Statistiska Centralbyrån, 2016). According to the report from the International Council of Nurses, 86% of the members of the nurses union, the Swedish Association of Health Professionals, were employed full-time (35 hours or more per week) in 2015, while 16% were employed part-time (International Council of Nurses, 2015). National statistics from 2017 show that among all professions employed in the health care sector (both public and private, both men and women), 65% work full-time and 35% part-time (Statistiska Centralbyrån, 2018).

13.2.2 Deployment and skill-mix models

The Swedish labour market is regulated both through law and through collective bargaining between employers and unions. The collective agreement for registered nurses employed by county councils and municipalities states that full-time employment, in which the ordinary work week extends over the weekend, consists of 38.25 hours per week compared to the legally stated full-time work week of 40 hours/week in the labour market as a whole (Sveriges Kommuner och Landsting, 2017). For registered nurses working night shifts as well as day or evening shifts, i.e. three-shift employment, full-time working time is 34.33 hours per week (Sveriges Kommuner och Landsting, 2017). Staffing levels are the responsibility of the regional authorities, and are often delegated to hospital or departmental level.

13.2.3 Career structures

Apart from career paths offered through further specialization in nursing, there are no national regulations, guidelines or plans for structuring registered nurses' careers. Each county council and municipality has its own staffing policies and it is up to each specific health care institution to decide upon career structures in different professions.

In many county councils and municipalities there is a trend towards having positions for registered nurses which require some continuing education, such as registered nurse-led 'clinics' for patients with diabetes, chronic obstructive pulmonary disease or congestive heart failure (Nolte & McKee, 2008). In other cases, continued education as a registered nurse does not guarantee either a new set of responsibilities or an automatic increase in salary. In the Swedish RN4CAST data just over 60% of the approximately 11 000 registered nurses participating in the study reported having a bachelor of science in nursing. The proportion of registered nurses with a PhD was approximately 1% in 2010 (Hermansson, 2010). There is currently no common infrastructure in place within the health care system as a whole to systematize benefits from the higher level of education in the registered nurse workforce; instead, how registered nurses with advanced degrees are used in health care is ad hoc, differing on county council, hospital and even departmental levels.

Some local initiatives have been made to introduce the role of advanced practice nurse (APN) in Sweden. There was, for example, an educational programme at master's level at the University College of Skövde, in which five registered nurses specialized in advanced nursing practice (Hallman & Gillsjö, 2005). These advanced practice nurses graduated in 2005 and took up qualified positions in primary care, taking care of children and adult patients with chronic infections, skin problems and chronic conditions leading to impairment (Fagerström, 2011; Lindblad et al., 2010). After the Skövde-programme ended, the University of Linköping introduced an educational programme in advanced nursing practice for surgical care (Linköpings Universitet, 2018).

13.2.4 Planning mechanisms

There are a number of agencies involved in producing data and information on health care workforce planning and forecasting. Sweden uses both integrated workforce planning and separate planning by professional group. At one level, projections are made by Statistics Sweden, encompassing the whole of the labour market. At another level, projections are made by the NBHW after analysing the supply of and demand for physicians, registered nurses, midwives, dentists and dental hygienists in the health care sector (Socialstyrelsen, 2018a). While gender

equality is prioritized in many areas of national and regional policy-making, it is not specifically addressed in national health care workforce planning. The Swedish Higher Education Authority is responsible for analysing supply from education and the balance between the number of graduated registered nurses and the corresponding demand.

An annual report from Statistics Sweden shows that in 2017 the shortage of newly educated as well as experienced registered nurses with basic nursing education has increased, with around 80% of employers reporting difficulties in recruitment (Statistiska Centralbyrån, 2017). The shortage of specialist registered nurses is also increasing rapidly (Statistiska Centralbyrån, 2017) despite efforts to increase educational seats and facilitating ways for registered nurses to further educate themselves (Socialdepartementet, 2017). Most county councils currently offer, to some extent, paid specialist education depending on regional shortages of certain specialist registered nurse groups (Socialstyrelsen, 2018a).

13.2.5 Mobility

During the past decade the mobility of health care professionals to and from Sweden has increased, primarily among newly licensed physicians where 59% in 2015 had been educated in another country. The comparable figure for registered nurses is 15% (Socialstyrelsen, 2018b).

13.3 Structure of nurses' work

13.3.1 Working conditions

The Swedish labour market builds upon principles of collective agreement between representatives of employers and employees in a centralized bargaining process. The main components of wages and working conditions in Swedish health care are partly regulated by law and partly determined in central negotiations between the employer associations and the different health care professional unions. Working conditions regulated by law are, for example, employment security (Lag om anställningsskydd (SFS 1982:80)), rules for annual leave (Semesterlag (SFS 1977:480)), working hours (Arbetstidslag (SFS 1982:673)), parental leave (Föräldraledighetslag (SFS 1995:584)), work environment (Arbetsmiljölag (SFS 1977:1160)), right to staff participation (Lag om medbestämmande i arbetslivet (SFS 1976:580)), and rules for the protection of unions and their elected representatives in the workplace (Lag om facklig förtroendemans ställning på arbetsplatsen (SFS 1974:358)). Conditions regulated by central bargaining agreements include, for example, salary increases, compensation for working 'unsocial hours' (Gustafsson, 2017), complementary rules for employment, increased staff participation and influence, and collective insurance policies. The different laws form the basis for negotiation in the collective agreements.

The county councils and municipalities are represented by the Swedish Association of Local Authorities and Regions (SALAR) at the national level. SALAR functions as the employers' central association for negotiating wages and terms of employment for personnel employed by the county councils and municipalities. SALAR represents the largest employers in Sweden, with more than 1 million employees in 2015, and about one third of these are employed in the health care sector (Sveriges Kommuner och Landsting, 2016).

The majority of Swedish health care personnel are members of labour unions. The Swedish Association of Health Professionals represents registered nurses, midwives, radiology nurses and biomedical scientists in the central bargaining process.

In Sweden the average gross salary for a registered nurse with basic education in 2016, excluding managers and leaders, was approximately SEK 31 850 (about €3 100) within the county councils and approximately SEK 32 575 (about €3 300) in the municipalities (Statistiska Centralbyrån, 2017). Sweden employs a wage negotiation system where the norms for employees in the public sector, including registered nurses, are based on wage norms for Swedish-based industries which compete in the international market (Konjunkturinstitutet, 2017).

In the Swedish RN4CAST data, it was found that approximately 61% of the surveyed registered nurses reported almost never (a few times a year or less) feeling burned-out from their work. In a survey undertaken in 2011 by the NBHW, registered nurses working full-time or more reported being satisfied with the number of hours they worked rather than wanting to work less (Socialstyrelsen, 2011). According to the Swedish RN4CAST data, the majority of registered nurses surveyed (57%) reported being moderately satisfied with their current job. Most registered nurses (66%) who participated in the Swedish RN4CAST survey reported having no intention of leaving their current job within the next year due to dissatisfaction.

13.3.2 Governance and leadership

Due to the high degree of local governance within the county councils and municipalities, the organizational structure of nurses in leadership positions varies across the country. Until the late 1990s only physicians were allowed to have positions as head of a health care unit or facility. In 1997 this regulation changed, making it possible for health care professionals other than physicians to become the head of a health care unit or facility (Hälso- och Sjukvårdslag (SFS 2017:30)). In 2005 approximately one third of all clinical directors in Swedish public hospitals were non-physicians, and 40% of primary care health centres were run by registered nurses (Granestrand, 2005).

13.4 Synthesis and policy implications

In Sweden, as in many other countries, registered nursing education has gone from being a two-year vocational education to a three-year academic education. Currently over half of all registered nurses in direct patient care in hospitals have a bachelor of science degree in nursing. After the Bologna process was introduced in 2007, the number of registered nursing master's degree programmes (two years) has increased. The government has increased the number of educational places for basic nursing education as well as for the registered nurse specialization programmes in recent years, but it remains to be seen if this step is adequate to meet the challenges of an ageing population and the increased demands on the future health care system.

The present Swedish health care system is challenged to create a staffing strategy and systematic human resource policies which capitalize upon the benefits derived from the higher level of education in the registered nurse workforce. The number of registered nurses with a PhD working in direct patient care is negligible; instead registered nurses with a PhD are most likely to be working in education, research or management. We argue that Sweden presently suffers from a lack of clinical career paths for registered nurses with higher academic education. This is an important issue, since a career infrastructure needs to be in place for registered nurses to be motivated to seek advanced education, and for all parties – the health care system, patients and registered nurses – to benefit from the educational programmes currently in place.

Working conditions for registered nurses in Sweden are relatively well regulated, in that national laws, regulations and collective bargaining agreements control working hours, annual leave, parental leave, etc. But there are no national guidelines related to other aspects of the care environment, such as minimum staffing, patient-to-nurse ratios, organization of nursing care, etc. Decisions related to these issues are decentralized and are the responsibility of each county council or hospital or department. This leads to wide variation in the clinical work environment for registered nurses across the country. More dynamic national debate and explication of common goals in relation to these issues could benefit the health and safety of both patients and nursing staff.

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14 Switzerland

René Schwendimann, Dietmar Ausserhofer, Maria Schubert, Marcel Widmer, Veronique Addor, Mario Desmedt, Sabina De Geest

14.1 Context-organization of the health system, education and regulation

14.1.1 Switzerland and its health system

Switzerland is a Federation of 26 cantons, situated in Western Europe, with a population of 8.42 million (Eurostat, 2017). Although the country is not a member of the European Union, it has pursued close relations with the European Union through bilateral agreements and is a member of the European Trading Area. The cultural diversity of Switzerland is exemplified by its four national languages: German (60%), French (26%), Italian (4%) and Romansh (<1%), whilst the remaining 9% speak other languages (Bundesamt für Statistik, 2014). The design of the health care system is determined by the Swiss federalist system, characterized by a decentralized structure with three policy levels – federal, cantons and communes – and a high degree of local autonomy. The main responsibilities in the health sector at the Federal level include legislative and supervisory roles in areas such as health insurance regulation; the promotion of science, research and university-based health professional education; and the education of non-university-based health professionals including nurses. Cantons have responsibility for the provision of health care and partial funding of hospital costs and education of health care professionals, as well as the implementation of Federal laws upon delegation by the Federal government. The cantons and the communes guarantee health care delivery to their population.

Switzerland spends 12.4% of its GDP on health, or US$7 919 per capita (OECD, 2017); 46% is spent on inpatient care, 29% on outpatient care and 12% on pharmaceuticals dispensed to outpatients. The share of inpatient care is much higher than the OECD average (33%), for example due to longer hospital stays compared to most other OECD countries, while the share of pharmaceuticals is lower (OECD average: 20%). The relative share of expenditure by type of health care services has remained stable over time (OECD, 2017). To date, reimbursement of basic health care services is uniformly regulated on a national level, but costs for equivalent health services vary significantly across cantons, as well as private or complementary health insurance coverage. To increase transparency and comparability of Swiss health care, Swiss Diagnosis Related Groups (DRGs) became effective on 1 January 2012 on a national level. According to the recent revision of the Swiss Health Insurance Act, this new classification system aims at standardizing reimbursement of health care services in acute care settings.

14.1.2 Regulation and legislation of the nursing profession

The current legal framework for health professions is based on three main laws: 1) the 2007 Law on University-based Medical Professions, regulated by the Federal Office of Public Health (BAG, 2011); 2) the 2004 Law on Non-university-based Professional Education for health professionals educated at the universities of applied sciences (tertiary level A); and 3) the 2003 Vocational and Professional Education and Training Act for upper-secondary level vocational education and training and tertiary level B professional education and training, both regulated by the State Secretariat for Education, Research and Innovation (SERI); and finally a newly proposed law for health professions (SERI, 2015).

In terms of governance, the law on non-university-based professional education transferred authority for nursing education from the cantons to the Federal level and was conceived as a general framework to address the demands of the health labour market. This law is encouraging as it enables students to transfer from one training programme to another, and more generally promotes mobility within the health education system as a whole. As a result, some training schemes have been revised and some new educational programmes have been established, such as primary health care assistants (*Fachangestelle Gesundheit*) who can be assigned to the category of health care workers or 'practical nurses' given their training for clinical patient care under nursing supervision. These programmes are open to 16–17-year-old students after completion of their compulsory lower secondary education. While the Federal government currently has a greater role and voice regarding the nursing professions, the financing and numbers of health care students remain the responsibility of the cantons.

Within the Federal Department of Economic Affairs, Education and Research, the SERI is the Federal government's specialized agency for national and international matters concerning education, research and innovation policy. Regarding health care-related professions, the SERI deals with Vocational and Professional Education and Training (VET) and Higher Education, including Universities of Applied Sciences, among others, and acts as the Federal competence centre for upper-secondary level vocational education and training, tertiary level professional education and training programme colleges, Universities of Applied Sciences, and innovation. The SERI is responsible for accrediting degree programmes offered by professional colleges, including regulation on the minimum requirements for recognition of educational programmes including health care, and specifically nursing and midwifery, physical therapy and occupational therapy (SERI, 2015).

Currently, two important initiatives are under way regarding health professionals educated at tertiary level. These include the revision of the law on University-based Medical Professions as mandated by the Federal Office of Public Health (FOPH) and the development of the law for health professionals at the tertiary level as jointly mandated by the FOPH and SERI. Here, the Institute of Nursing Science of the University of Basel is proposing the legal regulation of the profession of advanced practice nurses jointly with the Institute of Higher Education and Research in Healthcare (IUFRS) of the University of Lausanne participating in the consultation process for the ongoing revision of the law on University-based medical professions. Both initiatives are important for the legal regulation of nursing education and professional nursing practice at a Federal level. The negotiations on the specifications of the new proposed law for tertiary level health professionals, including nursing, physiotherapy, midwifery and occupational therapy, successfully underwent Federal parliamentary commissions review and was passed by the Federal Council in 2016 (BAG, 2016).

In addition to government bodies and legal authorities, the Swiss Nurses Association (SBK-ASI), as the largest professional association in Switzerland, plays an important role at policy level. Part of its medium- and

long-term educational policy at Federal and cantonal level includes advocating that all tertiary level nursing education should lead to a bachelor degree in nursing science in keeping with other health care professionals such as midwives and physiotherapists (SBK-ASI, 2011). In addition, the Swiss Academy of Medical Sciences embraces the professional profile of nurses being at the bachelor level in its position paper on the future roles of medical doctors and nurses in ambulatory and clinical care settings (SAMW, 2011).

14.1.3 Nurse education

14.1.3.1 *Pre-registration nursing education*

Nursing education in Switzerland has undergone major reforms in recent decades. Until the early 1990s Swiss nursing curricula lasted three to four years with tracks that included general adult nursing, mother and child nursing and psychiatric nursing, offered in more than 50 – often hospital-based – nursing schools across the country. Yet nursing diplomas took various names as curricula were modified: general nursing, paediatric nursing, psychiatric nursing and home-care nursing for education curricula of three years started before 1994; Level I (three years) and Level II (four years) diplomas for curricula started between 1992 and 2001. Nursing education was regulated by the Swiss Red Cross, which was legally mandated by the Swiss Conference of the 26 cantonal Ministers of Public Health, whereas most other professional education curricula were regulated by the former Federal Office of Professional Education and Technology. As in other European countries, the Swiss educational system comprises primary, secondary and tertiary levels with nursing education embedded in the upper secondary and tertiary levels. Upper secondary level education includes vocational and educational training programmes. Tertiary level education includes higher education programmes at universities and universities of applied sciences and professional education and training programmes at colleges. One of the major advantages of this educational system is its 'permeability', allowing students after successful graduation at secondary level to enrol in tertiary level education. This is especially true for nursing, for which the educational pathway was a dead end, offering no further development, before the educational reforms were introduced and before the inception of academic educational programmes. In 2000 Switzerland incorporated academic nursing education into its university system, one of the last European countries to do so (INS, 2015; Von Klitzing & Kesselring, 2006).

The creation of the universities of applied sciences in 1995 led to a new type of higher education institutions that in a short period of time have become firmly established as part of Switzerland's educational system. The universities of applied sciences offer practical university level education and training, with study programmes structured along the lines of the bachelor/master's degrees system and both federally and internationally recognized (Bologna agreement). The universities of applied sciences mainly offer bachelor degree programmes preparing for specific professions (e.g. nursing and midwifery) (BFH, 2015; HES-SO, 2015; FHSG, 2015; ZHAW, 2015).

Professional education and training colleges devote most of their time to specific professional aspects of nursing and less to academic and research studies. These programmes provide students with the competencies needed to perform technical and managerial tasks and reflect the needs of the labour market. With the Vocational and Professional Education and Training Act, for the first time in Swiss nursing education a unified compulsory curriculum framework was implemented in 2009 to which all professional education and training colleges have to align their nursing education and training programmes (Oda Santé 2007). The curriculum follows Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications (Eur-LEX 2015).

Schools for Vocational Education and Training impart the skills and knowledge needed to work in a given occupation and sector such as health care. Three-year and four-year vocational education and training programmes lead to the award of a Federal Diploma. During the three-year or four-year study programme, students have the option of attending general education courses to prepare for the Federal Vocational Baccalaureate Examination.

14.1.3.2 *Post-registration nursing education*

Formal continuous education and training programmes for nurses follow secondary and tertiary level education leading to Certificates, Diplomas and Masters of Advanced Studies (CAS, DAS, MAS), with 15, 30 and 60 ECTS credits given respectively. Courses tailored to suit the requirements of nursing are offered by the universities, universities of applied sciences, professional education and training programme colleges and the Swiss Nurses Association, as well as other institutions, to promote basic and advanced training schemes for health care professions, including various health care-related topics.

Universities of applied sciences' master's degree programmes (lasting between one-and-a-half to two

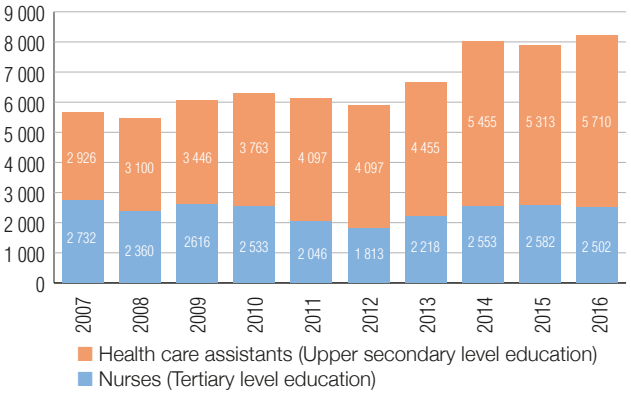
years, 90 ECTS credits) provide students with more in-depth and specialized knowledge and lead to a higher level qualification. These programmes in nursing were first introduced in 2010 (BFH, 2011; Kaleidos Fachhochschule, 2011; FHSG, 2011; ZHAW, 2011). Although not federally regulated at that point, the two university-based Master of Science in Nursing (MScN) programmes offered at the Universities of Basel (INS) (120 ECTS credits) and Lausanne (since 2006) (90 ECTS credits) account for higher education at tertiary level A, preparing nurses for advanced practice nursing. The universities of Basel and Lausanne also offer doctoral study programmes (PhD) in nursing science. The first PhD study programmes started in Basel in 2004 and in Lausanne in 2008, and in 2018 the University of Zurich in cooperation with the Zurich University of Applied Sciences started a PhD study programme in care and rehabilitation sciences (UZH, 2018).

14.1.3.3 *Enrolees in nursing*

Overall, Swiss nurse education relies on vocational education and training programmes such as in tertiary level B and the upper secondary level, which in turn reflects the strong and successful tradition of the dual education system (on the one hand the vocational education and training programmes at vocational education and training programme schools or colleges combined with a part-time apprenticeship at a host company, and on the other hand the higher education at academic institutions). OECD statistics on nursing graduates (all educational levels) per 100 000 population in Switzerland in 2014 was 93. The Swiss graduates per 100 000 population ratio was the second highest (after Korea) in OECD countries, indicating a relatively high overall 'production rate' of nursing graduates, including health care assistants (OECD, 2017).

Due to educational reforms, demographic changes, labour market competition and the expansion of vocational education and training in nursing, the numbers of eligible nursing students at the tertiary level shrank relative to upper secondary level education (health care assistants), whose output of graduates has increased (Figure 14.1). In the latter, nursing education has been characterized by a strong overall increase of numbers, particularly due to the increases in the upper secondary level education.

Figure 14.1 *Annual numbers of graduates from tertiary level nursing education and upper secondary level health care assistant education, 2007–2016*



Source: Swiss education statistics, Federal Statistical Office 2018. Analysis by the Swiss Health Observatory.

14.2 The Swiss nurse workforce

14.2.1 Composition and configuration

Data on human resources for health care personnel are available through a variety of Federal databases on health care professionals, including hospital, long-term care, and home health organizations' care statistics and health care education statistics. Given important limitations regarding information and data accuracy for specific health professions, an individual-based national registry for health professions (NAREG) is being set up, using electronically stored health professional data from 2000 and onward in cantonal Public Health Departments and nursing schools (NAREG, 2015). NAREG is the equivalent of the medical professionals registry (MedReg). While the MedReg consists of data only from health professionals educated at university, such as physicians, dentists and pharmacists, NAREG also gathers data on other tertiary-educated health professionals such as nurses, physiotherapists, midwives and occupational therapists (NAREG, 2014), including the type of health profession, the year of graduation, the professional licence, and – when available – workplaces. Another source of nursing data is the 'nurses at work' study on career paths and retention factors among 15 000 nurses working in the Swiss health system (Addor et al., 2016).

Nurses represent a core group of the health workforce and play a major role – at least in numbers – in providing health care in hospitals, nursing homes and home health care organizations. They include nurses at all educational levels, from tertiary level educated nurses to nursing aids with 'on the job training' (OBSAN, 2011).

Table 14.1 *Composition and work settings of practising nurses in Switzerland, 2016*

Nursing categories	Hospitals (FTE)	Nursing homes (FTE	Home health care (FTE)	Total (FTE)
Nurses	60 607 (46 216)	19 653 (14 618)	15 204 (7 237)	95 464 (68 071)
Health Care Assistants	16 858 (13 432)	26 240 (19 849)	10 954 (5 187)	54 052 (38 468)
Nursing aides	8 470 (5 618)	19 438 (13 311)	10 127 (3 911)	38 035 (22 903)
Total	85 935 (65 329)	65 331 (47 778)	36 285 (16 335)	187 551 (129 442)

Source: Swiss hospital statistics, Home Health Care Statistics and Statistics on long-term care institutions, Federal Statistical Office, 2018. Analyses by Swiss Health Observatory, Neuchâtel, 2018

Note: FTE = Full-time equivalents

In Switzerland in 2015 human resources for health per 1 000 population available in the Swiss health system included 18.0 practising nurses (OECD average 9.0) and 4.2 practising physicians (OECD average 3.4) among others, resulting in a ratio of nurses to physicians of 4.3 in Switzerland (OECD average 2.8) (OECD, 2017). However, the reported figure on practising nurses per 1 000 population is under debate since it includes not only tertiary level educated nurses but also health care assistants who completed upper secondary level vocational education. These internationally reported Swiss figures clearly lack accuracy and represent an overestimation of the numbers of professional nurses, which may negatively influence health workforce planning and education at the national level (SBK-ASI, 2018). More specifically, the estimated numbers of practising professional nurses (tertiary level only) is 95 464, revealing a ratio of 11.3 nurses per 1 000 population (Federal Statistical Office, 2018, analyses by the Swiss Health Observatory, Neuchâtel, 2018). Furthermore, the practising nurse workforce in Switzerland was analysed by the Swiss Health Observatory drawing together various sources and estimated 129 442 full-time equivalents (FTEs), consisting of 52.6% nurses (tertiary level), 29.7% health care assistants (upper secondary level) and 17.7% nursing aides. Roughly half (50.5%) were employed in hospitals, 36.9% in nursing homes and 12.6% in home health care organizations. The nurse skill-mix differs considerably between hospitals, nursing homes and home health care organizations (Table 14.1).

14.2.2 Deployment and skill-mix models

National nurse-to-patient ratios and staffing levels for hospitals, nursing homes and community care settings have neither been defined nor rendered compulsory. Furthermore, statistics related to the cantons do not provide nurse staffing levels or nurse-to-patient ratios in hospitals. Such information is best accessed via individual hospitals on how they deploy and organize their health workforce to provide health care services as mandated. Although the Swiss Nurses Association published a position paper addressing a 2020 vision for professional nursing in Switzerland, it does not provide recommendations on how to best calculate sufficient nurse-to-patient ratios or staffing levels (SBK-ASI, 2011).

In the RN4CAST study for Switzerland, nurse staffing levels and nurse-to-patient ratios were measured for the first time at unit and hospital level across 35 hospitals. At the hospital level the nurse-to-patient ratio was on average nine patients per nurse (range 5:1 to 15:1) over the previous 24 hours within the nurse sample of adult medical and surgical hospital units. More specifically, during the day shift (typically 8 hours 24 minutes, usually from 7am to 4pm including lunch break) the overall average patient-to-nurse ratio at the hospital level was 5, and varied from 3:1 to 10:1 reflecting inter-hospital variability (Schubert et al., 2011). The average patient-to-professional-nurse ratio in Swiss hospitals (and across all shifts) was 7.9 (European hospital range: from 5.4 in Norway to 10.2 in Greece and 13.0 in Germany), and the average ratio of patient-to-all-nursing-staff was 5.0 (European hospital range: from 3.3 in Norway to 7.1 in Poland and 10.5 in Germany). Although variability was observed between and within European countries, hospitals with better professional nurse staffing levels combined with a good work environment resulted in more satisfied patients and nurses and evidence of better quality and safety of care (Aiken et al., 2012).

For nursing homes, nurse skill-mix configurations have been described within the cantons (Landolt, 2016). More specifically, nurse staffing requirements for running a nursing home have been outlined in terms of skill-mix among the professional categories of nurses. Across the cantons the required proportions for each educational level of nurses varied or have not been defined at all. On average it is proposed to have 20% tertiary level educated nurses and 30% upper secondary level educated nurses, while the remaining categories are nursing assistants and aides usually with 'on the job' training.

14.2.3 Career structures

Akin to other European countries, nursing in Switzerland offers a wide range of career opportunities and professional roles. Nursing careers typically start after completion of undergraduate education and training, including transitions from VET diploma holders such as primary health care assistants when enrolling in professional education and nurse training degree programmes. Career pathways for nurses with professional education and training degrees or Bachelor of Science in Nursing degrees include many professional roles in a variety of clinical and non-clinical or mixed settings. However, nursing career pathways generally lead away from the bedside to managerial or teaching positions in various settings. Whereas this type of career path was dominant in the past decades, new and more clinically focused roles for well educated nurses have evolved as career paths in the last 20 years, including clinical nurse specialists and advanced practice nurses (De Geest et al., 2008; Gut, 2007; Schafer, 2011; Zuniga et al., 2010). Overall clinical career ladders have been implemented to define the roles, responsibilities and required competencies in clinical nursing care for each level, including those of advanced practice nurses, allowing for differentiation in clinical nursing positions (Torstad & Bjork, 2007). For instance, the university hospitals in Basel, Zurich and Bern are implementing clinical career ladders, which will further support the development of advanced practice nurses, as well as other nursing positions, in a structured career pathway, including educational backgrounds, with advanced practice nurse appointments requesting that 'advanced practice nurses hold a master's degree' (Spirig et al., 2011; Spichiger et al., 2018). Recently, other hospitals and nursing homes, as well as primary care facilities, have also employed advanced practice nurses and are supporting the formalization of this new professional category in the future through Master of Science in Nursing (MScN) study programmes at the two universities and the universities of applied sciences.

14.2.4 Planning mechanisms

To meet future needs for health care services, national health systems and their hospitals and related institutions will have to meet a rising demand with the right volumes and quality of health care professionals and health care provision on a long-term basis (Dubois et al., 2006). Reaching this goal will require 'supply and demand'-oriented planning approaches as well as combined models to estimate future needs of health care professionals to meet society's health care needs. The Swiss Health Observatory (OBSAN) projected future needs for health care professionals in the health system using a supply-oriented approach with the following determinants: nursing demand (based on the population's demography and health conditions), service requirements (based on utilization and type of health care services) and staffing requirements (based on system productivity, skills and grade mix, employment level) (Mercay, Burla & Widmer, 2016). The OBSAN estimated that compared to 2014, 29 000 new nurses (+32%) and 20 000 new health care assistants (+40%) will be needed by the year 2030 in hospitals, home care and nursing homes (other sectors of health care were not studied, and the proportion of registered nurses from this total is not available) (Mercay, Burla & Widmer, 2016). Although this overall estimate pertains to the entire Swiss health care workforce, it can be inferred that up to 60 000 additional nurses, especially in long-term and primary care, will be needed within the forthcoming decades due to the ageing population, the epidemiological shift to chronic conditions, technological advances and shorter lengths of hospital stay. These pressing issues, however, might also boost the substitution of registered nurses' positions by health care assistants, as well as general practitioners by advanced practice nurses, producing a shift in professional boundaries and practices in order to guarantee health care services to the population and other contributions to public health including research and education (De Geest et al., 2008).

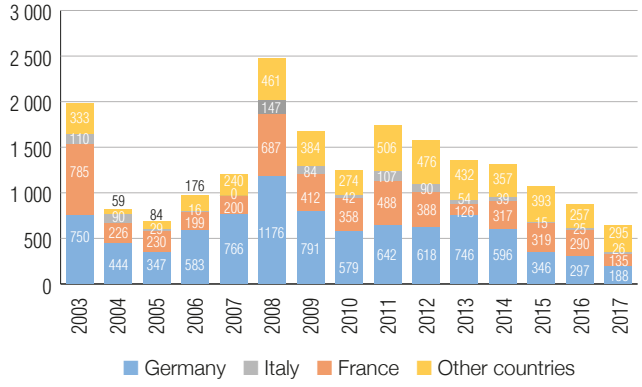
14.2.5 Mobility

Foreign nurse migration is crucial in sustaining the Swiss health system as it is today. A recent report indicated that Swiss-trained nurses will cover only half (43%) of the needs until 2025, whereas Swiss-trained health care assistants will cover 75% (Dolder & Grünig, 2016). Such information implies the importance of a constant inflow and a substantial proportion of foreign-trained nurses to support the Swiss health care system. Before 1990 Switzerland regulated its foreign workforce inflow by contingents, with each canton determining annual numbers of workers required from abroad across all professional fields, including health care. In 2000 new regulations were passed between Switzerland and the European Union; the bilateral agreements allow free flow of the labour force – including health care workers – from EU countries (EUR-Lex, 2002), while strongly diminishing access for other nations' citizens, except for highly specialized and skilled professionals. These developments, however, guaranteed that health care

professionals such as physicians and nurses could enter the Swiss health system and substitute its additional need for the health care workforce to cover health care services to the population.

The proportion of foreign-trained health professionals in Switzerland is increasing (for example, 26% of the nurses in nursing homes are foreign-trained). The positive migration balance of foreign-trained nurses in the last years – expressed by the number of nurses entering Switzerland per year minus the number of nurses leaving Switzerland per year (Figure 14.2) – confirms the weakness of the nurse workforce in terms of self-sufficiency and sustainability and thus the constant reliance of the Swiss health care system on foreign-trained nurses. This is an issue of particular concern given the 2010 WHO Global Code of Practice on the International Recruitment of Health Personnel, which was signed by its Member States including Switzerland.

Figure 14.2 *Annual migration balance of nurses (tertiary level) by country of origin (2003–2017)*



Source: Central Migration Information System, State Secretariat for Migration. Analyses by Swiss Health Observatory, Neuchâtel, 2018

14.3 Structure of nurses' work

14.3.1 Working conditions

The health sector (including long-term care) is one of the largest employers and the fastest-growing labour markets in Switzerland. In 2014 it employed 11.8% of the working population. Employment in health care far outpaced the rest of the economy, growing by 17% between 2009 and 2014 compared with 6% for the entire Swiss economy over the same period (Bundesamt für Statistik, 2015).

Legally regulated working times for employees are 40–43.5 hours per week with 20–30 annual paid vacation days according to age and canton. In agreement with their employers. nurses can work full-time or part-time. Incomes and wages for registered nurses vary within Switzerland. While in some cantons collective employment contracts have been negotiated for its publicly funded health care institutions, in general employees rely on specific legal regulations with respect to remuneration, financial and non-financial rewards. More specifically, the annual net income for a registered nurse recently graduated from tertiary level education ranges from CHF 55 000 to CHF 70 000. Registered nurses with 10 years of professional experience have an annual income which ranges from CHF 60 000 to CHF 85 000 depending on canton, age and qualifications. For instance, in the University Hospital of Basel the annual income of a newly graduated, full-time employed registered nurse in 2015 was CHF 65 200, while a full-time employed registered nurse with 10 years of professional experience could earn CHF 82 800 annually (Personal communication with chief nursing officer of University Hospital of Basel, 13 October 2015).

In the absence of reliable and comprehensive data on nursing, the international RN4CAST study (involving 486 general acute care hospitals in 12 European countries) provided major updates to describe nurse and nurse workplace characteristics in Swiss hospital settings (Schwendimann et al., 2014). The RN4CAST study aimed to develop innovative forecasting methods by addressing not only nurse-to-patient ratios but quality ratings both of nursing staff and of patient care. In Switzerland 35 acute care hospitals (quota sampling) from the three language regions (German-speaking: 20, French-speaking: 11, Italian-speaking, 4) participated in the study. A total of 1633 nurses, working in 120 medical, surgical and mixed medical/surgical units responded to the questionnaire. The survey results indicated that the largest (45%) age group of hospital nurses (with tertiary education) are those aged 21–30 years, followed by those aged 31–40 years (26%), 41–50 years (20%) and more than 50 years (9%).

Results from the Swiss RN4CAST data showed that 48% of the nurses worked full-time (>90%), 33% worked between 51% and 90%, and 19% worked between 10% and 50% (Schubert et al., 2011). The RN4CAST study revealed a high level of job satisfaction, low burnout rates and moderate intention to leave the hospital, but the findings also demonstrated a high level of variability between the 35 participating Swiss hospitals in this regard. At the hospital level, 79% of nurses were satisfied with their current job (Range: 56%–100%), which is higher than in most other RN4CAST study countries except for the Netherlands, where 89% of nurses said that they were satisfied with their job, in strong contrast

to 63% in Germany, and 44% in Greece (Aiken et al., 2012).

The three job characteristics/aspects nurses were most satisfied with in Switzerland were independence at work (94%; range: 84%–100%), professional status (85%; range: 75%–98%) and sick leave regulations (85%; range: 64%–97%), (Schwendimann et al., 2014). It should be noted that findings on working conditions varied widely across Swiss hospitals, not only due to hospital types and sizes (number of beds) but also due to varying work environments. About 15% (range: 2%–41%) of nurses reported emotional exhaustion on the exhaustion subscale of the Maslach Burnout Inventory (Poghosyan et al., 2009). Among participating nurses, 28% (Swiss hospital range: 3%–48%) reported an intention to leave the hospital within the next 12 months due to job dissatisfaction (for comparison, intention to leave in other European countries ranged from 19% in the Netherlands to 36% in Germany and 49% in Finland). In Switzerland, of those nurses who intended to leave the hospital, only 24% (range: 0%–57%) also intended to leave the nursing profession, while the others aimed at starting an alternative job in nursing.

Another Swiss study has also provided information on nurses' working conditions in hospitals, nursing homes and community care in the Canton of Bern in 2001 (Künzi etal., 2002). Of the 1954 nurses surveyed, 61% reported high to very high workload, e.g. due to understaffing and consequent time constraints and overtime. With regard to nurse staffing levels, all settings reported understaffing of registered nurses and some overstaffing of nursing aids. As far as the quality of nursing care was concerned, the majority of nurses indicated that the quality of care in general has not deteriorated in recent years. However, a substantial minority of nurses reported unsafe care and many expressed the view that they were unable to care for their patients as required, due to restricted resources. The registered nurses reported that their working conditions were characterized by high demands challenging their professional qualifications and accountability, while they perceived only limited influence on their working conditions.

14.3.2 Governance and leadership

Within health care institutions nurses are represented in the lower and middle management levels as unit head nurses and department chief nurses respectively. Most hospitals and nursing homes have a Director of Nursing. Managerial competencies vary from a consulting function with minor financial responsibilities to executive positions requiring strong leadership capabilities and administrative know-how. University and cantonal hospitals' hierarchy schemes include defined nursing positions consisting of professional objectives, duties and responsibilities from the bottom (bedside) to the top (board). In most Swiss hospitals (USB, 2012; CHUV, 2012; Inselspital, 2012; Kantonsspital Luzern, 2012) there exists a classic organization model with four levels of hospital hierarchy, including 1) a chief nursing officer at the top level (e.g. as a member of the hospital's executive board); 2) a department chief nursing officer, 3) a unit head nurse or ward leader; and 4) registered nurses/staff nurses responsible for patient care at the individual level. At the unit or ward level, a three-stage model is gaining increasing interest. The management team is made up of 1) a ward leader, in charge of operational and delivery issues; 2) a medical doctor in charge of medical issues; and 3) a nurse clinician, in charge of practice development.

In terms of professional governance, the Swiss Nurses Association has defined quality norms and standards for nursing care across a range of settings and health care organizations. These include criteria on the organization of nursing care, for example how management should be structured or the need for special education of nursing executives, as well as how workplace conditions (including finances and personnel resources) should be regulated (SBK-ASI, 1990, 2006). However, it remains unclear to what extent hospitals, nursing homes and home health care organizations meet these recommendations since their implementation varies between cantons.

14.4 Synthesis and policy implications

The Swiss health care system is characterized by a decentralized structure with three policy levels – Federal, cantons and communes – with a high degree of local autonomy. The health care system is legally based on the 1994 Federal Health Insurance Law, including mandatory basic health insurance which has led to virtually full coverage in basic health insurance for residents across Switzerland since 1996. Cantons are in charge of the provision of health care and partial funding of hospital costs and teaching. The cantons and communes guarantee health care to their population, which is basically delivered by ambulatory care services, public and private hospitals and long-term care facilities.

The advantages of the Swiss federalist system include its strong local autonomy allowing tailored political solutions close to the citizens' needs and will at the level of the cantons and communes. Disadvantages include a protracted political decision-making process, sometimes leaving urgent matters, such as nursing education, on the agenda but unresolved for many years.

Swiss nursing education relies strongly on vocational education and training programmes in the tertiary and upper secondary levels. Those education systems reflect the overall successful tradition of the Swiss dual education system. With the education reforms in the last decade, however, it has led – step by step – to the integration of nursing education into the Swiss higher educational system, including its incorporation into regulatory structures at the Federal level, in keeping with other professions. Furthermore, for the tertiary level A education a major initiative is under way to legally regulate nursing education and practice alongside other health professions at the tertiary level across Switzerland with the Law on Health Professions.

Given the scarcity of nurse workforce data in Switzerland, a strong emphasis should be given at the Federal and cantonal levels to reform and/or establish databases for reliable and prospective health workforce planning. Standardized mandatory data collection procedures and easily accessible statistics about nurse education, as well as detailed information on the professionally active nurse workforce in the various health care settings, are urgently needed. Current initiatives involving legal regulation of the nursing professions may leverage data-based workforce planning instruments such as a reliable and accessible nurse registry at the Federal level. With standardized, mandatory nurse-specific data collection on an ongoing basis, cross-sectional studies such as the RN4CAST could be replaced by prospective longitudinal data analysis allowing for better and more reliable steering of health workforce planning.

To meet future needs for health care services, National Health Systems with their hospitals and related institutions will have to recruit and retain the right numbers, calibre and skill-mix of staff on a long-term basis. With this in mind, the RN4CAST consortium will further study the issue, including nurse survey results, and feed further qualitative information into forecasting models to provide strategies for national forecasting scenarios. The Swiss RN4CAST study group, in collaboration with the OBSAN, elaborated on that issue and provided respective nurse workforce information to the Swiss Health System.

Finally, the Swiss Health System relies on a significant proportion of foreign-trained nursing personnel to meet its workforce needs. This might be also be true in health care, meaning that Switzerland will have to recruit foreign-trained nurses and integrate them into multiprofessional teams in health care settings. As long as the Swiss health care system has strong 'pull' factors (such as good working conditions with relatively high wages, good career pathways and opportunities for development and overall high job satisfaction), well-educated nurses from neighbouring countries will be attracted to work in Switzerland. The pressure to develop a sustainable strategy in Switzerland for a nurse education policy geared to increasing the numbers of students and graduates needs to be matched with investment in leadership and family friendly policies for better nurse retention. Such policy interventions rely upon the specifics of the Swiss federalist system, as well as the ability of professional organizations and individuals to inspire and mobilize nurse power, including policy lobbying to guarantee a nurse workforce which relies less on immigration and more on its self-renewing and self-sustaining capacity.

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‘Who is a nurse?’ and ‘What is nursing?’ seem to be simple questions yet the answers are strangely elusive. This book explores the variations in structure and organization of the nursing workforce across the different countries of Europe. This diversity, and the reasons for it, are of more than academic interest. The work of nurses has always had a critical impact on patient outcomes. As health systems shift radically in response to rising demand, the role of nurses becomes even more important.

This book is part of a two-volume study on the contributions that nurses make to strengthening health systems. This is the first time that the topic of nursing has been dealt with at length within the Observatory Health Policy Series. The aim is to raise the profile of nursing within health policy and draw the attention of decision-makers.

Part 1 is a series of national case studies drawn from Belgium, England, Finland, Germany, Greece, Ireland, the Netherlands, Norway, Poland, Spain, Sweden, and Switzerland. The countries were chosen as the subject of a large EU-funded study of nursing (RN4Cast). Lithuania and Slovenia were added to provide broader geographical and policy reach. Part 2, to be published later this year, will provide thematic analysis of important policy issues such as quality of care, workforce planning, education and training, regulation and migration.

The lessons learned from comparative case-study analysis demonstrate wide variation in every dimension of the workforce. It examines what a nurse is; nurse-to-doctor and nurse-to-population ratios; the education, regulation and issuing of credentials to nurses; and the planning of the workforce. While comparative analysis across countries brings these differences into sharp relief, it also reveals how the EU functions as an important ‘binding agent’, drawing these diverse elements together into a more coherent whole.

The editors

Anne Marie Rafferty, Professor, Florence Nightingale Faculty of Nursing, Midwifery & Palliative Care, King’s College, London

Reinhard Busse, Professor, Berlin University of Technology and Co-Director, European Observatory on Health Systems and Policies

Britta Zander-Jentsch, Researcher, Berlin University of Technology and National Institute for Quality and Transparency in Healthcare (IQTIG)

Walter Sermeus,Professor, Leuven Institute for Healthcare Policy, KU Leuven

Luk Bruyneel,Researcher, Leuven Institute for Healthcare Policy, KU Leuven

Health Policy Series Series No. 52

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