

OHS

Table 25: Clinical evidence profile: Variable non-invasive ventilation (NIV) vs fixed non-invasive ventilation (NIV)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Variable NIV	Fixed NIV	Relative (95% CI)	Absolute		
Change in disease specific QoL (follow-up 3 months; measured with: SRI-SS (parallel trial); range of scores: 0-100; Better indicated by higher values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	None	23	23	-	MD 4 higher (3.23 lower to 11.23 higher)	⊕⊕⊕O MODERATE	CRITICAL
Disease specific QoL (follow-up 1.5 months; measured with: SRI-SS (crossover trial); range of scores: 0-100; Better indicated by higher values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	very serious ¹	none	10	10	-	MD 3 lower (16.18 lower to 10.18 higher)	⊕OOO VERY LOW	CRITICAL
Change in ESS (follow-up 3 months; range of scores: 0-24; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	23	23	-	MD 1 higher (2.47 lower to 4.47 higher)	⊕⊕⊕O MODERATE	IMPORTANT
PaCO2 (follow-up 1.5-3 months; measured with: kPa; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	serious ³	no serious indirectness	very serious ¹	none	33	33	-	MD 0.14 lower (0.82 lower to 0.55 higher)	⊕OOO VERY LOW	IMPORTANT
Adherence (hours per night) (follow-up 3 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	23	23	-	MD 0.9 lower (2.44 lower to 0.64 higher)	⊕⊕⊕O MODERATE	IMPORTANT
AHI (follow-up 1.5 months; Better indicated by lower values)												

1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	serious ⁴	none	10	10	-	not pooled	⊕⊕⊕⊕ LOW	IMPORTANT
ODI (follow-up 1.5 months; Better indicated by lower values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	very serious ¹	none	10	10	-	MD 6 higher (8.05 lower to 20.05 higher)	⊕⊕⊕⊕ VERY LOW	IMPORTANT
Pao2 (Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	23	23	-	MD 0.2 higher (0.89 lower to 0.49 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Mortality												
Outcome not reported												

¹ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs. Established MIDs for SF-36 physical/mental- 2/3; ESS-2.5; EQ5D- 0.03; FOSQ- 2; GRADE default MID (0.5XSD) used for all other continuous outcomes.

² Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

³ Downgraded by 1 or 2 increments for heterogeneity, unexplained by subgroup analysis. Random effect analysis used.

⁴ The mean and SD in both arms was 0

Table 26: Clinical evidence profile: non-invasive ventilation (NIV) vs lifestyle

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	NIV	Lifestyle	Relative (95% CI)	Absolute		
Change in PaCO2 (follow-up 1-2 months; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	No serious indirectness	serious ¹	none	129	133	-	MD 2.93 lower (4.26 to 1.59 lower)	⊕⊕⊕⊕ MODERATE	IMPORTANT
PaCO2 at 3 years (without severe OSA) (Better indicated by lower values)												

1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	48	48	-	MD 3.28 lower (5.63 to 0.93 lower)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Change in AHI (people with severe OSAHS) (follow-up 1-2 months; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	89	87	-	MD 48.41 lower (57.37 to 39.46 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in AHI (people without severe OSAHS) (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	40	46	-	MD 11.10 lower (15.84 to 6.36 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in ESS (follow-up 1-2 months; range of scores: 0-24; Better indicated by lower values)												
3	randomised trials	serious ²	Serious inconsistency ³	no serious indirectness	serious ¹	none	129	133	-	MD 2.48 lower (4.11 to 0.86 lower)	⊕⊕⊕⊕ VERY LOW	IMPORTANT
ESS at 3 years (without severe OSA) (Better indicated by lower values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	serious ¹	none	48	48	-	MD 2.97 lower (5.57 to 0.37 lower)	⊕⊕⊕⊕ LOW	IMPORTANT
Change in HbA1c (follow-up 1 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	18	17	-	MD 0.16 higher (0.08 lower to 0.4 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Change in SBP (follow-up 1-2 months; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	No serious indirectness	serious ¹	none	58	63	-	MD 1.57 higher (5.28 lower to 8.42 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Systolic blood pressure at 3 years (without severe OSA) (Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	48	48	-	MD 3.33 higher (4.19 lower to 10.85 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Diastolic blood pressure at 3 years (without severe OSA) (Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	48	48	-	MD 3.47 higher (1.81 lower to 8.75 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT

Change in ODI (people with severe OSAHS) (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	70	-	MD 41.30 lower (50.56 to 32.04 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in ODI (people without severe OSAHS) (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	40	46	-	MD 18.60 lower (25.71 to 11.49 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in SF-36 physical summary (follow-up 2 months; range of scores: 0-100; Better indicated by higher values)												
2	randomised trials	serious ²	no serious inconsistency	No serious indirectness	serious ¹	none	111	116	-	MD 1.78 higher (0.39 lower to 3.94 higher)	⊕⊕○○ LOW	CRITICAL
SF-36 physical at 3 years (without severe OSA) (Better indicated by higher values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	very serious ²	none	48	48	-	MD 2.35 higher (3.35 lower to 8.05 higher)	⊕○○○ VERY LOW	CRITICAL
Change in SF-36 mental summary (follow-up 2 months; range of scores: 0-100; Better indicated by higher values)												
2	randomised trials	serious ²	Serious inconsistency ³	serious indirectness ⁴	serious ¹	none	111	116	-	MD 2.51 higher (1.88 lower to 6.89 higher)	⊕○○○ VERY LOW	CRITICAL
SF 36 mental at 3 years (without severe OSA) (Better indicated by higher values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	very serious ¹	none	48	48	-	MD 1.47 lower (8.99 lower to 6.05 higher)	⊕○○○ VERY LOW	CRITICAL
Change in FOSQ (follow-up 2 months; range of scores: 5-30; Better indicated by higher values)												
2	randomised trials	serious ²	no serious inconsistency	no serious indirectness	serious ¹	none	111	116	-	MD 6.35 higher (1.87 to 10.84 higher)	⊕⊕○○ LOW	CRITICAL
FOSQ at 3 years (without severe OSA) (Better indicated by higher values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	very serious ¹	none	48	48	-	MD 5.05 higher (5.96 lower to 16.06 higher)	⊕○○○ VERY LOW	CRITICAL
PaO2 (Better indicated by lower values)												

1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ¹	none	19	20	-	MD 2.25 higher (5.89 lower to 10.39 higher)	⊕⊕⊕⊕ LOW	IMPORTANT
Mortality at 3 years (without severe OSA)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ¹	none	9/48 (18.8%)	18.8%	RR 1 (0.43 to 2.3)	0 fewer per 1000 (from 107 fewer to 244 more)	⊕⊕⊕⊕ LOW	CRITICAL
Cardiovascular events at 3 years (without severe OSA)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ¹	none	10/48 (20.8%)	22.9%	RR 0.91 (0.43 to 1.94)	21 fewer per 1000 (from 131 fewer to 215 more)	⊕⊕⊕⊕ LOW	IMPORTANT

¹ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs. Established MIDs for SF-36 physical/mental- 2/3; ESS- 2.5; EQ5D- 0.03; FOSQ- 2; AHI- different severity groups, likely true MCID will vary, qualitatively considered in decision making throughout. GRADE default MID (0.5XSD) used for all other continuous outcomes.

² Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

³Downgraded by 1 or 2 increments for heterogeneity, unexplained by sub-group analysis. Random effects analysis used.

Table 27: Clinical evidence profile: Non-invasive ventilation (NIV) vs CPAP

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	NIV	CPAP	Relative (95% CI)	Absolute		
Change in SF-36 physical (follow-up 2-3 months to 3 years; range of scores: 0-100; Better indicated by higher values)												
2	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	103	110	-	MD 1.49 lower (4.88 lower to 1.9 higher)	⊕⊕⊕⊕ LOW	CRITICAL
Change in SF-36 mental (follow-up 2-3 months to 3 years; range of scores: 0-100; Better indicated by higher values)												
2	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	103	110	-	MD 0.21 higher (3.11 lower to 2.38 higher)	⊕⊕⊕⊕ LOW	CRITICAL
SRI (follow-up 3 months; range of scores: 0-100; Better indicated by higher values)												

1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	None	27	30	-	MD 4.08 lower (12.16 lower to 4 higher)	⊕⊕⊕⊕ MODERATE	CRITICAL
Change in FOSQ (follow-up 3 years; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ²	None	76	80	-	MD 5.4 higher (0.3 lower to 11.1 higher)	⊕⊕⊕⊕ VERY LOW	CRITICAL
Hours/night (follow-up 2-3 months; Better indicated by lower values)												
3	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	None	118	129	-	MD 0.1 higher (0.47 lower to 0.67 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Change in AHI (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	None	71	80	-	MD 3 higher (6.74 lower to 12.74 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Change in ODI (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	None	71	80	-	MD 12 higher (1.95 to 22.05 higher)	⊕⊕⊕⊕ MODERATE	IMPORTANT
Change in PaCO2 (follow-up 2-3 months to 3 years; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision ²	None	95	99	-	MD 0.62 lower (1.66 lower to 0.42 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
ESS (follow-up 2-3 months to 3 years; range of scores: 0-24; Better indicated by higher values)												
3	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	125	128	-	MD 0.8 lower (3.34 lower to 1.75 higher)	⊕⊕⊕⊕ LOW	IMPORTANT
Systolic BP (follow-up 3 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ²	None	27	30	-	MD 0 higher (8.74 lower to 8.74 higher)	⊕⊕⊕⊕ LOW	IMPORTANT
Mortality												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ²	None	11/97 (11.3%)	15%	RR 0.76 (0.37 to 1.55)	36 fewer per 1000 (from 95 fewer to 82 more)	⊕⊕⊕⊕ LOW	CRITICAL

Cardiovascular events												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ²	None	17/97 (17.5%)	15%	RR 1.17 (0.63 to 2.19)	25 more per 1000 (from 56 fewer to 179 more)	⊕⊕○○ LOW	IMPORTANT
hospitalisation per patient per year (Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	None	97	107	-	MD 0.19 lower (1.13 lower to 0.75 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT

¹Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

² Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs. Established MIDs for SF-36 physical/mental- 2/3; ESS- 2.5; EQ5D- 0.03; FOSQ- 2. GRADE default MID(0.5XSD) used for all other continuous outcomes.

Table 28: Clinical evidence profile: CPAP (fixed) vs lifestyle

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	CPAP (fixed)	Lifestyle	Relative (95% CI)	Absolute		
Change in SF-36 physical (follow-up 2 months; range of scores: 0-100; Better indicated by higher values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	80	70	-	MD 1 higher (1.52 lower to 3.52 higher)	⊕⊕○○ LOW	CRITICAL
Change in SF-36 mental (follow-up 2 months; range of scores: 0-100; Better indicated by higher values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	80	70	-	MD 3.4 higher (0.06 to 6.74 higher)	⊕⊕○○ LOW	CRITICAL
Change in FOSQ (follow-up 2 months; range of scores: 5-20; Better indicated by higher values)												

1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	80	70	-	MD 6.8 higher (1.67 to 11.93 higher)	⊕⊕⊕⊕ LOW	CRITICAL
Change in ESS (follow-up 2 months; range of scores: 0-24; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	80	70	-	MD 3.3 lower (4.76 to 1.84 lower)	⊕⊕⊕⊕ LOW	IMPORTANT
Change in AHI (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	70	-	MD 53.2 lower (62.97 to 43.43 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in ODI (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	70	-	MD 53.3 lower (62.75 to 43.85 lower)	⊕⊕⊕⊕ HIGH	IMPORTANT
Change in PaCO2 (follow-up 2 months; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	70	-	MD 0.5 lower (2.52 lower to 1.52 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Mortality												
Outcome not reported												

¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

² Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs. Established MIDs for SF-36 physical/mental- 2/3; ESS- 2.5; EQ5D- 0.03; FOSQ- 2.GRADE default MID(0.5XSD) used for all other continuous outcomes.