

Summary of review finding	Studies contributing to the review finding	Methodological limitations	Relevance	Coherence	Adequacy	CERQual assessment of confidence in the evidence
<p><u>Lack of knowledge about HPV, HPV related diseases and vaccine</u></p> <p>Almost all participants reported initially believing HPV vaccination was predominately or exclusively an intervention designed for girls or women and that it was for the prevention of cervical cancer. Participants lacked knowledge about HPV in general, transmission in MSM and were unaware of the connection between HPV and male associated cancers. There were some who believed that men carried the virus without symptoms or any effect on them.</p>	<p>Apaydin 2018, Fontenot 2016, Gerend 2019, Grace 2018, Jaiswal 2020, Kesten 2019, Koskan 2018, Nadarzynki 2017</p>	<p>Moderate concerns</p> <p>(small sample size reported in 7 of the studies which might be due to sampling method. One study also reported a lack of data saturation)</p>	<p>No or very minor concerns</p> <p>(data is of direct relevance and is applicable to the context specified in the review question).</p>	<p>No or very minor concerns</p> <p>(there is a good fit between the studies and the review finding)</p>	<p>No or very minor concerns</p> <p>(data is sufficiently rich and comes from 8 out of 9 studies)</p>	<p>Moderate confidence</p> <p>This finding was graded as moderate confidence because of moderate concerns regarding methodological limitations</p>
<p>Supporting statements: "I've heard it doesn't affect men, but they can transmit it. I don't know if that's true"</p>						

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<p>"I didn't know like it affected guys at all"</p> <p>"I've always associated it to cervical cancer and to women. I didn't realize at the time, until recently, that it affected men as well"</p> <p>"My own ignorance was that HPV was something that really only affected women and cervical cancer. I didn't hear it as much as something that was affecting men"</p> <p>"I had no idea that it associated itself with cancer. As far as I did know, it [HPV] just caused warts."</p> <p>"If I didn't have the knowledge [about HPV vaccination]. Because I think that that's what stops people in general. (cisgender man, HIV-infected, vaccinated)."</p> <p>"I haven't heard about that disease. Personally, I have never—my doctors have never told me about it"</p> <p>"I heard that it's really contagious. I heard that some people catch it through [having] sex"</p> <p>"I mean I've heard it mentioned on the news here and there, but my understanding, which is minimal, is that it's not just affecting gay men"</p> <p>"Well, I heard it when it first came out, and it was only for females, right? For girls at a certain age? I didn't pay that much attention because it didn't pertain to me"</p>						
<p><u>Vaccine effectiveness and potential side effects</u></p> <p>Participants noted the importance of having clear information about the vaccine and any possible side effects.</p> <p>They questioned the effectiveness of the vaccine in sexually active men who might already have been exposed to HPV and/or had genital warts in the past.</p>	<p>Fontenot 2016, Gerend 2019, Koskan 2018, Nadarzynki 2017, Wheldon 2017</p>	<p>Moderate concerns</p> <p>(small sample size reported in 4 of the included studies which might be due to sampling method.)</p>	<p>No or very minor concerns</p> <p>(data is of direct relevance and is applicable to the context specified in the review question).</p>	<p>No or very minor concerns</p> <p>(there is a good fit between the studies and the review finding)</p>	<p>No or very minor concerns</p> <p>(data is sufficiently rich and comes from 5 studies)</p>	<p>Moderate confidence</p> <p>This finding was graded as moderate confidence because of moderate concerns regarding methodological limitations</p>
<p>Supporting statements:</p> <p>"I mean I don't know, I mean I'm not too fond of the guinea pig thing, so I don't know, it depends on the side effects, I actually [inaudible] that. So I would have to see—weigh my options and see what my side effects are"</p>						

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<p>"I imagine that there are some people who are more concerned about side effects. Some people may be more prone to them than others"</p> <p>"I suppose the only reason why you would not is because it says it does not cure existing HPV infections so if you already have it, that would be the only reason"</p> <p>"I think like with all vaccines there are probably side effects"</p>						
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<p><u>Vaccination series including timing of doses</u></p> <p>Participants who reported not completing the vaccine series described barriers such as the long time intervals between doses; multiple doses; and the inconvenience of work conflicting with clinic hours.</p> <p>Fully vaccinated participants described monitoring their own timeline for dose completion and following up to confirm appointments as behaviours that facilitated 3-dose completion.</p>	<p>Apaydin 2018, Fontenot 2016, Kesten 2019</p>	<p>Moderate concerns</p> <p>(small sample size reported in included studies which might be due to sampling method.)</p>	<p>No or very minor concerns</p> <p>(data is of direct relevance and is applicable to the context specified in the review question).</p>	<p>No or very minor concerns</p> <p>(there is a good fit between the studies and the review finding)</p>	<p>Moderate concerns</p> <p>(data is moderately rich and comes 3 studies)</p>	<p>Low confidence</p> <p>This finding was graded as low confidence because of moderate concerns regarding methodological limitations and adequacy of data</p>
<p>Supporting statements:</p> <p>"... you know, going back and coming back, and going back [for 3 doses], it's too much work"</p> <p>"I kind of had the whole timeline laid out before I started even with the first dose, and then just before I would leave the office that same day schedule a follow-up appointment. So it was already in my calendar"</p> <p>"It is hard to remember, keep track of all the shots"</p>						

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<p>“People are uncomfortable having to make phone calls. . . it’s a lot easier to just do something on your phone, like an appointment confirmation, so that you can go in without having to talk [to someone] or feel uncomfortable disclosing things [on the phone]”</p>						
<p>Possible stigma</p> <p>Participants described stigmas related to being gay, gay health, acceptance by HCPs, and STIs.</p> <p>Participants described the importance of being able to discuss sexual activity with healthcare professionals and the importance of being in health care situations where they feel comfortable doing that. Some described previous negative experiences of this.</p> <p>Participants were also concerned that they would be labelled as promiscuous upon receiving vaccination.</p> <p>There was concern from participants about possibly singling out people, especially boys, by their sexuality when offering the vaccine.</p>	<p>Fontenot 2016, Gerend 2019, Koskan 2018, Nadarzycki 2017, Wheldon 2017</p>	<p>Moderate concerns</p> <p>(small sample size reported in 4 out the 5 studies included, which might be due to sampling method.)</p>	<p>No or very minor concerns</p> <p>(data is of direct relevance and is applicable to the context specified in the review question).</p>	<p>No or very minor concerns</p> <p>(there is a good fit between the studies and the review finding)</p>	<p>No or very minor concerns</p> <p>(data is sufficiently rich and comes from 5 studies)</p>	<p>Moderate concerns</p> <p>This finding was graded as moderate confidence because of moderate concerns regarding methodological limitations</p>
<p>Supporting statements:</p> <p>“The embarrassment, being embarrassed about getting a vaccine shot or whatever type of vaccine they may need. I know when I first had to get a vaccine shot for a STD, I was kind of nervous about that and embarrassed about that”</p> <p>“I just feel weird talking to someone like that [healthcare provider] about those kind of things”</p>						

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<p>“If there’s another virus, like HPV, it’s going to be strongly linked to gay men community again. I don’t think it’s a good thing for people because it will strengthen the gay label to this specific disease. I don’t think people will like it. Since they just got rid of HIV labels and they don’t want another stigma again”</p> <p>“...some people will consider somebody very promiscuous. ‘Oh, you’re getting a vaccine because you’re sleeping with multiple people,’ and there’s just a stigma associated with that”</p> <p>“[HPV] that’s like a girl thing and they don’t market it towards men so we are embarrassed sometimes because we’re like that a girl’s thing, why are we over here getting treated for this”</p> <p>“You can push and push and push with posters and campaigns and stuff but the people that ain’t gonna do it, ain’t gonna do it.</p>						
<p>Clinical settings</p> <p>Most of the participants suggested sexual health clinics to be the most suitable setting to reach MSM as the openness and non-judgemental attitudes of staff in sexual health clinics were thought to be reassuring.</p> <p>Though some suggested that the vaccine should be offered at GP surgeries as some young men do not access sexual health services, others highlighted difficulties discussing sexual health with their general practitioners.</p> <p>Some men mentioned that MSM who do not identify as gay or bisexual, will not benefit from the vaccine if it was only targeted to gay or bisexual men.</p>	<p>Gerend 2019, Nadarzynki 2017, Wheldon 2017</p>	<p>Moderate concerns</p> <p>(small sample size reported in 2 out the 3 studies included which might be due to sampling method)</p>	<p>No or very minor concerns</p> <p>(data is of direct relevance and is applicable to the context specified in the review question).</p>	<p>No or very minor concerns</p> <p>(there is a good fit between the studies and the review finding)</p>	<p>Minor concerns</p> <p>(data is moderately rich with supporting statements from 2 out of 3 studies)</p>	<p>Low confidence</p> <p>This finding was graded as low confidence because of moderate concerns regarding methodological limitations and minor concerns regarding adequacy of data</p>

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<p>Supporting statements:</p> <p>"I think the best thing is to do it at your GP everywhere, offer it so don't make it like you have to go to a place to get it cos then there is potentially like, oh I have to make an appointment at a sexual health clinic, two, there's a stigma oh I need to go to a sexual health clinic so remove all that offer it at GP, if you want it, you'll get it"</p> <p>"Well, it was offered right there while I was getting the physical done. So I didn't even have to make a special trip or anything"</p> <p>"I feel like he judges me. I feel like if I had a provider or somebody who is a little more open-minded ... my doctor is a staunch Republican, white dude who is like 65 and I'm sitting there like a gay little Puerto Rican kid, and you know, it is just always awkward when I go to my doctor. We come from opposite ends of the earth"</p> <p>"I think ease of access. I don't know how many hospitals or locations would have this vaccine or if it's accessible in that capacity"</p> <p>"Sexuality is more fluid and flexible than we like to think. I know many people who identify as heterosexual or straight but at some point in their lives experimented with the same sex partner"</p>						