

Elimination of HPV-associated Cancers: Routine Universal HPV Vaccination and the Role of Anal Screening

Perspectives from LMIC

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June 05, 2025

Antwerp, Belgium

Disclosure

Grant recipient of an 'investigator initiated grant' research grant from MERCK Ltd to 'evaluate HPV vaccine immunogenicity among adolescent boys and girls living with HIV'

Protocol-chair and site PI for the Kenya Single Dose HPV vaccine Efficacy (KEN SHE) study

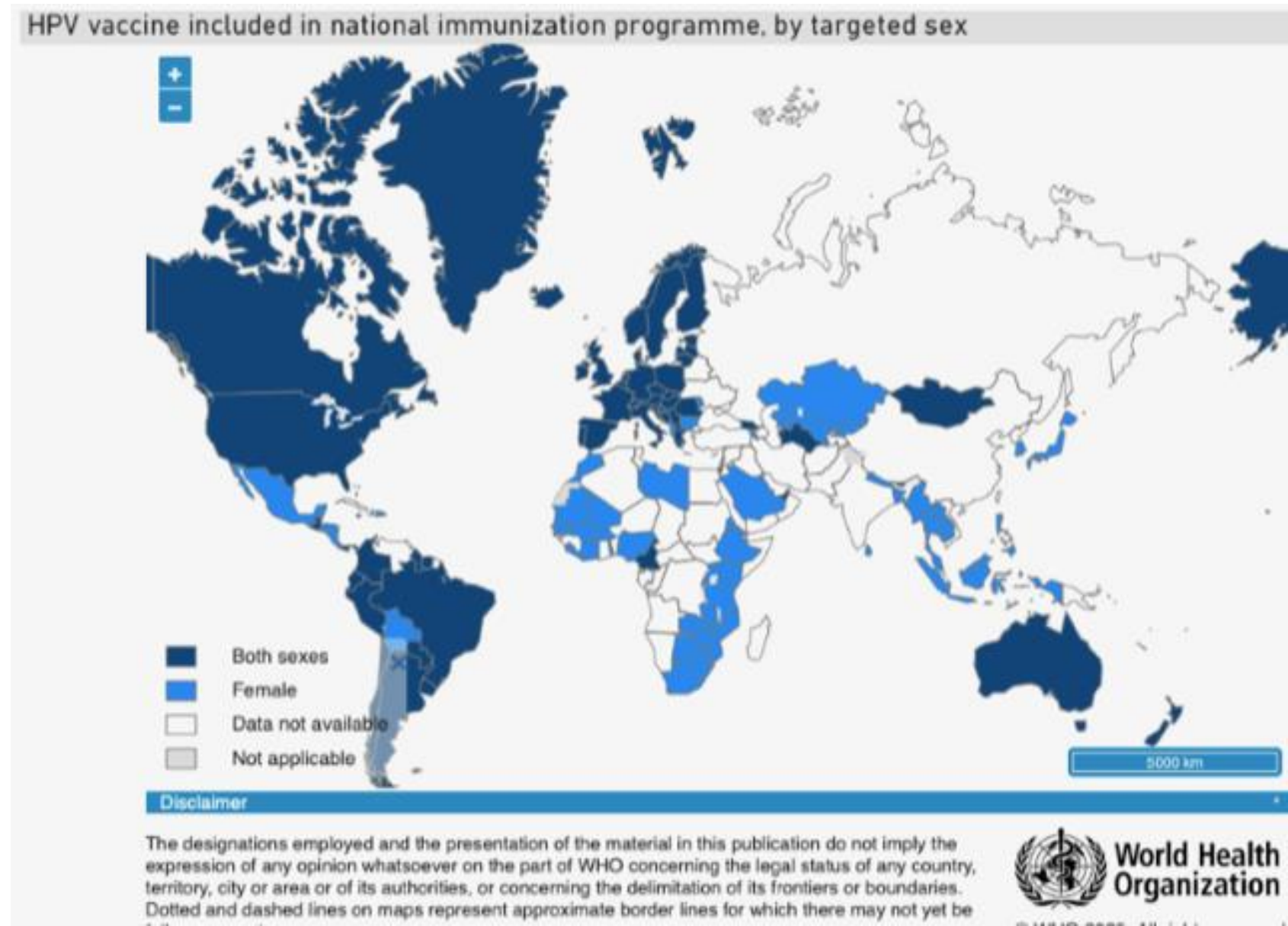
HPV vaccine included in national immunization program by targeted gender

148 countries

Female : 72

Both sexes: 76

Countries
vaccinating both
gender have higher
vaccine coverage





Comparison of HPV related cancers HIC vs LMIC (GLOBOCAN Data 2012)

Region	cervix	Anus		Penile	Vulva/ vagina	Head and Neck	
		M	F			M	F
Sub Sahara Africa	103000	1000	1200	1000	2100	5600	1000
East Asia	203,000	3600	2800	4230	3360	7360	1580
LMIC	370000	10000	7600	6800	8300	8600	21000
HIC	160000	6800	1000	6100	12000	22000	5500

The highest burden of most HPV associated cancers both sexes reside in LMIC, with East Asia with predominant burden of penile and head and neck cancers

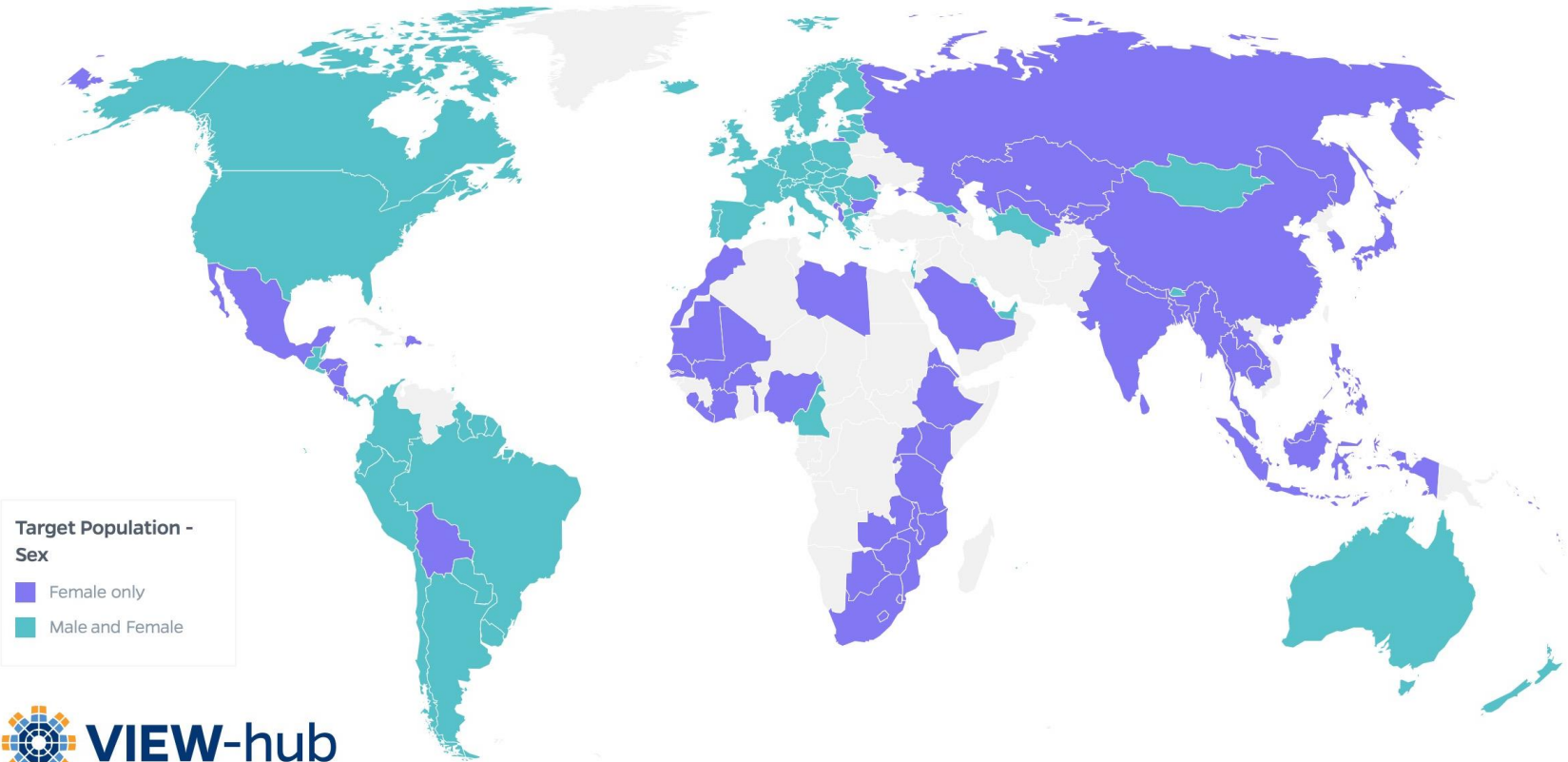
HPV vaccination population coverage by sex

Overview

	Global	Gavi
 Female only	75	29
 Male and Female	76	1



HPV ▶ Vaccine Introduction ▶ Target Population - Sex



March 17, 2025 © The International Vaccine Access Center (IVAC)

LMIC: Cameroon is the only country with universal vaccination program

Gender target vaccination can fire up hesitancy

- In sub-Saharan Africa, where majority of vaccine programs are dependent on GAVI the target population for HPV vaccination is young adolescent girls.
- A cohort that faces moral judgement around behaviour and risk to their fertility
- In West Africa, across six studies 'risk of infertility relating to the HPV vaccine was a common concern
- Mistrust by race and colonial historical perspective build this mistrust

Gender dynamics in decision making: HPV vaccination

- Common reasons for declining vaccination
 - Knowledge of HPV and cervical cancer
 - Fear about HPV vaccination and gender dynamics are important to how stakeholders understand HPV vaccination in sub-Saharan Africa (Deignan C. Vaccines 2021)
- Parental refusal of HPV vaccination is often due to fear of vaccine side effects
 - Fear of infertility is recurrent across vaccine hesitancy studies (Remes P. Vaccine 2012; Debora-Watson-Jones PLoS One 2015)
- Men often hold autonomy in household decision making in most LMICs (K. Fuseini Journal of Comparative Family Studies)
 - Excluding males from HPV vaccination can also often exclude men from the information network

Women autonomy and reproductive rights and social cultural factors



- HPV vaccination has brought forth issues of women's autonomy and their reproductive rights (Xu S. Int J Qual Stud Health Well-Being)
 - Connotations and misconception around HPV vaccination and sexual shaming
 - 'promiscuity' and an STI vaccine
 - 'Who owns a young woman's 'fertility' – issues of fertility among young girls touch communities and make their fertility everybody's business
- Universal vaccination may help to override these fears or
 - may potentially bring them forth for the boy child when there is change in target population

HPV vaccine hesitancy

In the Gambia, knowledge of HPV vaccine was low and the most prominent concern was that the *vaccine could cause infertility or is a form of birth control*



Vaccine

Volume 41, Issue 24, 1 June 2023, Pages 3647-3654



HPV vaccination acceptance and perceptions related to fertility and population control in the Gambia: An anthropological analysis

Rose J. Wilson ^a  , Lamin Leigh ^a, Haddy Bah ^b, Heidi J. Larson ^c, Ed Clarke ^a



‘Why it is only the girls who get vaccinated’ Barriers and facilitators to HPV vaccination among ‘hard to reach populations’

Qualitative study conducted in 2012 among urban high-density-low-income area (Korogocho) in Nairobi and nomadic community in Kajiado Kenya. Interviews with parents, boys, girls, community leaders and teachers.

Provision of information about the vaccine and its benefits was felt to be critical to prevent misinformation

- Injection pain, fear of side effects and the fact that the HPV vaccine would only be offered to girls were also mentioned as factors potentially affecting vaccine uptake.
 - *“...the boys will enquire why it is only the girls who are getting the vaccine...The boys will discourage the girls, telling them that the vaccine will damage their lives.”*(Community Leader, FGD Korogocho).
- Discrimination against boys was raised as an issue, especially by males.
 - *Boys in Kajiado stated that they would need clear information about why only girls will receive the vaccine and that it would be useful if boys were also taught about cervical cancer and HPV.*
 - One HCW made the point that excluding boys from vaccination would not prevent transmission of the virus. *“Why target women and not men? Why don’t you target the source? Why don’t you put out the fire from where it starts.”*
- District Public Health Nurse, Kajiado). The fact that the vaccine should ideally be given before girls have passed sexual debut was seen as potentially discouraging young girls who have already had sex from getting the vaccine.

Girls only tetanus vaccination program inspired misinformation

Tetanus vaccination is provided during childhood and to girls (only) in primary school in school-based outreach program

In Kenya, rumors circulated that the tetanus vaccine was a form of birth control, leading to fears and hesitancy among expectant mothers and school-going girls, prompting the government to address these concerns and emphasize the vaccine's safety.

Here's a more detailed look at the situation:

•Misinformation and Fear:

- Rumors spread within the community, *suggesting the tetanus vaccine was a family planning method*, which fueled fears among expectant mothers.



Kenya Catholic Church tetanus vaccine fears 'unfounded' - BBC News

13 Oct 2014 — Kenya's government has dismissed allegations made by the country's Catholic Church that a tetanus vaccin...

BBC

Statement from WHO and UNICEF on the Tetanus Vaccine in ...

Statement from WHO and UNICEF on the Tetanus Vaccine in Kenya | WHO | Regional Office for Africa. ... The World Health...

WHO | Regional Office for Africa

HCG Found in WHO Tetanus Vaccine in Kenya Raises ...

The type of anti-tetanus "birth-control" vaccine the KCCB and KCDA suspected the WHO of using in Kenya involves the...

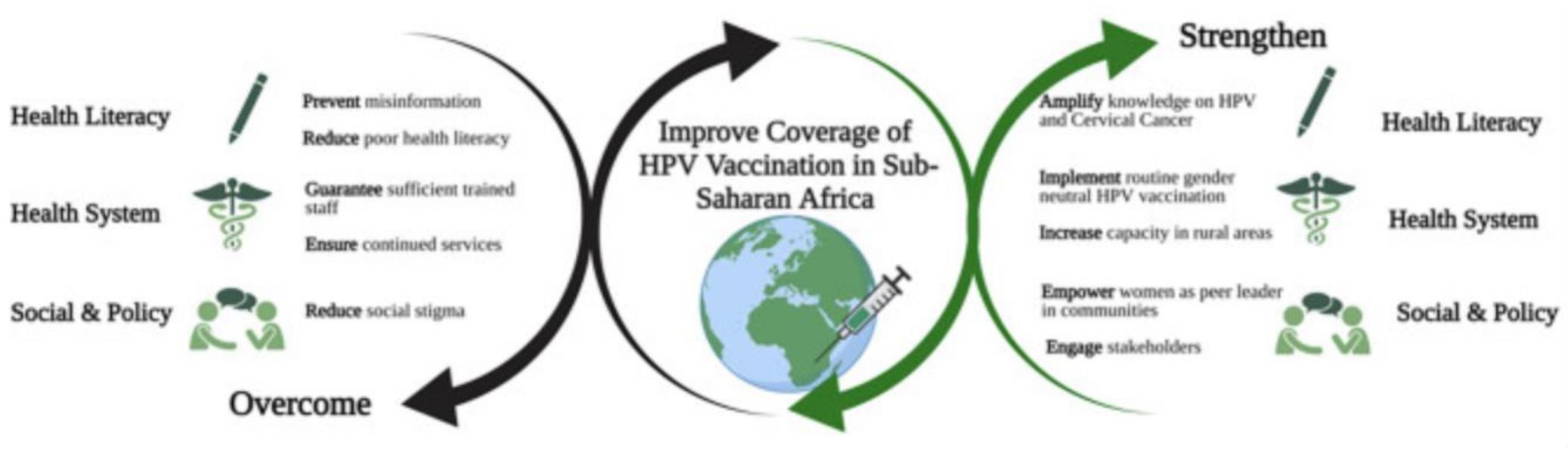
Scientific Research Publishing

HPV infection acquisition occurs soon after sexual debut

- The Tanzania Mwanza HPV research series found high incidence of HPV infection within 5 months of sexual debut among adolescent girls¹
- ²In Kenya, we had similar findings of high incident sexually transmitted infections soon after sexual debut
 - High burden HPV infection in this heterosexual partnerships is a factor in early acquisition of hrHPV infection in young women soon after sexual debut

¹Whitworth H et al. Trop Med Int Health 2021;²Melody Wang et al. J Adolesc Health, 2023

‘Gender neutral vaccination’ among strategies to strengthen and improve HPV vaccine coverage



- This systematic review of 536 articles identified that boys were scarcely considered for HPV-vaccination by parents and stakeholders
- And women’s empowerment, community engagement and target oriented vaccination campaigns would improve coverage (Kutz JM BMC Public Health 2023)

Mal-information from “credible” sources

BBC
<https://www.bbc.co.uk/Programmes/TheSheWord>

Dr Wahome: Why I don't recommend the HPV vaccine on ...
15 Nov 2019 — A Kenyan doctor has come out to warn against administering the **HPV vaccine** to girls. Dr Wahome Ngare says he wouldn't recommend the vaccine to any woman.

Facebook · Citizen TV Kenya
20+ reactions · 5 years ago

Citizen TV Kenya - Dr Wahome Ngare on HPV vaccine
Dr Wahome Ngare on HPV vaccine: It is important to know who comes up with figures and how they are interpreted #DayBreak @WaihigaMwaura ...
Missing: Ngari | Show results with: Ngari

Health Policy Watch
<https://healthpolicy-watch.news/african-anti-rights-gro...>

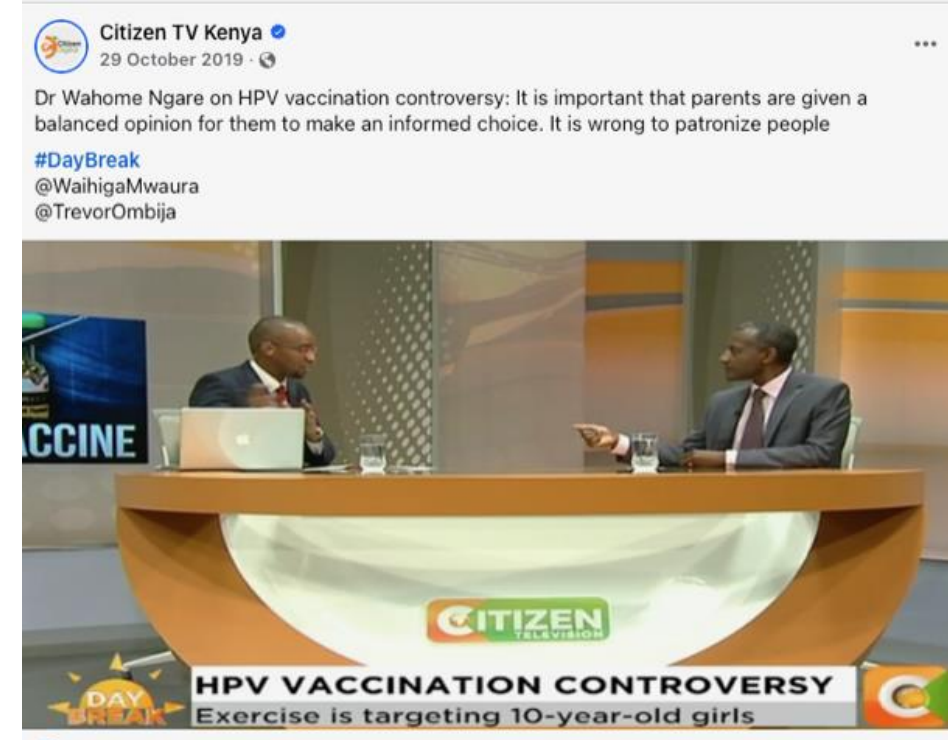
African Anti-LGBTQ Groups And Anti-Vaxxers Unite ...
21 May 2024 — Uganda's First Lady Janet Museveni (centre), hosts delegates from the African Inter-Parliamentary Conference on Family Values and ...
Missing: Ngari | Show results with: Ngari

AFP Fact Check
<https://factcheck.afp.com/...>

Kenyan doctor spreads harmful disinformation about the ...
21 Jun 2024 — Kenyan doctor Wahome Ngare claimed several vaccines were “unnecessary” because they were designed to “reduce African fertility”, at a recent ...

Facebook · Citizen TV Kenya
20+ reactions · 5 years ago

Dr Wahome Ngare: The vaccine protects someone for 10 ...
We vaccinate 10 year olds uh it protects them up to 20 years MH majority will still not be sexually active so you still need to give another boost.



A gynaecologist in Kenya has taken to public platform and stated that the HPV vaccine has not undergone necessary clinical trials in the country.

- “We don’t think the vaccine is necessary. **HVP is sexually transmitted and does not make sense to vaccine everyone against a sexually transmitted disease that can be controlled through behavior change,**” Dr. Wahome Ngare, a gynecologist and a member of the Catholic doctors group, told Catholic News Service.
- “The **side effects are too risky for anyone to even dare,**” he added.
- Ngare said the vaccination was not to prevent cervical cancer but HPV. He urged instead widespread adoption of the simpler and more effective Pap test for early cancer detection.

Combating HPV Vaccine Misinformation

- Across high-and-low-income countries HPV vaccine misinformation is not uncommon
- The resources to combat and address this misinformation varies
- In many LMIC vaccine programs, the budgets are often limited and after vaccine launch do not cater for mitigating mal-mis-disinformation

► Mol Oncol. 2020 Oct 15;15(3):770–778. doi: [10.1002/1878-0261.12808](https://doi.org/10.1002/1878-0261.12808) 

Vaccination against HPV: boosting coverage and tackling misinformation

[Janne Bigaard](#)¹, [Silvia Franceschi](#)^{2,✉}

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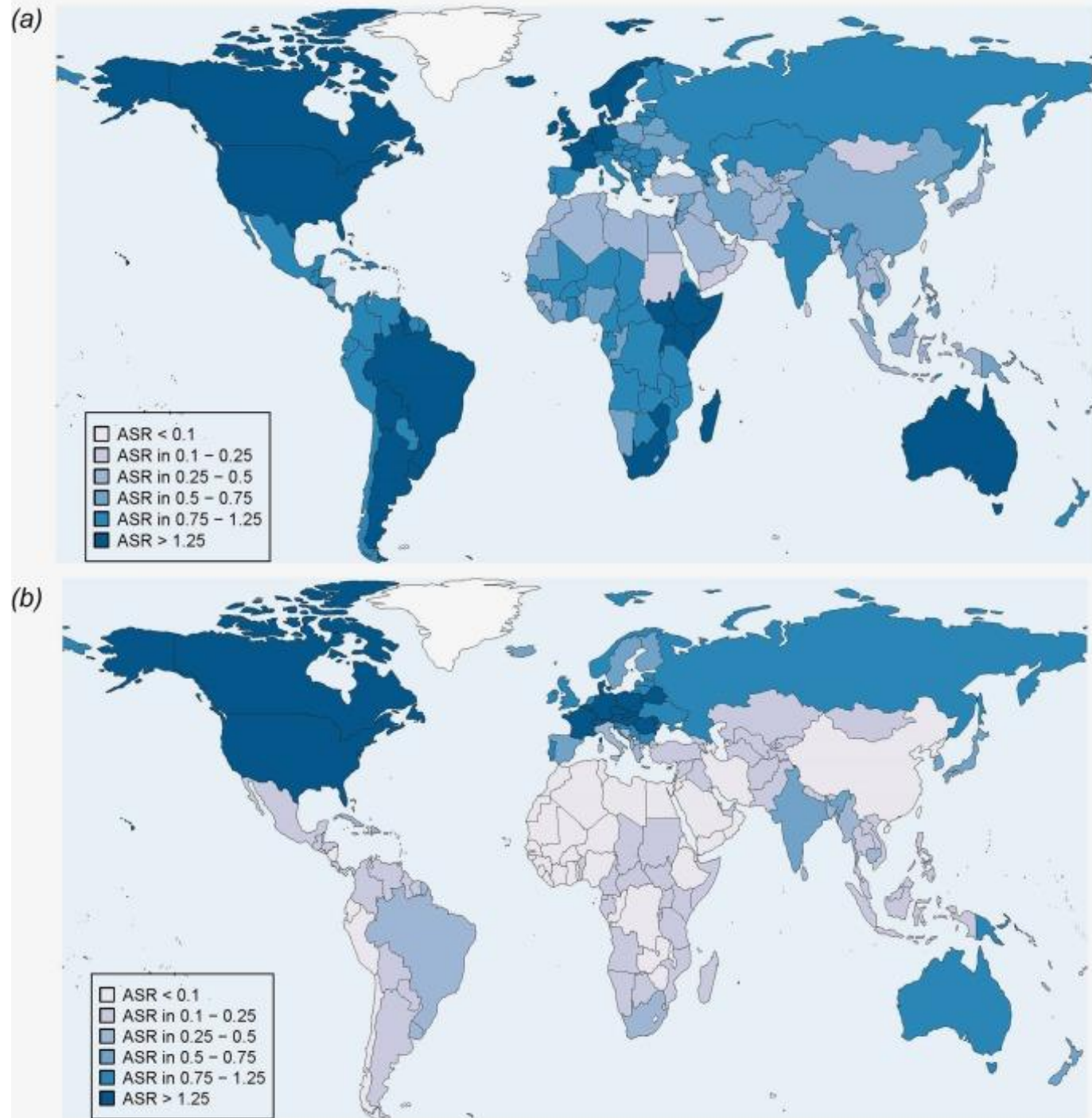
PMCID: PMC7931130 PMID: [33058497](https://pubmed.ncbi.nlm.nih.gov/33058497/)

High coverage of human papillomavirus (HPV) vaccination is key to the eventual elimination of infection and cervical cancer. Monitoring coverage, in a digital vaccine registry, is therefore essential to detect problems. For example, misinformation about dangers from HPV vaccine generated in Denmark a decline in coverage among girls age 12–17, from 80% in 2013 down to 37% in 2015, when remedial actions made it rise again.

Greatest burden of HPV associated cancers is among women

4.5% of all cancers worldwide (630,000 new cancer cases per year) are attributable to HPV:

- 8.6% in women and 0.8% in men
- AF in women ranges from <3% in Australia/New Zealand and the USA to
- >20% in India and sub-Saharan Africa.



Vaccination for all has great potential in advancing elimination of HPV associated morbidities and mortalities

- In presence of HPV vaccine shortage; prioritization of prevention should focus on cervical cancer
- Universal HPV vaccination, beyond the health benefits and equity in access to health care services, could potentially override vaccine hesitancy driven by mal information
- Bring equity in access to prevention of HPV associated morbidities and mortalities to populations who are often neglected and held with stigma
- Will require preparedness in managing change from single gender to universal vaccination to keep a pulse and mitigate adverse rumors and mal-mis-disinformation

- Acknowledgement

- Coalition to Strengthen HPV Immunization Community(CHIC) – Alex Vorster and team (CHIC) s
- Communities that have accepted HPV vaccination
- Global Alliance for Vaccine Initiative (GAVI) for supporting access to vaccination globally
- All advocates, groups, funders and coalitions working towards cervical cancer elimination