Structural Barriers to Cervical Cancer Prevention: How NIH Policy and Vaccine Design Exclude Indigenous Health Priorities

Amaya Pablo, BS, Rachel Starks, PhD
Department of Applied Indigenous Studies, Northern Arizona University

Abstract

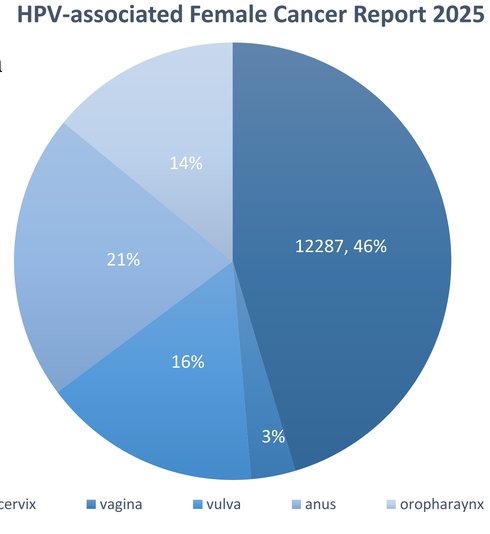
Human Papillomavirus (HPV) is one of the most prevalent sexually transmitted infections worldwide and remains one of the leading causes of cervical cancer in the United States (US). Over 200 distinct genotypes of HPV have been identified and are circulating worldwide. Despite the availability of highly effective vaccines such as Gardasil 9, which protects against nine of the most clinically significant HPV strains, current vaccines cover only a limited subset of oncogenic HPV types. Emerging research indicates that some of the less common oncogenic strains, also uncovered by the vaccines, disproportionately affect Indigenous populations in the US who face significant barriers to healthcare access, cancer screening, and vaccination. To address these issues, this research aims to interrogate the structural determinants of vaccine inequity, focusing not only on practical barriers to vaccine access but also on the sociopolitical context that guides research agendas, allocates funding, and shapes the language of scientific knowledge production.

Objective

- The study aims to address structural determinants of inequity by integrating vaccine accessibility with the sociopolitical framework governing research funding and research language

Background

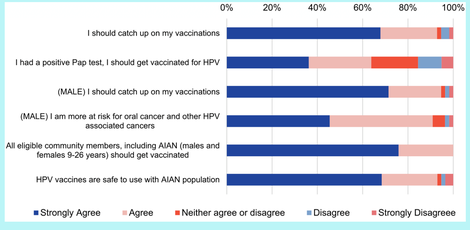
- Over 150 distinct types have been identified.
  - Most are non-oncogenic (about 30 can cause warts)
  - 14 oncogenic/high-risk types associated with cancer
- You can only prevent HPV infections; there are no antivirals
- Two HPV types (16 and 18) account for most (~70%) cervical cancer incidents
  - American Indian women had x2 incidents of cervical cancer
  - x2 Associated morality rate as white women
- Native American women are at an 80% higher risk of death from cervical cancer than white women in the US



Analysis

What Is Causing Cervical Cancer	Why Do We Need A New Vaccine?	NIH Language Policy

• ~25% of women in the US are positive for HPV that causes cancer. Up to 35% in AI/AN populations
Reasons for elevated cervical cancer risk
• Sociodemographic factors
• behavioral risk factors
  • Alcohol use
  • Tobacco use
• Vaginal Microbiota- vaginal dysbiosis
• Attitudes towards HPV and HPV vaccination
• Low screening rates
• Minimal HPV education
	• Current vaccines are only preventative and do not treat infections
	• Current vaccines don't protect against all HPV types that cause cancer >150 types, and 14 can cause cancer
	• We don't know the most common HPV types in Native Americans
	• Native Americans are not included in clinical trials
	• We don't know if the vaccines are working in Native Americans
	• Vaccine distribution can be difficult in hard-to-reach communities
	  • Required cold storage – vaccine stability
	  • Trained professionals
	  • Reliable infrastructure
	• Transportation
	• Schedule flexibility
		• Executive Order 14151 terminates all activities related to DEI
		• 51% relative decrease in the use of words reflecting diverse language from October to November 2024
		• In addition, 25% Decrease from January 2024 to June 2025
		• DEI is considered illegal and discriminatory
		• As of February 2026, EO 14151 is legally unenforceable nationwide, but many agencies are still proceeding with caution



activism	cultural heritage	implicit bias	prejudice
affirming care	cultural sensitivity	inclusiveness	pronouns
anti-racism	DEI	increase diversity	racial inequality
assigned at birth	disability	inequalities	sexuality
at risk	discriminatory	injustice	social justice
biases	disparity	intersectionality	socioeconomic
biologically male	diverse groups	LGBTQ	stereotypes
BIPOC	diversity	marginalized	systemic
black and latinx	equal opportunity	most risk	they/them
clean energy	equitableness	multicultural	transgender
climate crisis	feminism	Mx	traumatic
community	gender ideology	nonbinary	unconscious bias
diversity	Gulf of Mexico	people + uterus	underprivileged
confirmation bias	hate speech	pregnant people	victims

Conclusion

- There is a need for cervical cancer research and HPV research
- More data needed on: risk factors, HPV and cervical cancer prevalence in Indigenous communities, prevalent types, screening practices
- Lack of funding from national research grants (NSF and NIH)
- More HPV and cervical cancer education programs available to Indigenous people s
- Need for new vaccines that protect Indigenous peoples

HPV vaccines need to be able to protect **everyone**, with high prevalence in NA populations, and not enough coverage

- Partnership for Native American Cancer Prevention (NACP) at NAU and UA is working on vaccine development to combat cervical cancer in native women
- Research is being conducted to analyze the vaginal microbiome to create a tailored intervention for Indigenous women
- Increase the sample size for male HPV statistics