OPINION

Perineal Hygiene Education Simulation To Potentially Counter Future Oncogenesis

Deepak Gupta
Department of Anesthesiology, Detroit Medical Center, Detroit, Michigan, United States

CORRESPONDING AUTHOR
Dr Deepak Gupta, Department of Anesthesiology, Detroit Medical Center, Detroit, Michigan, United States
Email: dgupta@med.wayne.edu

CITATION
Gupta D. Perineal Hygiene Education Simulation To Potentially Counter Future Oncogenesis. Journal of the Epidemiology Foundation of India. 2026;4(3):298-302.
DOI: https://doi.org/10.56450/JEFI.2026.v4i03.013
ARTICLE CYCLE
Received: 17/02/2026; Accepted: 06/09/2026; Published: 30/09/2026
COPYRIGHT STATEMENT
© The Author(s), [2026]. Published by the Journal of the Epidemiology Foundation of India (JEFI) under a Creative Commons Attribution 4.0 International License (CC BY 4.0)

Abstract
The question to address and resolve is whether pelvic examination trainers utilized for education simulation of healthcare providers could, would and should evolve for education simulation of general population so that perineal hygiene of society gets addressed with resolved societal dilemma.

Keywords
Penile Cancer; Cervical Cancer; HPV Vaccination; Sexual Health; Perineal Hygiene

Opinion
The Nobel Prize-winning postulation and discovery of the role of human papillomavirus (HPV) in oncogenesis is almost half-a-century old [1]. Correspondingly, HPV vaccination to counter HPV-induced oncogenesis is almost two-decade-old [2-6]. However, timeless sexual health education and thus perineal hygiene education is helpless without societal acceptance considering that raising and resolving questions and concerns about sexual health and perineal hygiene could still make 21st-century populations uncomfortable thus driving away patients and providers to seek the unverified sources-resources of media for personal and professional education in the absence of standardized formalized educational curriculums about sexual health and perineal hygiene [7-15]. Ironically, this may be the reality despite having one of the highest penile cancer rates and one of the highest cervical cancer rates with one of the lowest HPV vaccination rates and one of the lowest Pap smear rates not helping the cause either but rather worsening the gravity of potential oncogenesis in the society [16-30].

Interestingly, sexual health and perineal hygiene could, would and should have to be a lifelong learning process because sexual health and perineal hygiene continue to be relevant not only at the dawn of sexuality but also at the dusk of sexuality even though questions and concerns may differ at the extremes of sexual age irrespective of whether or not those asking questions or raising concerns have become sexually active yet or have ceased to be sexually active at the extremes of sexual age or even right in the middle of their sexual lifetime. Moreover, in the absent plausibility for

universal applicability of any globally standardized education standards about sexual health and perineal hygiene [31-35], there is a long way for each society to tread before each society develops locally adaptable standardized education standards about sexual health and perineal hygiene while taking into account the variabilities in genitourinary anatomy prevalent amongst its constituents and variabilities in sexual practices prevalent amongst its constituents.

The society may have to think beyond educational reading materials and educational audiovisual presentations for general populations as well as at-risk populations via mass media health promotions as well as directed one-to-one educational sessions. The society may have to explore education simulation as a futuristic step with simulators designed for perineal hygiene education simulation as well as sexual health education simulation to be age-appropriate, gender-appropriate, sexual orientation-appropriate and societal climate-appropriate with or without the mandated requirement for parental-guardian involvement in the process depending on the competency levels and dependency levels of general populations as well as at-risk populations if and when asking questions or raising concerns regarding sexual health and perineal hygiene.

Perineal hygiene education simulation unique to uncircumcised populations could, would and should be related to deterring the possibilities of phimosis and paraphimosis by appropriately ensuring uncircumcised simulators for perineal hygiene education demonstrated either in one-to-one educational sessions by healthcare providers in healthcare clinics and/or in group educational sessions by healthcare educators in educational institutions. Concurrently, families, friends and peers could, would and should choose to professionally train themselves under the standardized guidance of healthcare providers and healthcare educators so that trained families, trained friends and trained peers could, would and should "pay it forward"/ "pass it on" by scientifically spreading the standardized sexual health education as well as perineal hygiene education to their untrained families, untrained friends and untrained peers.

Summarily, it is a humble opinion worth exploring whether pelvic examination trainers [36-39] and breast examination trainers [40-41] utilized for education simulation of healthcare providers and potentially even healthcare educators could, would and should evolve for education simulation of untrained families, untrained friends and untrained peers so that sexual health in general and perineal hygiene in particular of all-age constituents, all-gender constituents and all-sexual orientation constituents get addressed with resolved societal dilemmas.

Declaration Of Generative AI And AI Assisted Technologies In The Writing Process

The author has not used any generative AI/AI assisted technologies in the writing process

References

1. The Nobel Prize: Nobel Prize in Physiology or Medicine 2008 https://www.nobelprize.org/prizes/medicine/2008/summary/ Last accessed February 14, 2026
2. World Health Organization: Human papillomavirus vaccines (HPV) https://www.who.int/teams/immunization-vaccines-and-biologicals/diseases/human-papillomavirus-vaccines-(HPV) Last accessed February 14, 2026
3. World Health Organization: WHO updates recommendations on HPV vaccination schedule https://www.who.int/news/item/20-12-2022-WHO-updates-recommendations-on-HPV-vaccination-schedule Last accessed February 14, 2026
4. Centers for Disease Control and Prevention: HPV Vaccination https://www.cdc.gov/hpv/vaccines/index.html Last accessed February 14, 2026
5. National Cancer Institute: HPV Vaccination Recommendations https://ebccp.cancercontrol.cancer.gov/recommendation.do?topicId=22626661 Last accessed February 14, 2026
6. American College of Obstetricians and Gynecologists: Human Papillomavirus

Vaccination https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2020/08/human-papillomavirus-vaccination Last accessed February 14, 2026
7. Gupta D. Are We Educating, Our Children, About Hygiene? Are We Talking, With Them, About It? Perineal Hygiene Education. Indian Journal of Community Health. 2018;30(3):303-6. https://www.iapsmupuk.org/journal/index.php/IJCH/article/view/947 Last accessed February 14, 2026
8. American Public Health Association: The Conference Exchange: Maintaining perineal area hygiene: An educational video https://apha.confex.com/apha/2019/ff2/fupload.cgi?action=showFile&FileType=VideoAbstract&Fileid=357&RecordType=Paper&Recordid=452747 Last accessed February 14, 2026
9. ResearchGate: Water or Wipe: Implications for Human Papilloma Virus Associated Cancers? http://www.webmedcentral.com/article_view/5266 https://www.researchgate.net/publication/326380640_Water_or_Wipe_Implications_for_Human_Papilloma_Virus_Associated_Cancers_httpwwwwebmedcentralcomarticle_view5266 Last accessed February 14, 2026
10. UC DAVIS HEALTH: Male Sexual Health and Hygiene https://health.ucdavis.edu/conditions/mens-health/mens-sexual-health-hygiene Last accessed February 14, 2026
11. TEXAS TECH UNIVERSITY: RISE Blog | Sex Ed Didn't Teach Me This: Vaginal Health & Hygiene https://www.depts.ttu.edu/rise/Blog/vaginalhealth.php Last accessed February 14, 2026
12. Everlywell: Good Sexual Hygiene: Here's What to Know https://www.everlywell.com/blog/virtual-care/good-sexual-hygiene/ Last accessed February 14, 2026
13. DR. MEL IRVINE: Sexual Health and Hygiene https://drmelirvine.com/sexual-health-and-hygiene/ Last accessed February 14, 2026
14. Lin N, Ding N, Meza-Wilson E, Manuradha Devasurendra A, Godwin C, Kyun Park S, Batterman S. Volatile organic compounds in feminine hygiene products sold in the US market: A survey of products and health risks. Environ Int. 2020 Nov;144:105740. doi: 10.1016/j.envint.2020.105740. https://www.sciencedirect.com/science/article/pii/S0160412020303494 Last accessed February 14, 2026
15. Magoutas K, Holdcroft A, Walls M, Furfaro L, Ireland D, Payne M. Investigating the Link Between Intimate Health, Hygiene and Sexual Practices and the Vaginal Microbiome-The INTIMATE Study. Reprod Med Biol. 2025 Oct 21;24(1):e12685. doi: 10.1002/rmb2.12685. https://onlinelibrary.wiley.com/doi/10.1002/rmb2.12685 Last accessed February 14, 2026
16. BBC: Penis cancer cases increasing: Brazil sees 6,500 amputations in a decade https://www.bbc.com/news/articles/c9rr7z5gk62o Last accessed February 14, 2026
17. The Conversation: Global rise in penis cancer – what you need to know http://theconversation.com/global-rise-in-penis-cancer-what-you-need-to-know-233142 Last accessed February 14, 2026
18. The University of Texas MD Anderson Cancer Center: Penile Cancer https://www.mdanderson.org/cancer-types/penile-cancer.html Last accessed February 14, 2026
19. Teixeira Júnior AAL, da Costa Melo SP, Pinho JD, Sobrinho TBM, Rocha TMS, Duarte DRD, de Oliveira Barbosa L, Duarte WE, de Castro Belfort MR, Duarte KG, da Silva Neto AL, de Ribamar Rodrigues Calixto J, Paiva Paiva LC, do Nascimento FSMS, Alencar Junior AM, Khayat AS, da Graça Carvalhal Frazão Corrêa R, Lages JS, Dos Reis RB, Araújo WS Jr, Silva GEB. A comprehensive analysis of penile cancer in the region with the highest worldwide incidence reveals new insights into the disease. BMC Cancer. 2022 Oct 15;22(1):1063. doi: 10.1186/s12885-022-10127-z. https://link.springer.com/article/10.1186/s12885-022-10127-z Last accessed February 14, 2026
20. Vieira CB, Feitoza L, Pinho J, Teixeira-Júnior A, Lages J, Calixto J, Coelho R, Nogueira L, Cunha I, Soares F, Silva GEB. Profile of patients with penile cancer in the region with the highest worldwide incidence. Sci Rep. 2020 Feb 19;10(1):2965. doi: 10.1038/s41598-020-59831-5. https://www.nature.com/articles/s41598-020-59831-5 Last accessed February 14, 2026
21. Montes Cardona CE, García-Perdomo HA. Incidence of penile cancer worldwide: systematic review and meta-analysis. Rev Panam Salud Publica. 2017 Nov 30;41:e117. doi: 10.26633/RPSP.2017.117. https://pmc.ncbi.nlm.nih.gov/articles/PMC6645409/ Last accessed February 14, 2026
22. Giona S. The Epidemiology of Penile Cancer. In: Barber N, Ali A, editors. Urologic Cancers [Internet]. Brisbane (AU): Exon Publications;

2022 Sep 12. Chapter 11. doi: 10.36255/exon-publications-urologic-cancers-epidemiology-penile-cancer https://www.ncbi.nlm.nih.gov/books/NBK585980/ Last accessed February 14, 2026

23. World Cancer Research Fund: Cervical cancer statistics https://www.wcrf.org/preventing-cancer/cancer-statistics/cervical-cancer-statistics/ Last accessed February 14, 2026
24. World Health Organization: Cervical cancer https://www.who.int/news-room/fact-sheets/detail/cervical-cancer Last accessed February 14, 2026
25. Wu J, Jin Q, Zhang Y, Ji Y, Li J, Liu X, Duan H, Feng Z, Liu Y, Zhang Y, Lyu Z, Yang L, Huang Y. Global burden of cervical cancer: current estimates, temporal trend and future projections based on the GLOBOCAN 2022. J Natl Cancer Cent. 2025 Jan 23;5(3):322-329. doi: 10.1016/j.jncc.2024.11.006. https://www.sciencedirect.com/science/article/pii/S2667005425000134 Last accessed February 14, 2026
26. Li Z, Liu P, Yin A, Zhang B, Xu J, Chen Z, Zhang Z, Zhang Y, Wang S, Tang L, Kong B, Song K. Global landscape of cervical cancer incidence and mortality in 2022 and predictions to 2030: The urgent need to address inequalities in cervical cancer. Int J Cancer. 2025 Jul 15;157(2):288-297. doi: 10.1002/ijc.35369. https://onlinelibrary.wiley.com/doi/10.1002/ijc.35369 Last accessed February 14, 2026
27. American Cancer Society: Cervical Cancer Leads Cancer Deaths for Women in 37 Countries https://www.cancer.org/research/acs-research-news/cervical-cancer-leads-cancer-deaths-37-countries.html Last accessed February 14, 2026
28. Lemp JM, De Neve JW, Bussmann H, Chen S, Manne-Goehler J, Theilmann M, Marcus ME, Ebert C, Probst C, Tsabedze-Sibanyoni L, Sturua L, Kibachio JM, Moghaddam SS, Martins JS, Houinato D, Houehanou C, Gurung MS, Gathecha G, Farzadfar F, Dryden-Peterson S, Davies JI, Atun R, Vollmer S, Bärnighausen T, Geldsetzer P. Lifetime Prevalence of Cervical Cancer Screening in 55 Low- and Middle-Income Countries. JAMA. 2020 Oct 20;324(15):1532-1542. doi: 10.1001/jama.2020.16244. https://jamanetwork.com/journals/jama/fullarticle/2771901 Last accessed February 14, 2026
29. Han J, Zhang L, Chen Y, Zhang Y, Wang L, Cai R, Li M, Dai Y, Dang L, Chen H, Zhu L. Global HPV vaccination programs and coverage rates: a systematic review. EClinicalMedicine. 2025 Jun 9;84:103290. doi: 10.1016/j.eclinm.2025.103290. https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(25)00222-6/fulltext Last accessed February 14, 2026
30. Mikalsen MP, Simonsen GS, Sørbye SW. Impact of HPV Vaccination on the Incidence of High-Grade Cervical Intraepithelial Neoplasia (CIN2+) in Women Aged 20-25 in the Northern Part of Norway: A 15-Year Study. Vaccines (Basel). 2024 Apr 16;12(4):421. doi: 10.3390/vaccines12040421. https://www.mdpi.com/2076-393X/12/4/421 Last accessed February 14, 2026
31. Sexuality Information and Education Council of the United States (SIECUS): NATIONAL SEX EDUCATION STANDARDS CORE CONTENT AND SKILLS, K-12 SECOND EDITION https://siecus.org/wp-content/uploads/2023/12/NSES-2020-web-updated-1.pdf Last accessed February 14, 2026
32. State of Michigan: MICHIGAN HEALTH EDUCATION STANDARDS GUIDELINES https://www.michigan.gov/mde/-/media/Project/Websites/mde/ohns/School-Health-and-Safety/Michigan-Health-Education-Standards-Guidelines-2025---ADA-Final.pdf Last accessed February 14, 2026
33. East Lansing Public Schools: Grades 9-12 Sexual Health and HIV Education Curriculum & Materials https://elps.us/downloads/district_-_sex_education_advisory_board_report_2019/5._high_school_mi_model_sex_ed_curriculum_updated_april_2019_.pdf Last accessed February 14, 2026
34. McGlone MS, Stephens KK, Jia M, Montagnolo C, Xu Y. Multiple Messaging Strategies for Increasing HPV Vaccination Intentions among English- and Spanish-Speaking Parents in the United States and Mexico. Vaccines (Basel). 2024 Jun 11;12(6):650. doi: 10.3390/vaccines12060650. www.mdpi.com/2076-393X/12/6/650 Last accessed February 14, 2026
35. ResearchGate: Kissing HPV or Kissing It Goodbye: Time To Reinvent Mass Media Strategy To Increase Acceptance Of HPV Vaccination Among Parents And Their Young Wards http://www.webmedcentral.com/article_view/5731 https://www.researchgate.net/publication/353573111_Kissing_HPV_or_Kissing_It_Goodbye_Time_To_Reinvent_Mass_Media_Strategy_To_Increase_Acceptance_Of_HPV_Vaccination_Among_Parents_And_Their_Young_Wards_h

ttpwwwwebmedcentralcomarticle_view5731 Last accessed February 14, 2026
36. Limbs & Things: Clinical Male Pelvic Trainer (CMPT) Mk 2 - Advanced (Light Skin Tone) https://limbsandthings.com/global/products/60951-clinical-male-pelvic-trainer-cmpt-mk-2-advanced-light-skin-tone Last accessed February 14, 2026
37. Limbs & Things: Clinical Male Pelvic Trainer (CMPT) Mk 2 - Advanced (Dark Skin Tone) https://limbsandthings.com/global/products/60965-clinical-male-pelvic-trainer-cmpt-mk-2-advanced-dark-skin-tone Last accessed February 14, 2026
38. Limbs & Things: Clinical Female Pelvic Trainer Mk 3 (CFPT) - Advanced (Light Skin Tone) https://limbsandthings.com/global/products/60905-clinical-female-pelvic-trainer-mk-3-cfpt-advanced-light-skin-tone Last accessed February 14, 2026
39. Limbs & Things: Clinical Female Pelvic Trainer Mk 3 (CFPT) Advanced (Dark Skin Tone) https://limbsandthings.com/global/products/60935-clinical-female-pelvic-trainer-mk-3-cfpt-advanced-dark-skin-tone Last accessed February 14, 2026
40. Limbs & Things: Advanced Breast Examination Trainer (Light Skin Tone) https://limbsandthings.com/global/products/40201-advanced-breast-examination-trainer-light-skin-tone Last accessed February 14, 2026
41. Limbs & Things: Advanced Breast Examination Trainer (Dark Skin Tone) https://limbsandthings.com/global/products/41201-advanced-breast-examination-trainer-dark-skin-tone Last accessed February 14, 2026