Poster 63: Primary HPV Screening Outcomes in a Large Safety-Net Health System

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Topic
Cervical

Objectives
Following the standardized implementation of a primary high-risk HPV (hrHPV)-based cervical cancer screening algorithm across a large integrated safety-net health system, we sought to characterize screening outcomes during the first two years post implementation.

Methods
In March 2024, a health system-wide cervical cancer screening (CCS) algorithm was implemented, in which patients ≥30 years of age underwent primary HPV testing with reflex cytology for non-16/18 hrHPV+ tests. Implementation design included EHR order sets with clinical decision support, centralized HPV testing, and the availability of concurrent disease management EHR reports of all CCS results. The latter provided the database for the current study. Here we report a retrospective analysis of provider-collected primary hrHPV screening performed between March 1, 2024 and February 27, 2026. Data include patient age, HPV genotype (HPV16, HPV18, non-16/18 hrHPV), and reflex cytology. The primary outcome was the percent of hrHPV screening resulting in an indication for colposcopy (HPV-16+, HPV-18+, other hrHPV+ with > ASCUS cytology).

Results
A total of 33,188 primary HPV screening tests were performed. Overall, 3,774 tests (11.4%) were hrHPV positive (1.2% HPV 16+; 0.6% HPV 18+; 0.8% multiple hrHPV+; 8.7% non-16/18 hrHPV+). Among positive tests, HPV16 was detected in 10.7%, HPV18 in 5.7%, multiple hrHPV in 7.2%, and in 76.4%. hrHPV positivity decreased with increasing age, from 15.8% in ages 30-39 to 9.7% in patients ≥50 ($p < 0.001$). Colposcopy was indicated in 7.7% of the screened cohort based on HPV16+ (1.2%), HPV18+ (0.6%), multiple hrHPV+ (0.8%) and non-16/18 hrHPV+ with reflex cytology ≥ ASCUS (5.1%; Table 1).

Conclusions
Primary HPV screening in a large safety-net health system aligns with prior trials and epidemiologic studies demonstrating age-dependent HPV prevalence, established genotype risk patterns, and expected downstream colposcopy utilization with primary HPV screening. These findings provide real-world evidence of screening performance following health system-wide implementation and highlight important implications for clinical workflow, resource allocation, and care delivery in underserved populations.

Uploaded File(s)
Abstract Table or Graph

Table 1: Distribution of Cytologic Findings in Non-16/18 hrHPV+ Tests (n=2885)

Cytology Category	n	%
NILM	1,206	41.8%
ASCUS	958	33.2%
LSIL	546	18.9%
HSIL	41	1.4%
ASC-H	39	1.4%
AGC	5	0.2%
Unsatisfactory	72	2.5%
Other/Unspecified	*18*	*0.6%*

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