

Evaluating the impact of reminder recall via phone calls and MyChart messaging on HPV vaccine completion rates at Westside Pediatric Clinic

Abstract

Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States and a leading cause of preventable cancers, including cervical, oropharyngeal, anal, and other anogenital malignancies. Although the 9-valent HPV vaccine is highly effective at preventing infection with oncogenic HPV strains, national vaccination rates remain below the Healthy People 2030 target of 80%. Vaccine efficacy and series completion are highest when vaccination is initiated at younger ages, prior to viral exposure. Denver Health has implemented multiple system-wide strategies to improve HPV vaccination coverage, achieving high overall completion rates; however, maintaining timely completion of second and third doses remains an ongoing challenge.

This quality improvement project evaluated the effectiveness of a one-month reminder–recall pilot conducted in October 2025 at Westside Pediatrics, a clinic where 87% of adolescents are fully vaccinated against HPV but gaps persist among patients overdue for subsequent doses. Established patients aged 9–17 years who were overdue for dose two or three of the HPV vaccine were targeted for outreach via a templated MyChart message or telephone call. Data extracted from the electronic health record between six and nine weeks post-intervention included demographics, outreach modality, engagement with outreach, and HPV vaccine completion. Among 686 eligible patients, 458 (66.8%) received outreach. Of those contacted, 23% opened a MyChart message and 28.1% answered a phone call. HPV vaccine completion occurred in 39.7% of patients who opened a MyChart message and 11.1% of those who answered a phone call, while 58.9% of patients who did not engage with outreach or did not receive outreach completed vaccination independently. HPV vaccine completion differed significantly by age group (χ^2 $p = 0.0004$). Children aged 9–11 years had higher odds of completion compared with those aged 12–14 years (OR 3.13, 95% CI 1.66–5.90), with no significant differences observed by language, race, ethnicity, or insurance status.

Although this short-term pilot did not demonstrate a clear effectiveness signal for manual reminder–recall outreach, findings reinforce evidence that earlier initiation of HPV vaccination is associated with higher completion rates and suggest that automated, scalable reminder systems with longer follow-up may better support sustained improvements in HPV vaccine series completion.