

Human Papillomavirus Prevention in North Dakota's Youth: Early Results of an HPV Educational Project Targeted at Health Care Professional Communication

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Background

Human papillomavirus (HPV) is a common infection that is easily transmitted and can cause cancer in a number of anatomical sites in both males and females. Despite the availability of an extremely safe and effective vaccine for over a decade, HPV immunization rates remain low in North Dakota and throughout the United States in both boys and girls. In adolescents, HPV series initiation and completion rates are consistently below that of Tdap and MCV-4 – vaccines also administered at the 11-12 year-old medical encounter – indicating both parental refusal of series initiation, as well as provider reluctance to discuss or recommend the vaccine. A strong provider recommendation at the medical encounter is known to be a major predictor of vaccination acceptance for all vaccines, particularly HPV.¹⁻⁶

The CDC's AFIX (Assessment, Feedback, Incentive, and Exchange) Program is a continuous quality improvement program that allows state and local public health unit representatives to track pediatric and adolescent vaccine rates in VFC-enrolled (Vaccines for Children) clinics. AFIX coordinators present this information to clinic vaccine coordinators and determine areas of improvement, set rate improvement goals, and identify quality improvement action items. While the program has consistently high reach into clinics, these visits rarely include participation by clinical providers.

Methods

A 1-hour presentation on HPV was developed by NDSU CIRE, including disease epidemiology, vaccine safety and efficacy, and evidence-based communication strategies for discussing immunizations. Trained Peer Content Experts and public health professionals delivered this presentation in-person to clinics throughout the state, in a luncheon format. Educator credentials included MD, DO, DNP, and MPH, with specialties including pediatrics, family medicine, infectious disease (adult and pediatric), and otolaryngology.

Clinics were selected to receive HPV education intervention based upon low HPV immunization percentage in their 13-year-old patient population and/or relatively large adolescent patient population. Patient attribution is determined by the most recent immunization administered that is not an influenza vaccine. Eligible clinics included North Dakota Vaccines-for-Children Program participants, which reaches the majority of North Dakota clinics, providers, and locales.

Clinic-specific data were collected from the North Dakota Immunization Information System prior to each visit, and re-assessed 6 months post-visit. These data were presented to medical staff during the presentation, in informational folders, and emailed to clinic coordinators both at the initial and follow-up visits.

Key changes to Enhanced AFIX, to increase participation:

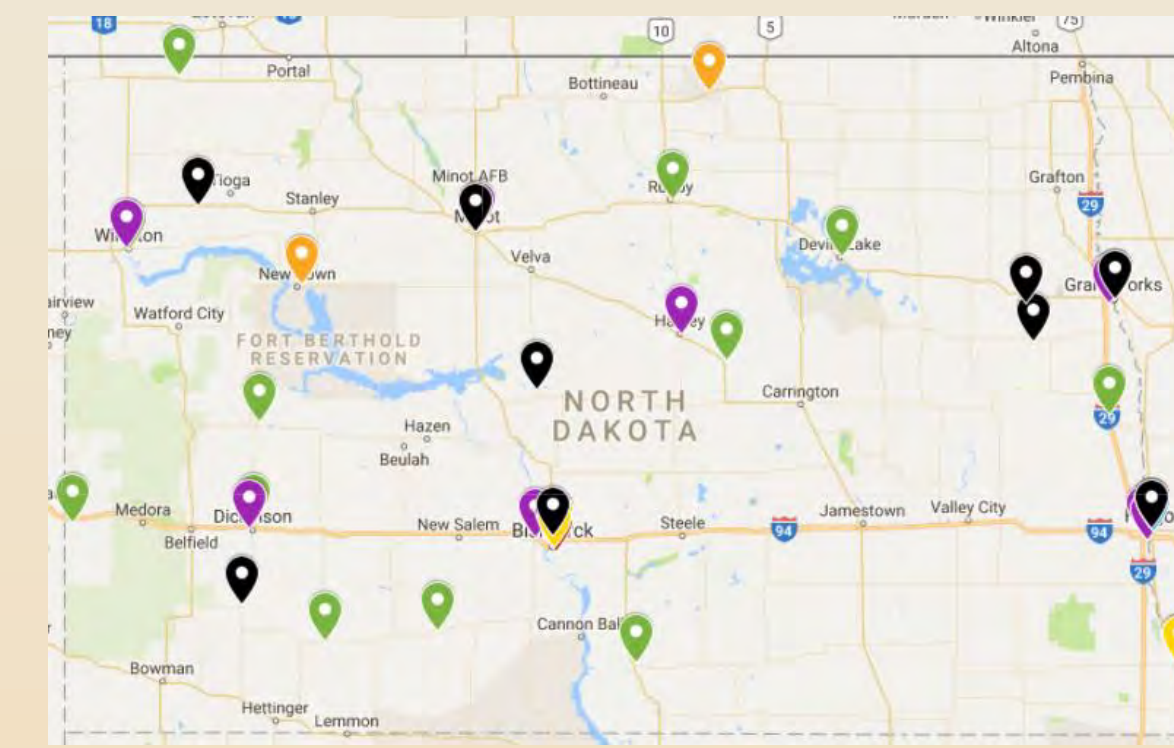
- Lunch provided
- Peer-to-peer education provided by Peer Content Experts
- Continuing Medical Education credit (CME) offered
- Personal invite and reminder from CIRE Medical Director
- Calendar invitation via Outlook/collaboration with clinic scheduler

Objectives

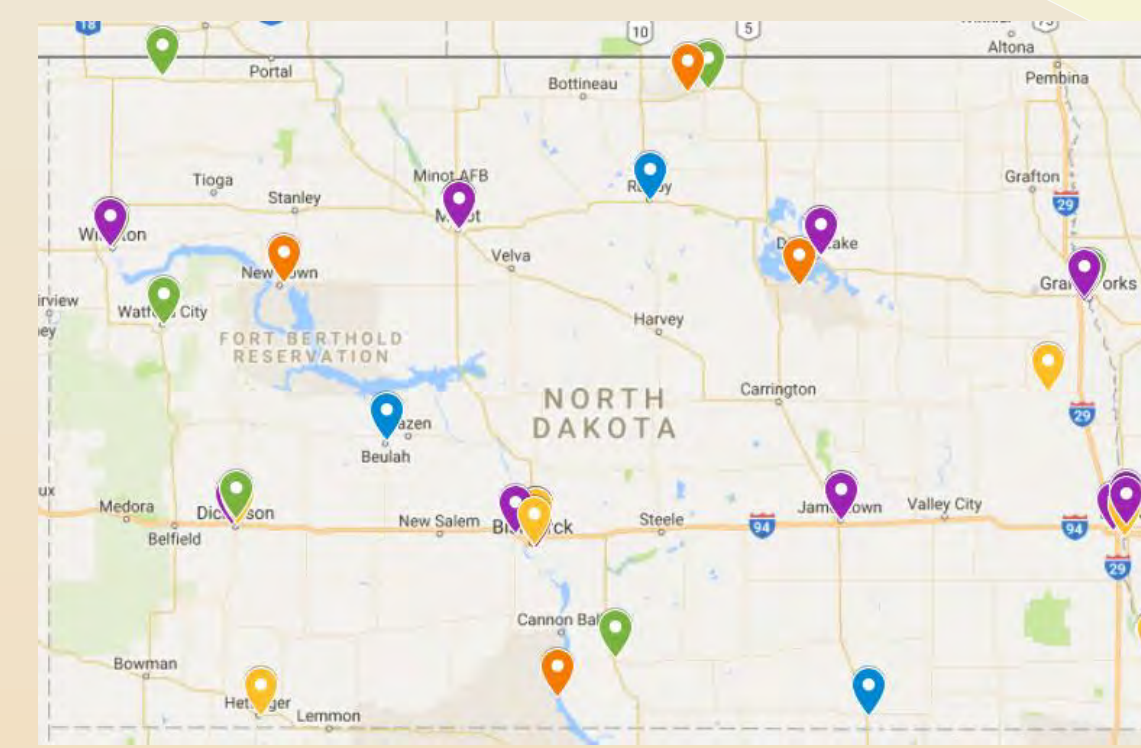
The project aim is to increase awareness and knowledge in medical providers throughout North Dakota on HPV infection and HPV-related cancers, to increase provider confidence in and communication about the vaccine. This will translate into improved HPV vaccination rates in North Dakota adolescents.

Coverage

- 59 clinics visited
- 34 educational sessions led by Peer Content Experts
- 2 supplemental visits
- 685 ND Health Professionals received education
- 237 of which were Providers (MD, DO, PA, NP)
- 25,078 total adolescents are attributed to these clinics



2017 Clinics

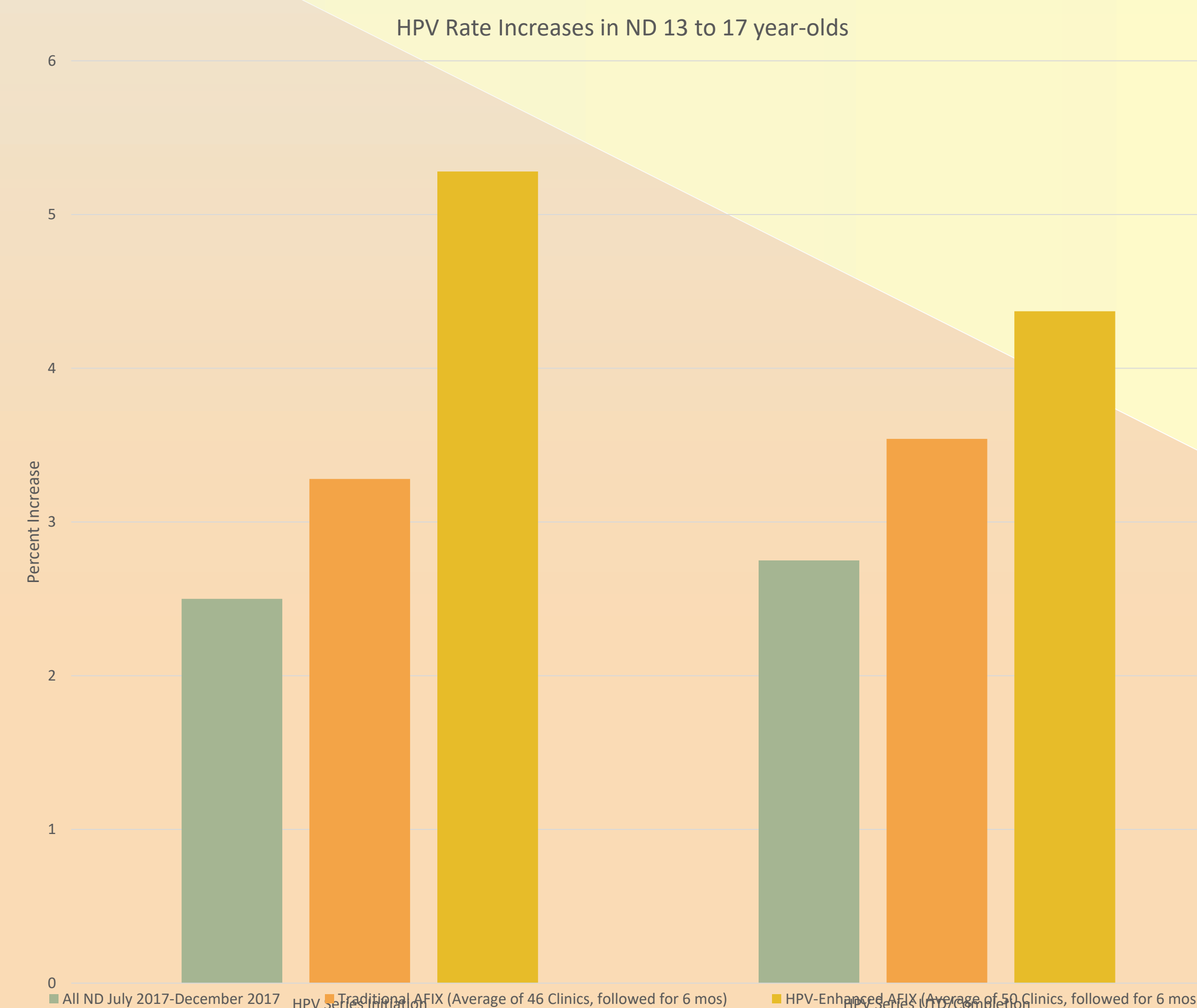
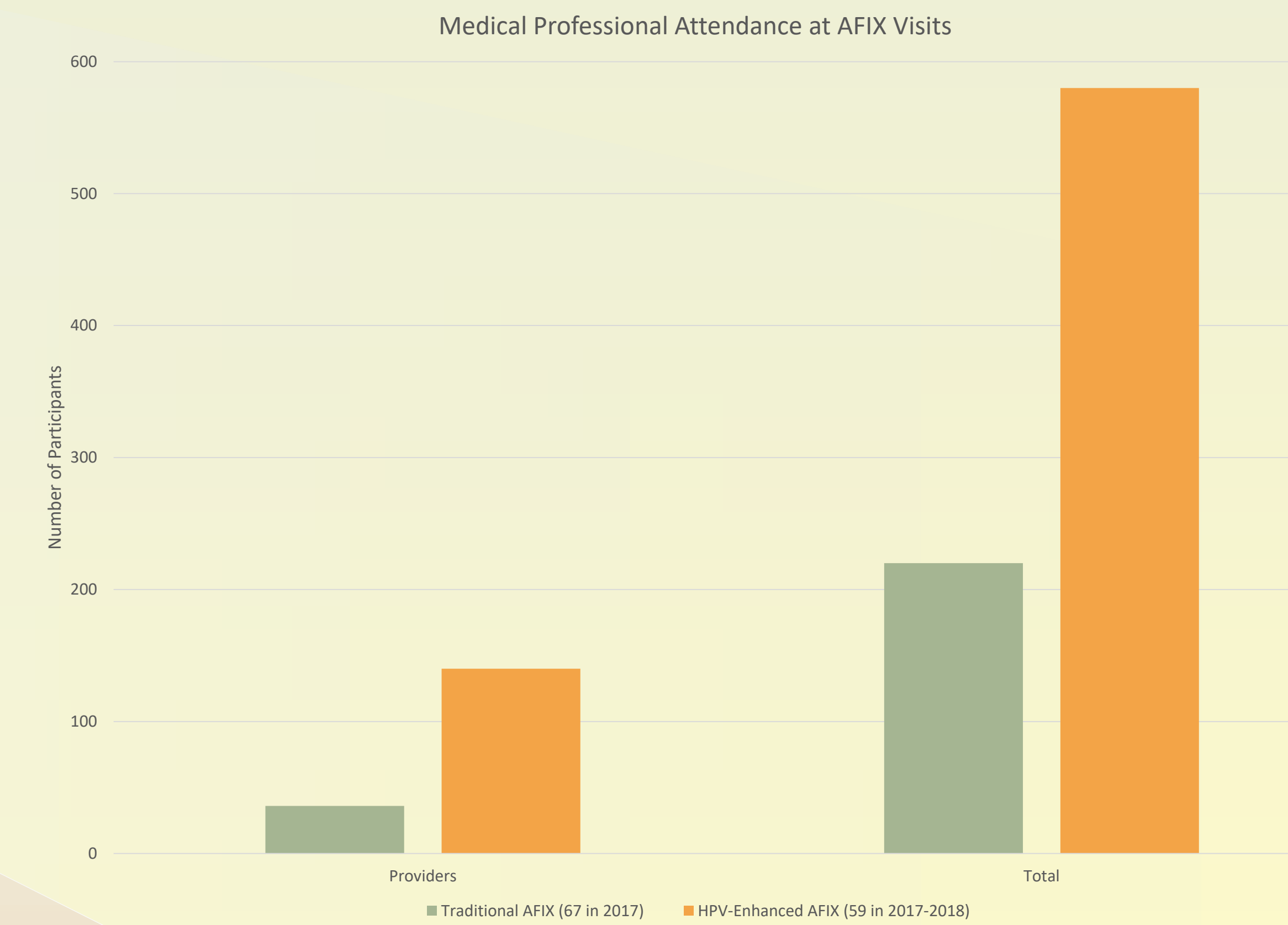


2018 Clinics



Content Experts present HPV education to their peers, around the state: Allison Peltier, DNP; Clifford Mauriello, MD; Rebecca Bakke, MD; Tracie Newman, MD, MPH; Kwanza Devlin, MD; Alison Hornyak, DO; Jeffrey Nelson, MD

Results



Conclusions

Peer-to-peer training with CME and food incentives was significantly more successful than standard AFIX at reaching providers and clinic staff with education. Provider turnout was 3.89 times higher in intervention clinics, and health professional attendance was 2.63 times higher in intervention clinics. Additionally, 30/36 Providers in attendance at Traditional AFIX Visits were ND Medical Residents, versus the majority of Enhanced-AFIX Visit attendees, who are practicing Physicians and Providers, throughout the state.

While vaccine uptake is steadily increasing statewide, HPV immunization series initiation rate improvement was 2.1 times higher in intervention clinics, over the six month follow-up period, versus six months of ND quarterly rates for all 13-17 year-olds, and was 1.6 times higher in intervention clinics compared to AFIX control clinics.

Limitations

Immunization rate increases or decreases may be based on other factors, including a natural tendency for rates to increase as a school year approaches. Patient attribution is based on the last non-influenza immunization administration, therefore AFIX patient lists may deviate from a patient's true medical home or provider. Follow-up rates were assessed at ~6 months post initial visit, so not every patient in the assessment was seen at the corresponding clinic, in this timeframe. Finally, AFIX assessments collect data starting at age 13, therefore the target 11-12 year-old range for the recommended start date of the vaccine series is not collected. Future study will compare improvements in early adolescent HPV series initiation and completion.

References

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Acknowledgements

This project is funded by the Centers for Disease Control and Prevention, and the Prevent Cancer Foundation. Special thanks to the North Dakota Department of Health Division of Disease Control Immunization Program, which subcontracted this CDC Grant to NDSU CIRE.

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