

Combining Efficiency and Incentive to Enhance Adolescent Preventive Care

Jordan Roberts, MD; Camille Collett, MD

St. Mark's Family Medicine Center and Residency, 1250 East 3900 South, Salt Lake City, UT 84124

Introduction

The St. Mark's Family Medical Center and Residency of Salt Lake City, UT, instituted a year-long project to increase rates of adolescent vaccinations by efficiently capturing and creating vaccination opportunities, creating a bi-directional interface with the Utah Statewide Immunization System (USIIS), educating clinic staff, providers, patients and consenting parents regarding recommended vaccines and providing small incentives to encourage series completion.

As a result of these efforts, the rates of annual influenza vaccination and the up-to-date percentages of TDAP, HPV and MenA vaccines were all improved.

Materials and methods

We collected the total number of vaccines of interest (Flu, TDAP, HPV and MenA) that our clinic administered to our population of interest (11-21 year olds) in the previous year from billing data. Later we used USIIS and the CDC software tool CoCASA to generate a report of adolescent coverage through the AFIX program during this time period to demonstrate a percentage of our clinic patients who were up-to-date. We repeated this after our interventions.

- Our interventions included the following:
- Efficient capture of vaccination opportunities
 - Outreach to patients overdue and coming due
 - Education of office staff and providers
 - Ensuring accurate vaccination records
 - Making strong vaccine recommendations
 - Incentive program (raffle) for series finishers

Results

In our population of interest (11-21 year olds) we noted significant improvements in rates of Flu and HPV uptake and series completion, and modest gains in TDAP and MenA uptake as well (Figure 1).

Specific subsets of our population that lagged behind, despite our interventions, included children of refugees and non-English speakers, who only account for 10-15 percent of the total adolescent population but represent upwards of 60% of our "overdue" patients according to USIIS.

One subset of patients who demonstrated improvements far beyond the aggregate were our 13-17 year olds, who had much higher rates than the Utah VFC average in all categories, but especially in HPV and MenA uptake and completion (Figure 2).

Figure 1

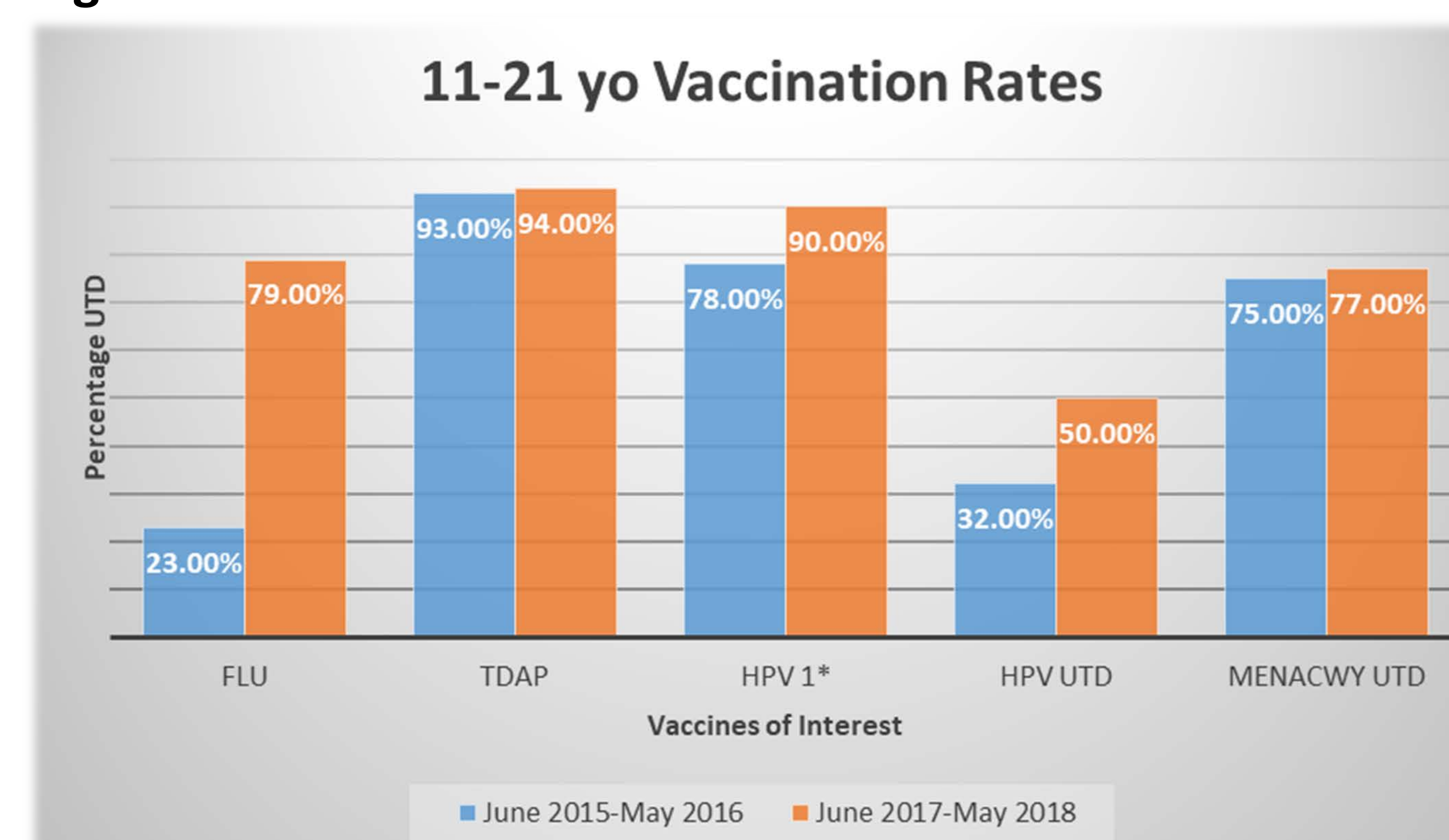


Figure 2

Series/Antigens	SMFM % UTD	Utah VFC Average
Flu	78%	53%
TDAP	96%	90%
HPV (1+)	89%	75%
HPV UTD	74%	53%
MenACWY	91%	81%

Conclusions

The largest gains observed after our interventions were seen in younger adolescent patients and in uptake of vaccines that are not required for school enrollment (Flu and HPV). Our rates for mandatory vaccines (TDAP and MenA) were already much higher than the state averages prior to initiating our project.

Our interventions were not effective in specific subsets of our population (i.e. Refugees and non-English speakers), likely due to language barriers and lack of easily accessible/translatable outreach materials and methods (mailers, exam room posters, voice and text messages, etc.). Also, our incentive program (tickets to local amusement parks awarded during quarterly raffles) was geared more toward middle class adolescents and not children of lower socioeconomic status and/or from non-dominant cultures.

Techniques that made our project successful included vaccine forecasting at each visit, making strong vaccine recommendations, having accurate records that were easily downloaded/uploaded to the statewide vaccine database electronically via a bi-directional EMR interface, and the use of different forms of communication and media to engage our patients.

Future directions include more and better efforts to collaborate with community organizations who specialize in refugee relocation and care (e.g. International Rescue Committee, Catholic Community Services and the Asian Association of Utah) and ethnic community leaders with vaccine drives hosted by community medicine providers (e.g. Utah Dept. of Health and Community Nursing Services) and incentive programs that cater to their unique needs (i.e. grocery gift cards).

Supporting Institutions

St. Mark's Family Medicine
Utah HealthCare Institute



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Further information

We applaud a recent change in Utah law to restrict non-medical exemptions for school vaccines and efforts to shift HPV vaccine awareness to a cancer prevention focus.

http://www.immunize-utah.org/pdf/2018_Changes_Utah_School_Law.pdf