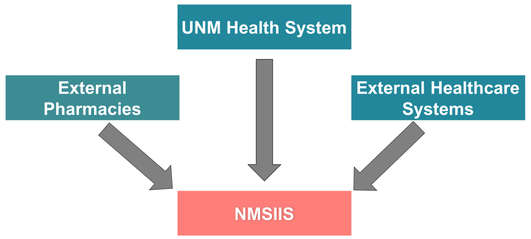
The Utility of Immunization Information Systems in a Primary Care Clinic

Connor Wagner[1], Clare Arroyo[1], Matthew Davoudzadeh[1], Melissa Martinez, MD[1]
[1]The University of New Mexico School of Medicine and Health Sciences Center

Background and Significance

- The "Volume-to-Value" culture shift has emphasized the importance of quality metrics in primary care clinics today
- Immunization Information Systems (IIS) such as the New Mexico Statewide Immunization Information System (NMSIIS) have been recommended for increasing the vaccination rates within communities
- However, the Community Preventive Services Task Force has noted a lack of evidence for the practical use of an IIS in a clinical setting

Unidirectional Information Flow of Vaccination Records in New Mexico



- NMSIIS utilizes a unidirectional communication system that allows for vaccination records to be automatically uploaded from various statewide electronic medical records (EMR)
- These records are not freely shared between EMR's and require a healthcare team member to access NMSIIS to obtain an accurate vaccination record for each patient

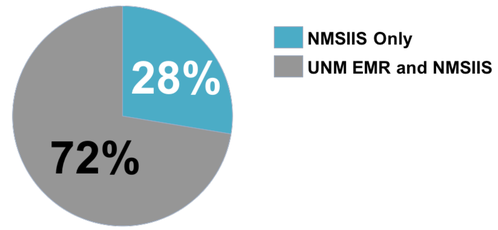
The aim of this project is to determine the practical utility of an Immunization Information System in a primary care setting

Study Design

- University of New Mexico (UNM) primary care clinics identified 295 patients, age 65 and up, that did not have pneumococcal vaccinations documented within the UNM EMR
  - Pneumococcal conjugate vaccine (PCV13)
  - Pneumococcal polysaccharide vaccine (PPSV23)
- Performed a retrospective chart review to determine whether the pneumococcal vaccinations were not captured in the original identification process
- Examined NMSIIS database to determine whether patients received vaccinations outside of the UNM Health System

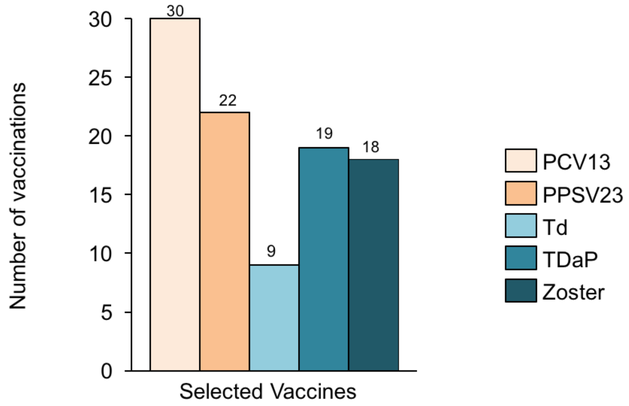
Findings and Analysis

Percentage of Patients with Vaccination Records in NMSIIS that were absent in the UNM EMR

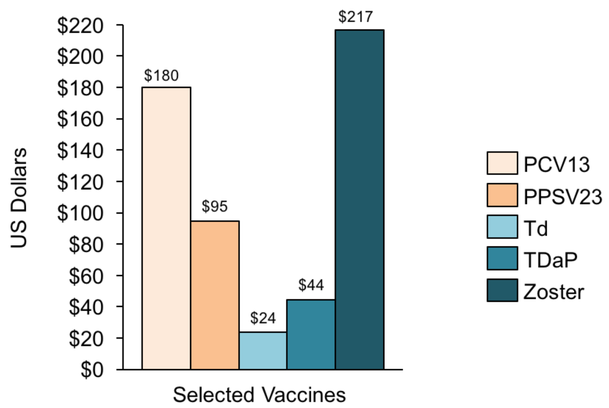


Vaccinations are exported from the EMR into the NMSIIS database; however, no system currently exists to move vaccination records from NMSIIS into the EMR

NMSIIS Vaccination Records that were Absent in the UNM EMR

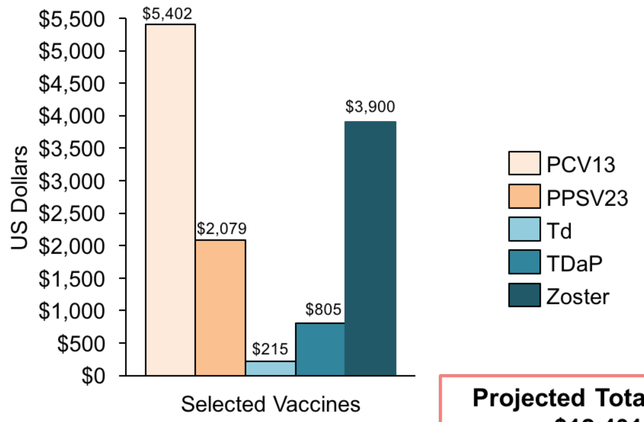


Private Sector Cost per Vaccine Inoculation



Conclusions

Projected Total Cost of Vaccine Inoculations



Projected Total Cost: $12,401

- Utilization of NMSIIS revealed 52 pneumococcal vaccinations and a total of 264 adult vaccinations that were not recorded in the UNM EMR
- Within this study population, the UNM Health System could reduce the costs and risks associated with duplicate vaccinations by utilizing NMSIIS within its adult primary care clinics
- Immunization Information Systems such as NMSIIS can be used to access quality metrics and improve the accuracy of electronic health records

Current Progress and Future Directions

- Report the findings of this study to the clinics involved in order to improve patient care and quality metrics
  - ~10,000 patients over the age of 65 in the UNM Health System
- Train healthcare team members to utilize NMSIIS and develop a system-wide protocol for reviewing patient records
- Address the current unidirectional communication system of NMSIIS and look for opportunities to integrate a bidirectional communication system

Acknowledgements and References

- **The authors would like to thank the unit directors and staff of the UNM Primary Clinics for their involvement in the study**
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