Oral Presentation
Diverse Stakeholder Perspectives to Improve OR's School Immunization Reporting Process
Andrew Osborn, Marcey Propp

Background:
Oregon's school immunization reporting process, also referred to as the Vaccination Assessment, Record-Keeping and Reporting process (VARR), was established to ensure a safe and healthy school environment by minimizing the spread of vaccine-preventable disease. Oregon's school immunization law has been successful, contributing to increased up-to-date rates and decreasing the number of students excluded from school for missing vaccinations. Over time, inefficiencies in the system combined with a growing complexity of vaccine requirements, advances in technology and increased staff turnover in school, child care and county health department staff have raised questions of process sustainability.

Setting:
Over twenty individual/group sessions were facilitated from May-October 2017 to solicit input from state staff, ALERT IIS staff, local public health authorities, technical partners, and school and child care staff. In addition, informal discussions were held with other states to understand how they manage their regulatory school immunization requirements.

Population:
Based on the 2015 Business Case for Determination of Operational Options for SMILER (June 12, 2015), Oregon's current VARR process involves 34 local public health authorities (LPHAs), and over 3,300 schools and children’s facilities, helping to protect more than 650,000 children.

Project Description:
A standard project management methodology applied to document and prioritize stakeholder requirements within a Requirements Traceability Matrix, and inform three conceptual models, offered as philosophical approaches to a more streamlined and automated school immunization reporting process. The models were evaluated by stakeholder group across state-defined criteria to assess each option’s impact.

Results/Lessons Learned:
The models represent a range of possible solutions from a component system to a set of applications or hybrid approach. Though there is no perfect solution as each model has its benefits and risks, the assessment enables OR to take a step back and recognize how school compliance and the systems that support it fit into a larger picture of children’s health and well-being.
Oral Presentation
Development of short questionnaire sets for assessing vaccination hesitancy on surveys
Stacie Greby, Paul Scanlon, Carla Black, Allison Fisher, Cynthia Knighton, Glen Nowak

Background:
Vaccination hesitancy is the reluctance to receive a vaccination according to the recommended schedule. Areas with high hesitancy may be areas with low vaccination coverage, increasing the risk of vaccine preventable disease outbreaks even though national vaccination coverage is high. Measure are needed to assess vaccination hesitancy in a standardized way across different sub-populations.

Objectives:
Describe the development process and contents of standardized 1/3/5-minute short question sets designed to be used in surveys to measure and track vaccination hesitancy.

Methods:
The National Center for Immunization and Respiratory Diseases (NCIRD) and the National Center for Health Statistics (NCHS) collaborated to develop vaccination hesitancy question sets. An expert review was conducted of existing questions from previous studies related to vaccination hesitancy. Parent focus groups separated by race (African American/not African American) and education (less than college degree/college degree or more) were conducted to obtain information on important constructs (e.g., trust in the healthcare system) for further evaluation. Iterative cognitive interviews were then used to design 1/3/5 minute short question sets.

Results:
Overall, parents in focus groups trusted individual components of the healthcare system, e.g., nurses and doctors, based on experience. There were indications of distrust of the government, but individual government agencies like CDC and FDA were considered very helpful and trustworthy. Many parents distinguished old (trusted) vaccines from new (untrusted/potentially worrisome) vaccines. During cognitive interviews, parents typically understood the word “shot” to mean “vaccine”. The final short question set assessed schedule used; vaccination hesitancy; concerns about vaccines, including number and necessity; personal knowledge of someone who had serious side effects after vaccination; and most trusted source of vaccine information.

Conclusion:
The 1/3/5 minute question sets include targeted attitudinal questions designed to be added to surveys, providing a standard way to measure vaccine hesitancy in a variety of settings.
Oral Presentation
Developing An Effective Clinical Decision Support Tool
Ned Mossman

Background:
Guidelines abound with regard to preventive care. Multiple agencies and specialty organizations create a wide variety of extensive, overlapping and sometimes conflicting guidelines to help steer providers to appropriate immunization practices, screening tools and disease-specific interventions. The sheer number of these recommendations by different groups makes following recommended practices difficult.

Setting:
EHR systems differ in terms of their usability, but they are not usually considered the gold standard of user-centered design in the technology world. It is common for a provider to visit multiple screens to obtain a comprehensive picture of the patient’s medical history. This variety may lead to clinician frustration and lack of trust in the EHR system.

Population:
Patients are mobile, and obtain care at a variety of organizations likely using different EHR systems. HIEs aim to consolidate information but their data sets are limited by political and geographic boundaries. This scatter of information makes it difficult for a provider to determine what preventive care any given patient has already received, and what is still recommended.

Project Description:
OCHIN developed a solution that takes data from our clinical data warehouse, performs analysis using a variety of preventive care guidelines, and displays care gaps in a single page for the provider and clinical care team that can be displayed directly in the EHR. The resulting point-of-care tool will be intuitive, real-time and easily printable for maximum flexibility in workflow integration.

Our user interface team will have full ability to make the report attractive, intuitive, and responsive to provider needs. Also, as the reporting logic would not be built into the EHR, but rather in our data analytics engine, changes to guidelines will be easy to implement. The vision is to make the report configurable by health care system, geographic region and user preference.

Results/Lessons Learned:
Work in progress; results will be reported at NIC.