Vaccination Support in EHR
- Decision support at Point of Care
  - Best Practice Alerts to drive provider workflows based on presence of immunization administration record
- Monitoring Performance
  - Reporting on frequency of immunization administration by providers/organizations and broken down by patient demographic (race, ethnicity, sex, etc.)
- Communication with Immunization Information Systems (IIS)
  - Automatic submission of administration information
  - Bidirectional querying for previous administration information

Why is Bidirectional Important?
- Medically underserved patient populations are...
  - Less likely to have continuity with their provider/care
  - More likely to have language and health literacy barriers
  - More likely to suffer from poor health overall
- Resource use and cost
  - Avoid duplication of administrations
  - Minimize wasted staff/provider time spent researching other contact points where patient may have received a vaccine
  - Difficult for primary care providers to receive information about the large number of immunizations that occur in other settings
    - Employer, pharmacy, school, church, etc.
  - The CDC and National Association of Community Health Centers (NACHC) recognize the need for better EHR documentation of administrations and are assisting OCHIN with improving bidirectional IIS exchange

Challenges to Implementing Bidirectional Capability
- Limited IIS that are capable and variation in format/process among those
- Backlogs to enroll for connection and testing
- Costs associated with development and licensing of interfaces
- Query and response processing
  - How to display incoming administration records in the EHR
  - Standardizing immunization codes used by each IIS, the CDC, and the EHR
  - Patient matching and chart reconciliation
  - IIS does not return anything if a single patient is not identified
  - End user must follow appropriate workflow to bring IIS administration record into the EHR or the process will have to be repeated each time
  - Identifying the correct IIS to query
    - Patients travel, but their records may not; becomes more important as bidirectional interfaces proliferate

What’s Next?
- Continue to build out bidirectional IIS interfaces with new states
- Ensure reconciliation process works with new interfaces
- Work with EHR vendor to verify query tool regularly identifies appropriate state IIS to query
- Leverage testing and workflow experience to streamline further bidirectional implementations

Learnings
- A national IIS must be implemented; or uniform standards for bidirectional IIS interfaces are necessary to streamline adoption and improve patient and population health
- Patient charts are only as accurate as the end user makes them; users must correctly reconcile records
- Accurate mapping is critical for success and must be done in advance of implementing query functionality