WEBINAR - Using Immunization Information Systems to Increase HPV Vaccination Uptake

August 22 at 1pm ET
Immunization Awareness Month
Housekeeping

• Please…
  – Mute your phones
  – Do not put your phone on hold
• This webinar will be recorded
• Link to today’s slides are available
Using Immunization Information Systems to Increase HPV Vaccination Uptake

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August 2016
Learning Objectives

• Define Immunization Information Systems (IIS)
• Describe need for HPV vaccination uptake
• Identify ways health care providers can be supported to implement reminder recall through IIS
What are Immunization Information Systems?

Hint – they are immunization registries, but so much more
What are Immunization Information Systems?

They are confidential, population-based, computerized databases that record all immunization doses administered by participating providers to persons residing within a given geopolitical area.
Where are IIS located?

- Federated States of Micronesia
- Guam
- Palau
- Commonwealth of the Mariana Islands
- Marshall Islands
- American Samoa
- U.S. Virgin Islands
What do IIS do?

IIS create consolidated immunization records

IIS assist with clinical decision support and forecasting and with vaccine ordering and inventory management

IIS generate reminders to ensure on-time immunization, as well as population-based coverage data to inform planning and practice
How does data get into an IIS?

**Vital Statistics**
Birth and death records

**Data Exchange**
Records from providers' system

**User Interface**
Rapidly becoming an ancient method

Provider sends query to IIS

IIS updates information & returns updated forecast to provider

Provider administers vaccines & submits new information to IIS

IIS sends patient history and forecast to provider
Percentage of adolescents aged 11 – 17 years participating in an immunization information system -- United States, five cities§, and D.C., 2014

National Participation: 61 % (excluding Territories)
Source: CY2014 IIISAR

§ Chicago, IL; Houston, TX; New York City, NY; Philadelphia, PA; San Antonio, TX.
We have an EHR, why do we still need an IIS?

- 2,464 certified EHR products (2014 edition)
- 6,280 certified EHR products (combination of 2011 & 2014 editions)
- Current EHR certification criteria do not include all VFC requirements (e.g. VIS dates)
- An EHR doesn’t always have the whole picture (or complete record)
- IIS can implement rigorous ACIP-driven algorithms for clinical decision support, and can leverage full consolidated record to ensure an accurate forecast
Consider a College Student...
Current Trends and Needs for HPV Vaccination Uptake
HPV Vaccination Goals

The Healthy People 2020 objective for HPV 3-dose vaccination completion is 80%.

More than seven years after vaccine approval, only 40% of U.S. females and 22% of males ages 13-17 years have completed the 3-dose series.
Vaccination Coverage Disparities, 2014 NIS-Teen

Vaccination Coverage among Adolescents 13 through 17 Years of Age

- MCV: [VALUE]%
- Tdap: [VALUE]%
- ≥1 HPV (Girls): [VALUE]%
- ≥1 HPV (Boys): [VALUE]%
Estimated coverage with ≥1 dose of HPV vaccine, either quadrivalent or bivalent, among adolescents aged 13-17 years, NIS-Teen, 2014
Estimated coverage with ≥1 dose of HPV vaccine, either quadrivalent or bivalent, among adolescents aged 13-17 years, NIS-Teen, 2014

Source: MMWR July 31, 2015 | www.cdc.gov/hpv
Supporting Health Care Providers to Implement Reminder Recall through IIS
What can you do to support health care provider use of IIS?

• Partner with your local or state Immunization Program
• Find out how your IIS operates
  • Does your IIS directly send reminders or do providers send reminders?
• Educate OBGYN providers who may not know about the benefits of IIS
• Ensure that there's a place in provider workflow where IIS is utilized
• Find out if linkages between your IIS and cancer registry exist
• Consider pilot projects to target recalls for 3-dose completion or HPV initiation
Contact

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Improving HPV Vaccine Uptake: Role of Technology

Janna Pastir, MPH
Director, North Dakota Comprehensive Cancer Control and Prevention
Objectives

• Understand the background of the NDIIS
• How NDIIS is used to increase vaccine uptake
• Successful HPV prevention projects in rural settings
• Successful HPV prevention projects in urban settings
NDIIS Background

The North Dakota Immunization Information System (NDIIS) is a confidential, population-based, computerized information system that attempts to collect vaccination data for all North Dakotans.

Established in 1988 as a modem, dial-up system.

The NDIIS is a grantee-developed (i.e. homegrown) IIS
Background continued…

ND Century Code requires North Dakota providers enter all childhood (18 years of age and younger) immunizations into the NDIIS within 4 weeks of administration.

95% of immunization data is entered into the NDIIS within one month of administration.

Includes 73% of doses entered within 1 day of administration.
Background continued...

North Dakota is one of six CDC Sentinel Sites, selected to receive additional grant funding because the NDIIS has consistently met the following three criteria:

- At least 85% of vaccine provider sites enrolled in the IIS
- At least 85% of the children less than 19 years of age are participating in the IIS
- At least 70% of the doses administered from the sentinel site area should be submitted to and processed by the IIS within 30 days of administration

As of June 2016, the NDIIS is receiving electronic immunization data directly from the electronic health record (EHR) system of 256 individual provider locations.
In 2006, the ability to change the status of a client in the NDIIS to Moved or Gone Elsewhere (MOGE) or Lost To Follow-Up was implemented.

The immunization forecaster was added to the NDIIS in 2010 and is used to determine vaccines a specific client is past due/coming due for.
Manual client-level deduplication was completed in the NDIIS in 2007 and electronic deduplication was implemented in 2009.

Automated client-level deduplication was added in 2016.

In April 2014, the NDIIS implemented vaccine level deduplication which evaluates all doses entered manually and electronically to remove duplicate dose records.

- To date:
  - 93,366 doses were manually deduplicated.
  - 430,687 doses were automatically deduplicated.
Existing Barriers in North Dakota

Immunization rates in North Dakota vary significantly across communities due to

– Access to immunizations
– Conservative communities and misunderstandings
– Rapidly growing/changing population
HPV Vaccine Uptake Improvement

1. Utilizing Immunization Information Systems
2. 2012 - Development of North Dakota Cancer Coalition HPV Task Force
3. Development of parent, patient, and provider level education
4. ND CCCP Subcontract Program
5. Cohesive and coordinated Statewide Messages
Increasing HPV Immunization to decrease consequential cancers using evidence-based immunization improvement strategies

- Improve access
- Increase vaccine demand
- Implement client reminder systems
- Support Advisory Committee on Immunization Practices (ACIP) recommendations
HPV Taskforce

The HPV Taskforce initiated in 2012

- Includes ND CCCP, Immunization and oral health program staff, local public health nurses, clinic nurses from major health systems, QI coordinators, university health, tribal health, and physicians

- Most members will serve on the HPV Roundtable convening for the first time in August 2016 to develop a strategic plan
Taskforce Deliverables

Provide existing toolkits and resources for immunization practice improvement AND talking points

Develop brochures, fact sheets, talking points by audience, presentations, Cervical Cancer and Oral Cancer Awareness Month materials

Advise subcontract projects focused on HPV prevention
HPV & Cervical Cancer

HPV Vaccination Schedule

- The HPV vaccine was first licensed by the FDA (Food and Drug Administration) in 2006.

- ACIP (Advisory Committee on Immunization Practices) recommends that the vaccine be routinely administered to both males and females aged 11-12 years of age.

HPV and Cancer

- HPV is the most common sexually transmitted infection.
- There are more than 40 types of HPV.
- The most dangerous strains of HPV can cause cancer if left untreated.

Cervical Cancer

- Cervical cancer is the fourth most common cancer worldwide.
- It is often asymptomatic until late stages.
- Early detection and vaccination can prevent cervical cancer.

Human Papillomavirus

- HPV 16 and 18 are the most common types associated with cervical cancer.
- Vaccination helps prevent infection with these strains.

Medical Advice:

- Regular Pap smears are essential for early detection.
-及时的治疗可以显著提高治愈率。
- 未接种HPV疫苗的女性应该考虑接种。

Healthcare Provider:

- If you have any concerns or questions about HPV or cervical cancer, please consult with your healthcare provider.

NORTH DAKOTA DEPARTMENT OF HEALTH
Ongoing Education

Immunization and cancer program staff provide “Lunch and Learn” modules for EBI* and PSE** approaches

Biennial Immunization Conference - 2014 featured Dr. Paul Offit and others focused on increasing HPV vaccination

Biennial Immunization Conference – 2016

*Evidence-based Intervention
**Policy, Systems and Environmental Change
Subcontract Program 2013

1st HPV prevention project to increase vaccination by 10% for $5,000

- Local public health unit begins school-based immunizations
- implement client reminder system
- develop education/displays for migrant health clinic

10.6% in 1 YEAR

HPV Vaccine completion rate increased from 13.2% on August 29, 2013, to 23.8% on May 15, 2014. First dose increased from 23.3% to 37.7%
Subcontract 2014

Local Public Health continues with $7,000 and increases from 23.8% to 41.9% at the end of the school year using client reminders and in-school immunization.

Work began with clinics to teach the ND Immunization Information System reminder/recall and forecast 18.1% in 1 YEAR.
Subcontract 2014 cont.

2nd Local Public Health Unite (county has no other immunization providers) begins with $7,000

– Replication of 1st project

Increases HPV vaccine uptake by 10% in year 1

– Memorandums of Understanding implemented with schools to provide services on-site during school hours
Subcontracts 2015

ND CCCP leverages $28,000 additional funding from state immunization program to provide 6 subcontracts at $7,000 each

- 1\textsuperscript{st} continues and developing policy for reminder systems and referrals with private clinics
- 2\textsuperscript{nd} revises contact methods to continue school-based clinics and implement MOUs with clinics to provide NDIIS training and referrals
- South East Central Regional Network of public health units implement school based clinics in 7 counties
- 3\textsuperscript{rd} LPHU begins school-based immunization clinics and reminder system
Subcontracts 2015 cont.

Two branches of largest health system that operate in separate regions and independent of each other also receive $7,000 each

- Develop policy and process for reminders/recalls of patients
- Provide community education with free public screening of “Someone to Love” with panelists to answer questions and share experiences
- Posts physician immunization rates in clinic to generate competition and role modeling
Subcontracts 2016

Three projects at $7,000 each all replicating the original school based immunization model developed by 2013 grantee in 2 new counties and continued policy development in 3rd LPHU project.
Subcontract Structure

Joint oversight is provided by ND CCCP Director partnered with ND Immunization Program Manager

Strong emphasis of system change and policy development

Priority is given to applicants addressing underserved rural communities and disparate populations (low income and minority)
State and Sector-wide Approach

ND State agencies including:
- ND CCCP
- ND Immunization Program
- ND Family Planning
- ND Oral Health

And other entities including:
- Major health systems
- Local public health
- ND Dental Association
- ND Medical Association
- ND Cancer Coalition
Provider and Parent Perception

Statewide survey conducted 2015 about provider perception of HPV and vaccine. Overall results show:

– Those identified as RNs and other younger medical professionals with a shorter length of specialty career are more likely to make strong recommendations

– Among parents the older cohort and those with no religious affiliation are more likely to immunize children specifically for HPV

*from unpublished Provider and Parent Perception survey conducted 2015. Authors are Danielle Pinnick, Molly Howell, and Tracy Miller.
North Dakotan Decision Making

– Concerns about safety is #1 issue for parents that reject the vaccine
– #2 Providers addressing the vaccine as necessary
– Trusting the doctor recommendation is the #1 reason for parents that accept the immunization

*from unpublished Provider and Parent Perception survey conducted 2015. Authors are Danielle Pinnick, Molly Howell, and Tracy Miller.*
Planning Ahead

Official convening of HPV Prevention Roundtable occurred August 5, 2016

Ongoing training and assistance implementing reminder system processes

Public education in several more communities using “Someone To Love” and panelist format.
Feature-length documentary on the human papillomavirus and the stories of tragedy and triumph surrounding the misunderstood infection.
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Acknowledgements
North Dakota Immunization Program:
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Questions? Comments?

• Please unmute your phones and speak up!
• Or you can use the Q&A chat box
Thank you! Contact us…

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