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### Best Practices for Increasing Vaccine Coverage Rates

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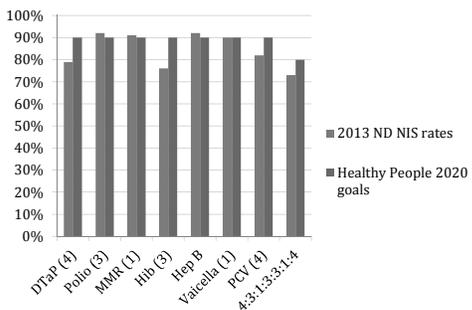
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### Infant Immunization Rates



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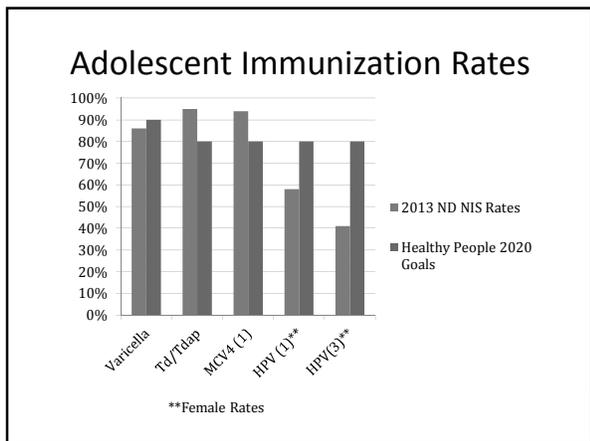
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### Immunization Quality Improvement

- Many health systems and clinics are conducting quality improvement initiatives. Immunization rates are an excellent way to achieve quality improvement initiatives, because it is easy to evaluate progress by monitoring rates.
  - Start small by having a goal of increasing rates by 10 percent over the next year.




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### Immunization Visits

- Walk-in or immunization-only visits provide convenient vaccination services proven to improve access to immunizations. Given busy parent and child schedules, convenient express services are helpful and appreciated.
- Walk-in visits allow families to get immunized at a time that is convenient for them, without having to schedule ahead of time. Immunization-only appointments are effective because they are generally quicker than a complete well-child visit. Also, for families who pay out of pocket for health costs or who have copay or deductible, immunization-only appointments typically result in lower out-of-pocket costs.

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### Immunization Visits

- Offering appointments in the late afternoon, evening and on weekends is a best practice strategy.
- Use all patient encounters (including acute-care and follow-up visits) to assess and provide vaccinations.
- Offering immunizations at all sites within the facility.
  - High school activity physicals are an excellent opportunity to immunize adolescents.

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### Increasing Immunization Rates

- Diseases that can be prevented by vaccines remain major causes of illness and death for people of all ages in the United States.
  - In the U.S., an estimated 800,000 – 1,400,000 persons have chronic Hepatitis B virus infection.
  - Flu seasons are unpredictable and can be severe. Between 1976 and 2007, estimates of flu-associated deaths range from a low of about 3,000 to a high of about 49,000 people.
- Useful information can be found on The Community Guide at <http://www.thecommunityguide.org/vaccines/index.html>

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### Measuring Coverage Levels

- Studies have shown that providers often overestimate their immunization coverage rates. The North Dakota Department of Health (NDDoH) immunization program emails clinic-level adolescent immunization rates based on NDHIS data to Vaccines For Children (VFC) Program providers throughout the state on a quarterly basis.
  - Your clinic can use these rates as a baseline to determine whether or not vaccination efforts are working at your facility or if changes need to be made.
- If you are a VFC provider and would like to know your clinic's rates, please contact the immunization program.

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### Measuring Coverage Levels

- Routinely measuring immunization rates allows providers to understand the immunization issues that are unique to their facility.
- For example, through routine measurement, some providers may identify certain vaccines with lower coverage rates, root causes for missed opportunities, or certain age groups with lower coverage rates than others.
- Once providers are aware of this, they can plan quality improvement interventions that are tailored to the needs of their facility and their patients.

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### Measuring Coverage Levels

- Immunization rates are an excellent way to achieve quality improvement initiatives, because it is easy to evaluate progress by monitoring rates.
- Select HPV vaccination rates as a quality improvement initiative for your organization.

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### Measuring Coverage Levels

- Routine assessments allow providers to monitor trends over time and evaluate whether interventions designed to improve coverage rates are having the desired effect.
- The North Dakota Immunization Information System (NDIIS) allows providers to routinely assess immunization rates.
- Raising staff awareness of coverage levels confirms efforts are working and points to where more can be emphasized, such as specific ages and vaccines.

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### Scheduling Next Vaccination Visit

- Scheduling the next vaccination visit before the patient/parent leaves the office ensures that they have the opportunity to select a convenient time for their visit. Once appointments have been scheduled, many clinics make reminder phone calls a day or two prior to the visit.
- For most clinics, it is easier to track patients who schedule an appointment but do not show up than it is to identify patients who should have scheduled an appointment and did not.
- It also gives the provider the opportunity to provide notification about the importance of vaccination and convenient vaccination services that suit the time and availability of patients.

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### Scheduling Next Vaccination Visit

- Simple interventions, like directing patients to leave through the reception area, can be an effective way to get patients/parents to schedule the next visit before leaving the clinic.
- Using upcoming immunization reminder cards for the patient/parent to take home.




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### Scheduling Next Vaccination Visit

- Front desk staff play a key role in making sure that appointments are scheduled appropriately, to avoid missed opportunities. Train the staff regularly on the importance of proper scheduling to lessen patient no-shows. Also train them on the current immunization minimum intervals and minimum ages to reduce invalid doses.
- Training your front desk/scheduling staff to account for vaccine schedules when scheduling appointments and/or wellness checks can ensure that:
  - a. Appointments and follow-ups are scheduled at an appropriate time for patients' vaccine schedules
  - b. Missed opportunities for vaccination are minimized
  - c. Appointments and follow-ups are scheduled at convenient times for patients/parents.

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### Scheduling Next Vaccination Visit

- Rescheduling patients within a short time period (3-5 days) of missing their visits not only provides a longer time frame for bringing them up-to-date on their vaccinations but it also stresses the importance of immunizations and catching-up on missed opportunities.

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### Avoid Missed Opportunities

- Immunization rates for Tdap and meningococcal vaccination are high in North Dakota (95.0% and 93.7% respectively), which shows that adolescents are presenting for vaccinations, but not receiving all vaccines for which they are eligible.
- In 2013, 98 percent of North Dakota girls who were unvaccinated against HPV had a missed opportunity for HPV vaccination. A missed opportunity is a healthcare encounter (other vaccination) where a person does not receive a vaccination for which he or she is eligible.
- Make sure your clinic is using the immunization forecaster in the NDIIS or in their EMR. Immunization forecasters will assist you and your staff in determining which vaccines a child is due for.

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### Avoid Missed Opportunities

- North Dakota children participating in high school activities are required to have an annual physical. Make sure your facility is assessing the immunization status of all adolescents presenting for physicals and offering vaccines when needed.
- Vaccinate at mild illness and injury visits
- Follow- up visits
- Multiple vaccines

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### Avoid Missed Opportunities

- Prior to patient's visits, review immunization records for each patient and flag charts of those who are due or coming due
- Review immunization records of siblings/children/parents who accompany the patient and vaccinate if indicated
- Inform parents when the next doses of vaccine are due and, if possible, make follow-up appointments before they leave
- Use a reminder/recall system to remind parents when immunizations are due
- Document exemptions and parental refusals in NDIIS
- Make sure the contact information in NDIIS is kept updated for every patient

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### Adolescent Wellness Visits

- A reminder card/call for the 11-12 year old patient will reinforce to the parent that the practice holds a high standard for protecting patients and the importance of the teen vaccines.
- A system for scheduling patients who are between 11-12 years for a wellness visit enables providers to assess and administer vaccination services to an important adolescent age group for receiving ACIP recommended Tdap, HPV, and MCV vaccines.
- In the NDIIS providers can run a list of adolescents who are due or coming due for immunizations.
- Also, use other adolescent visits, like sick visits or sports physical visits, to screen for immunizations.

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### Immunization Champion

- Immunization Champions can foster motivation and track progress toward goals. An immunization champion can have any role within the facility.
- An immunization champion may be a physician, office manager, clinical services coordinator, or medical assistant. No matter what role, an immunization champion will be most successful if there is institutional support for quality improvement.

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### Immunization Champion

- If the clinic has an immunization champion, make sure they have the support necessary (time, resources, and commitment) to fulfill duties around immunization quality improvement.
- Every organization should have an immunization champion to act as an advocate for immunizations. Find a vaccination champion at your facility to educate and motivate staff to increase rates.
- Raising staff awareness of coverage levels confirms efforts are working and points to where more can be emphasized, such as specific ages and vaccines.

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### Vaccine Refusals

- All parents and patients should be informed about the risks and benefits of preventive and therapeutic procedures, including vaccination.
- Documenting parent refusal of vaccination provides data that the vaccine was offered and that the parent of the patient refused. When vaccines are refused due to request for limited injections, it is recommended that the parent is the major decision maker on which vaccine is not administered.
- It is recommended that vaccine refusals be documented with every visit. Patients and parents should be informed about vaccine benefits and risks even if they refuse to vaccinate. Federal law requires that this communication include providing parents/patients with Vaccine Information Statements (VIS).

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### Immunization Education

- Studies show that physician and other health care professionals' recommendations are central to vaccine acceptance. Parents need to know about the importance of vaccination, the availability of vaccines, and the availability of convenient vaccination services.
- Federal law requires that health care staff provide a VIS to a patient, parent, or legal representative before each dose of certain vaccinations.



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### Immunization Information Resources

- Messages notifying parents/patients about the importance of vaccination and the availability of convenient programs can be delivered via on-hold messages, office posters, social media, public service announcements, and videos. Many organizations have developed immunization information resources and outreach materials that can be made available for you to assist with your information/education efforts.

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### Using Current ACIP Recommendations

- Resources are available to help providers that do not feel they have enough knowledge about the immunization schedule.
- Providers want to keep patients as protected as possible, therefore using the ACIP recommended schedule is optimal.
- NDIIS has a vaccine forecaster based on the ACIP schedule that shows which vaccines are due or past due. Use a this tool to determine which vaccines should be administered.

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### Standing Orders

- Standing orders authorize nurses, pharmacists, and other health care personnel (where allowable by state law) to assess a patient's immunization status and administer vaccinations according to a protocol approved by an institution, physician, or other authorized practitioner.
- The protocol enables assessment and vaccination without the need for examination or direct orders from the attending provider at the time of the interaction.
- In settings that require attending provider signatures for all orders, standing order protocols permit assessment and vaccination in advance of the provider signature.

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### Administering All Recommended Vaccinations

- Patients/parents trust their health care providers as a valuable source of information about immunizations.
- Providers and clinic staff should be knowledgeable and comfortable answering questions and concerns.
- It is also recommended that providers empower their staff to vaccinate with standing orders programs. Standing orders allow clinical staff, both nurses and medical assistants, to assess a patient's eligibility for vaccine, and vaccinate per protocol without the need for an individual physician's order. These recommendations should occur at all visits, sick or well.

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### Administering All Recommended Vaccinations

- If providers/staff are not comfortable administering all recommended vaccines or talking with parents who have concerns, help them find appropriate trainings or resources.
  - Consider having experienced staff mentor less experienced staff.

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### Reporting Immunizations to NDIIS

- It is importance to report all administered immunizations to NDIIS to generate complete and up-to-date coverage assessment reports. If administered vaccines are not reported to NDIIS in a timely and complete manner, the coverage rates generated are not a true representation of the assessment coverage rates and missed opportunities for this provider.
- Not reporting all immunizations to the NDIIS can also provide inaccurate assessments resulting in over-immunization, which is costly.

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## Historical Records

- Providers should report to the NDIIS all immunizations known to have been administered to a patient, regardless of whether the immunizations were administered by the provider's office, or by another provider.
- This helps ensure that every patient has a complete, consolidated vaccination history in the NDIIS and that the provider's coverage assessments reflect the true vaccination coverage for the patient population served.

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## Inactivating Patients

- Maintaining accurate patient lists also makes other functions of the NDIIS, like reminder/recall, more accurate for the clinic.
- NDIIS has to functions to inactivate patients that belong the last provider visited.
  - MOGE
  - Lost to Follow-up




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## MOGE

Moved or Gone Elsewhere (MOGE) Status  
 Providers can change the MOGE status of client's who are no longer being seen at their facility, who have moved out of state or who are lost to follow-up. Once a patient has been designated as MOGE or Lost To Follow-up will be excluded from all of the provider's reports, including Reminder/Recall. A provider can only update the client's MOGE status if they are that client's last provider visited excluding influenza.

The screenshot shows a user interface for updating a client's MOGE status. At the top, there are two tabs: 'Demographics | Immunizations | Comments | Maintenance'. The first tab is selected and shows 'MOGE Status: Current Client'. A tooltip indicates 'Field is grayed out and cannot be edited'. Below this is a dropdown menu for 'Current Client' with options: 'Current Client', 'Moved for Clinical Use/elsewhere', and 'Lost to Follow-Up'. A 'Save' button is next to it. The second tab is also selected and shows 'MOGE Status: Current Client' with a 'Save' button. A tooltip indicates 'Field can be edited if provider is that client's last provider visited excluding influenza'. Below the tabs, there is a 'MOGE Status:' label and a dropdown menu showing 'Moved or Gone Elsewhere'. At the bottom, there is a 'Reason:' label and a dropdown menu with the following options: 'Select One', 'Received documentation that the client moved out of North Dakota', 'Received documentation of a forwarding address/out of the immediate area', 'Received documentation that the client has moved and no forwarding address was provided', and 'Received notification or request for records indicating the child has transferred to another provider'.

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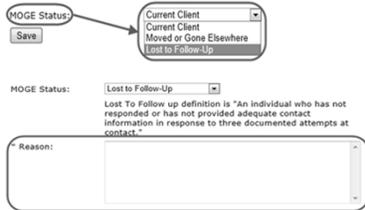
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### Lost to Follow-up

- To select Lost to Follow-Up, providers must have at least three documented attempts of contacting the client.
- Select Lost to Follow-Up from the drop-down box
- Type in the information related to contact attempts in the Reason box that will appear when Lost to Follow-Up is selected.



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### Using Forecaster

- The immunization schedule is complex, and it is difficult to forecast, especially for a patient is not on a regular immunization schedule.
- Many EHRs and the NDHHS have a forecaster that uses algorithms to determine which vaccines are due on the date of service. Forecasters should be used along with the patient's medical record and the clinician's judgment to determine what is due.
- When your patient has checked-in for their appointment a Forecaster should be printed at each visit for each patient.

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### Using Forecaster

- Enhanced office vaccination systems as defined by evidence-based strategies recommends assessment of vaccination by nursing staff as a routine part of a patient's every visit.
- It is recommended that vaccination assessments be addressed as part of vital signs. Make assessment a "Standard Operating Procedure" for any patient visit; well or sick. The NDHHS has the ability to generate a list of patients due for vaccination on the day of their visit and to provide an immunization forecast for individual patients.
- The accuracy of this information is dependent on the accuracy and completeness of the immunization data reported to the NDHHS.

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### Reminder/ Recall

- A reminder is a communication to remind parents or guardians of vaccination due dates for their children. Reminder messages can improve parents' awareness that vaccinations are coming due and the importance of scheduling and keeping appointments, therefore increasing the up-to-date vaccination status of pediatric/adolescent patients.
- A recall is communication to parents or guardians of children who are past due for one or more vaccinations and encourages them to schedule an appointment with their health care provider or local health department. Recall messages can decrease vaccination drop-out rates and reduce the time children remain at risk for vaccine-preventable diseases.

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### Reminder/Recall

- Effective reminder/recall systems are conducted by providers on a routine basis, and using a routine process. Providers may choose to conduct reminder/recall activities monthly, quarterly, or on some other schedule. Reminder/Recall lists can be generated through the NDIIS.
- The implementation of the reminder/recall systems has potential benefits beyond improved vaccination coverage rates. Patients of all ages who are due or overdue for recommended vaccinations also may have fallen behind in health supervision visits and may experience barriers to health care in general. Vaccination reminder/recall systems may help identify patients who are at risk for not receiving comprehensive primary care.

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### Reminder/Recall

- Numerous studies (62) have found immunization reminder/recall to be an effective method of increasing immunization rates. Your clinic can easily conduct immunization reminder/recall using the NDIIS.
- Try sending reminders for adolescent vaccines to all children turning 11 in your practice. Be sure to schedule subsequent doses of HPV vaccine at the time of the first dose being administered. Recall adolescents who still need second and third doses.
- The NDDoH is conducting quarterly recall of all adolescents ages 12 to 17 for Tdap, meningococcal conjugate, varicella, and HPV vaccines (if started the series). As parents present their children for these vaccines, be sure to strongly recommend HPV vaccine as well.

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### HPV

- When offering HPV vaccine, offer it as you would Tdap or meningococcal vaccine. HPV vaccine should not be viewed as less important just because it is not required for school. It should not be offered as an "optional" vaccine, but as a routinely recommended vaccine like all the other vaccines. Presenting the necessary vaccines as a package, saying "today your child needs HPV, Tdap, and meningococcal vaccines," can be very effective. Once all vaccines are presented, you can answer any questions the parents may have.
- Make sure that physicians, nursing staff, and office assistants are all presenting the information the same way.

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### HPV

- Every organization should have an immunization champion to act as a an advocate for immunizations. Find an HPV vaccination champion at your facility to educate and motivate staff to increase rates. Connect pediatricians and family practice physicians with OB-GYNs and oncologists. Oncologists don't want your patients to be their patients in the future.

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### AFIX

- AFIX is a quality improvement program used to raise immunization coverage levels, reduce missed opportunities to vaccinate, and improve standards of practices at the provider level.
- Assessment of immunization coverage and practices
- Feedback of results, along with recommended strategies to improve coverage levels
- Incentives to recognize and reward improved performance
- eXchange of healthcare information and resources necessary to facilitate improvement

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### AFIX

- The purpose of an **Assessment** is to:
  - Evaluate a provider's vaccination coverage levels and immunization practices
  - Identify opportunities for improvement of vaccination coverage levels and reduction of missed vaccination opportunities.
- **Feedback** of information provides insight on quality improvement strategies, patient drop-out rates, missed opportunities, and inappropriate use of contraindications.

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### AFIX

- **Incentives** to recognize and reward improved performance
- **eXchange** of healthcare information and resources necessary to facilitate improvement
  - Every provider that receives an AFIX visit receives an initial follow-up no later than six months following their AFIX visit.
  - The purpose of this follow-up is to discuss and document the provider's progress in implementing the agreed upon QI strategies and to provide any clarifications and technical assistance. The discussion should be based on findings from the latest AFIX visit and the agreed upon QI strategies.

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### Type your question in the chat window to the right

After the presentation, questions may be sent to:

Molly Howell	mahowell@nd.gov
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**Immunization Program :**  
**701.328.3386 or toll-free 800.472.2180**

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### Post-test

- Post-test
  - Nurses interested in continuing education credit, visit:  
<http://www.ndhealth.gov/disease/post/default.aspx?PostID=80>
  - Successfully complete the four-question post-test to receive your certificate.
- Credit for this session is available until Tuesday, June 9, 2015.
- This presentation will be posted to our website: [www.ndhealth.gov/immunize](http://www.ndhealth.gov/immunize).

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