Best Practices and Quality Improvement for Increasing Vaccination Rates

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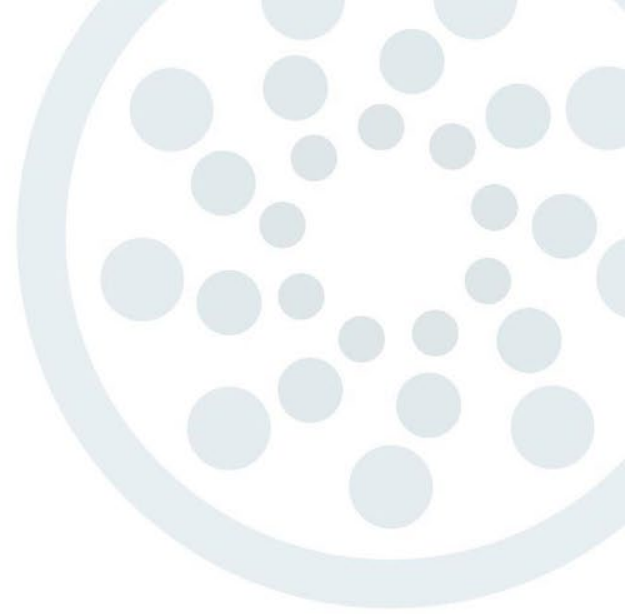
Overview

- What is quality improvement?
- QI strategies
- Data datality & QI
- QI programs

What is quality improvement (QI)?

What is quality improvement?

- Quality improvement programs analyze processes and use a systematic approach to improve performance
- Basic steps:
  - State the problem and desired result
  - Use data to understand the problem
  - Identify strategies for improvement
  - Implement strategies and refine as needed
  - Evaluate outcome

THAT'S SOME KOALITY IMPROVEMENT!

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Immunization quality improvement

- Immunization quality improvement can assist and support health care providers by identifying opportunities to improve vaccine uptake and to help providers be:
    - Motivated to try new vaccination service delivery strategies and incorporate changes into their current practices
    - Supported in sustaining changes and improvement to their vaccination service delivery
    - Aware of and knowledgeable about vaccination coverage and missed opportunities to vaccinate
    - Able to use available data from the WyIR to improve services and coverage

Immunization quality improvement

- Beyond increasing vaccination coverage rates, conducting immunization quality improvement can provide additional benefits:
    - Addressing burden of vaccine-preventable disease
    - Catching up on well-child visits and recommended vaccinations
    - Reducing missed opportunities
    - Increasing vaccine confidence
    - Using practice-based coverage assessments and performance improvement

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QI strategies

QI strategies

- Four "buckets" defined by the Immunization Quality Improvement for Providers (IQIP) program
  - Facilitate return for vaccination
  - Leverage immunization information system (IIS) functionality to improve immunization practice
  - Give a strong vaccine recommendation
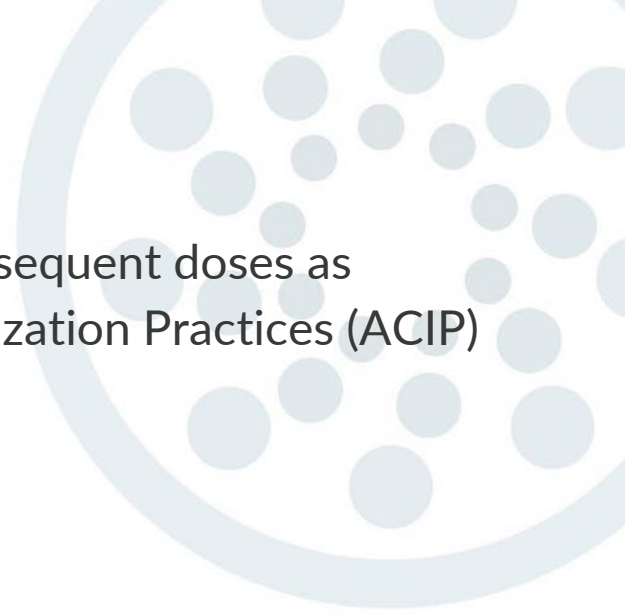 - Strengthen vaccine communications

Facilitate return for vaccination

Facilitate return for vaccination

- On-time vaccination depends upon returning for subsequent doses as recommended in the Advisory Committee on Immunization Practices (ACIP) recommended immunization schedule

Facilitate return for vaccination

- A 2017 AAP clinical report asserts that making families aware of when vaccines are needed and scheduling follow-up appointments before they leave are crucial steps to increase adolescent vaccination rates
- A 2018 Cochrane review of 75 studies concluded that using reminder and recall systems in primary care settings likely improved vaccination coverage across all age groups
- A 2021 review of studies on patient reminder recall concluded that reminder recall are among the most effective and cost-effective tools for childhood and adolescent vaccine delivery

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Facilitate return for vaccination

- Best practices for strategy implementation
    - **Conduct routine training** on current ACIP-recommended immunization schedules to inform when to schedule patients for subsequent visits
    - **Maintain accurate patient contact information** by verifying and updating patient contact information at each appointment to support scheduling and reminder recall efforts

Facilitate return for vaccination

- Best practices for strategy implementation
  - **Take action to prevent missed opportunities** by
    - Routinely generating lists of patients that have upcoming appointments using various technologies via EHR, IIS-based, or scheduling software platforms
    - Screening patients for vaccination eligibility at each visit regardless of the type of visit (e.g., sick visit, well-child, sports physicals, etc.)
    - Maintaining accurate vaccination records

Facilitate return for vaccination

- Best practices for strategy implementation
  - **Use effective scheduling protocol** by
    - Scheduling the next appointment before the patient leaves the office, either in the exam room or at check-out
    - Scheduling the next vaccination visit and the next well-child visit to occur the same day whenever possible
    - Offering various types of appointments where vaccinations can occur
      - Nurse visits
      - Vaccination-only clinic days

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Facilitate return for vaccination

- Best practices for strategy implementation
  - **Inform parents of future vaccine dates** by giving parents a copy of their current immunization record and a list of future recommended vaccines with precise due dates
  - **Implement reminder recall systems** using multiple methods to remind patients of upcoming appointments
  - **Track no-shows and cancelled appointments** and contact those patients within the same week to reschedule

Leverage IIS functionality

Leverage IIS functionality

- Using an IIS can directly increase vaccination coverage for a provider's patient population by providing
    - Vaccination recommendations
    - Provider-level coverage assessments
    - Reminder recalls for patient's due or overdue vaccinations

Leverage IIS functionality

- Best practices for strategy implementation
    - **Maintain accurate patient contact information** by verifying and updating patient contact information in the IIS at each appointment
        - Also key for Docket app
    - **Report** all historical and administered vaccination data to the IIS routinely to support complete and up-to-date patient records
    - **Assess immunization status** in the IIS for patient active/inactive status and doses due at every patient encounter, including drop-ins and sick visits

Leverage IIS functionality

- Best practices for strategy implementation
    - **Use a prompt system** to notify staff when vaccinations are due for every patient encounter
    - **Generate patient line lists** routinely to identify patients not up-to-date and overdue to determine future due dates for vaccines
    - **Assess practice performance and generate practice-level coverage reports** at regularly scheduled intervals for single vaccine and combination series for various age cohorts

Leverage IIS functionality

- Best practices for strategy implementation
  - **Use reminder recall functionality** to communicate with patients about appointments

Give a strong vaccine recommendation

Give a strong vaccine recommendation

- Parents usually consider their child's health care professionals one of the most trusted vaccine information sources
- A 2011 study on low HPV vaccination rates found poor provider recommendations contributed to under-vaccination
- Providers trained to use the presumptive announcement approach for HPV vaccination saw more significant increases in HPV vaccination coverage among their patients in a 2017 randomized clinical trial

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Give a strong vaccine recommendation

- Best practices for strategy implementation
  - **Use effective communication approaches** when recommending vaccines
    - Presumptive language
    - Bundling approach
    - Sandwiching recommendations
  - **Prevent missed opportunities** by recommending vaccines when they are due and recommending multiple vaccines simultaneously if the ACIP schedule indicates the patient is due for more than one vaccine at the time of the visit
  - **Avoid recommending vaccines based on school mandates** by not differentiating which vaccines are required for school, or describing certain vaccines as "optional"

Give a strong vaccine recommendation

- Best practices for strategy implementation
  - **Listen to parents** and seek to understand the concerns behind parents' questions before responding
  - **Reduce disparities and promote vaccine equity** by training providers to recognize the diversity in their community and acknowledge the systemic, cultural, and historical reasons some patients may have low confidence in vaccines
  - **Receive routine training** to prepare for and focus on the vaccination discussion with parents

Strengthen vaccination communications

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Strengthen vaccination communications

- Strengthening vaccine communications helps providers to:
  - Increase positive vaccination messaging throughout their practice
  - Provide accurate, easily accessible information on vaccines
  - Engage in effective vaccine conversations with parents
- The messengers and messages used to convey accurate information about vaccines are essential to combating mis/disinformation and improving vaccine confidence

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Strengthen vaccination communications

- Best practices for strategy implementation
  - **Promote the provider's patient vaccination policy** by sharing practice-wide vaccination policy with all new and existing patients and including the policy in new patient packets, displaying it in waiting rooms, and exam rooms
    - Does not necessarily mean a policy for *mandatory* vaccination
  - **Promote patient and parent education** by including vaccine-related promotional materials in welcome packets for new patients and accessible locations throughout the practice
    - Waiting room brochures and posters
    - Materials placed in exam rooms
    - Get creative - restrooms!

Strengthen vaccination communications

- Best practices for strategy implementation
  - **Update and train staff** by incorporating routine and current vaccine-related content in training curricula and promoting continuing education that focuses on vaccine education
    - ACIP schedule
    - Increasing vaccine confidence
    - How to address common questions or mis/disinformation about vaccines
    - Presumptive announcement approach to vaccine recommendations

Strengthen vaccination communications

- Best practices for strategy implementation
  - **Promote vaccination on the practice's website and social media** by incorporating vaccine-related content and have protocols to ensure the content is routinely updated
    - Parent- and patient-friendly ACIP schedules
    - Practice's vaccination policy
    - Links to reputable sources of information

Strengthen vaccination communications

- Best practices for strategy implementation
  - **Reduce disparities and promote vaccine equity** by ensuring patient materials in languages spoken within the provider's community are available
    - VIS translations in dozens of languages on Immunize.org
      https://www.immunize.org/vaccines/vis-translations/
    - Other educational materials translations
      https://www.immunize.org/translations/

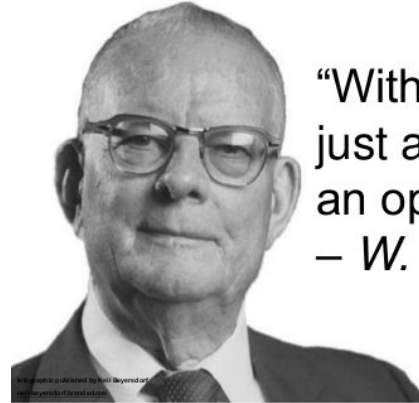PUBLIC HEALTH DIVISION | IMMUNIZATION UNIT

Data quality & QI

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Why?

- Data is essential to quality improvement
    - Helps inform progress and outcomes of work
- Data quality means the data collected has:
    - Accuracy
    - Completeness
    - Relevance
    - Legality
    - Consistency
    - Accessibility

"Without data you're just another person with an opinion."
– *W. Edwards Deming*

In Infographic published by Axel Beyersdorf
axel-beyersdorf.de/ivation-solution

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Bad data quality

- IIS data needs to be accurate, timely, and complete
- If one or more of these components are missing:
  - Assessment of coverage may not be representative of true coverage of patient population
  - Patients may be over- or under-vaccinated

Common data quality challenges: Newborn records

- Newborn babies with duplicate records
  - Birthing facilities report hep B and nirsevimab birth dose under a generic name that is not always updated in the WyIR once the baby has been given a legal name
    - NBM, NBF, BYB, BYG with mother's last name
    - Baby Girl and Baby Boy with mother's last name
    - Mother's first name, Baby as middle name, mother's last name
  - New record is then created by vital stats upload or baby's provider with baby's legal name

Common data quality challenges: Newborn records

- Newborn babies with duplicate records
  - Please search for a birth record and submit a duplicate patient merge!
    - You cannot report a birth dose of hep B or nirsevimab on a patient's record by assumption or word of mouth, you must use a verified immunization record as a source
      - The best source is finding the baby's original WyIR record and submitting the merge
    - Search using date of birth to check for generically named records that may match your patient

Common data quality challenges: Newborn records

- Newborn babies with duplicate records
  - Why does this matter?
    - Incomplete record if birth dose of hep B or nirsevimab is missing
      - Missing hep B dose can impact perinatal hep B prevention case management
      - Over vaccination or revaccination can occur
    - Impact on county and state coverage
      - Rarely are the initial generically-named patient records in the WyIR inactivated and patient will appear to be unvaccinated as they age
      - County coverage rates may be significantly impacted
      - Impacts data analysis for identifying pockets of low coverage (i.e. planning for possible measles cases)

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Common data quality challenges: Patient status

- Management of patient active/inactive status
  - Facilities need to routinely inactivate patients in the WyIR in order to have accurate reports (e.g. reminder/recall, coverage rate)
    - Inactivating a patient does not change the organization owner on the Patient Demographics screen. It removes the patient from showing up on reports (e.g. coverage rate report, reminder/recall) when they are run for "active patients only"
    - Inactivation does not delete any patient information from the WyIR
  - Appropriate utilization of "deceased"
    - Ensures families do not receive reminders
    - Ensures accurate patient lists

Common data quality challenges: Patient status

- Patient ownership
    - A facility "own" a patient if that facility adds a new patient in the WyIR
    - A facility will also "own" a patient if that facility administered the most recent vaccine
        - If you manually enter vaccines into the WyIR and do not want to take ownership of a patient, you can select the "Do not take ownership" check box on the Vaccination View/Add Screen
    - Updating demographic information (i.e. name or address) or recording a historical vaccination will not transfer ownership

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Common data quality challenges: Patient status

- Patient status
  - Patient status determines whether a patient is "active" or "inactive" with a facility
    - There are three status options in the WyIR: active, inactive, and deceased
  - Patients automatically display as "active" if an owning organization or facility
    - Creates a new patient record
    - Documents an administered vaccine

Common data quality challenges: Patient status

- You should only remove ownership or inactivate a patient if a patient is no longer seeking medical care from your facility or you do not have primary responsibility for vaccinating that patient
  - Examples:
    - When a patient moves
    - When a patient changes to a different facility
    - They only came to your clinic for a one-time vaccination event, such as an annual flu shot or COVID-19 vaccine
- You should not inactivate patients who are actively coming to the facility, but choose not to vaccinate with some or all vaccines

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Common data quality challenges: Patient status

- How do we know if patient status management should be done?
  - It should occurred routinely at least quarterly, and after an mass vaccination events (i.e. flu shot clinics)
  - Tdap is good indicator in the adolescent population
    - Tdap coverage rates will be abnormally low if patient status has not been managed (for instance, 40-60% coverage for this school required vaccine)
      - Patients may have come to clinic during infancy or childhood, but have since moved, and appear to be unvaccinated

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Immunization QI programs

How to find QI programs to participate in

- Professional organizations
  - American Academy of Pediatrics
  - American College of Physicians
- HPV-specific
  - American Cancer Society
  - HPV IQ
- Organizational specific
  - Large healthcare organizations often have their own QI programs
- VFC-enrolled clinics
  - Immunization Quality Improvement for Providers (IQIP)

- IQIP is a CDC-led QI program that promotes and supports implementation of provider-level strategies designed to help increase on-time vaccination of children and adolescents
- All VFC-enrolled clinics in Wyoming are eligible for participation in the IQIP program
- IQIP is a 12-month process

IQIP process

Site Visit	2-Month and 6-Month Check-Ins	12-Month Follow-Up
• Provider's vaccination workflow is observed, and initial coverage is reviewed • QI strategies are selected • Technical assistance is provided by the IQIP consultant • Action items are chosen for strategy implementation plan	• Progress toward strategy implementation is reviewed • Technical assistance is provided by the IQIP consultant • Strategy implementation plan is reviewed and updated	• Progress toward strategy implementation is reviewed and updated • Technical assistance is provided by the IQIP consultant • Year-over-year coverage change is reviewed

IQIP process

- Site visits on a two-year cycle
  - July 1, 2024 - June 30, 2025
    - Big Horn, Park, Washakie, Hot Springs, Goshen, Niobrara, Converse, Platte, Natrona, Sublette, Teton, Lincoln, and Uinta counties
  - July 1, 2025 - June 30, 2026
    - Laramie, Albany, Carbon, Sweetwater, Fremont, Weston, Crook, Campbell, Johnson, and Sheridan counties
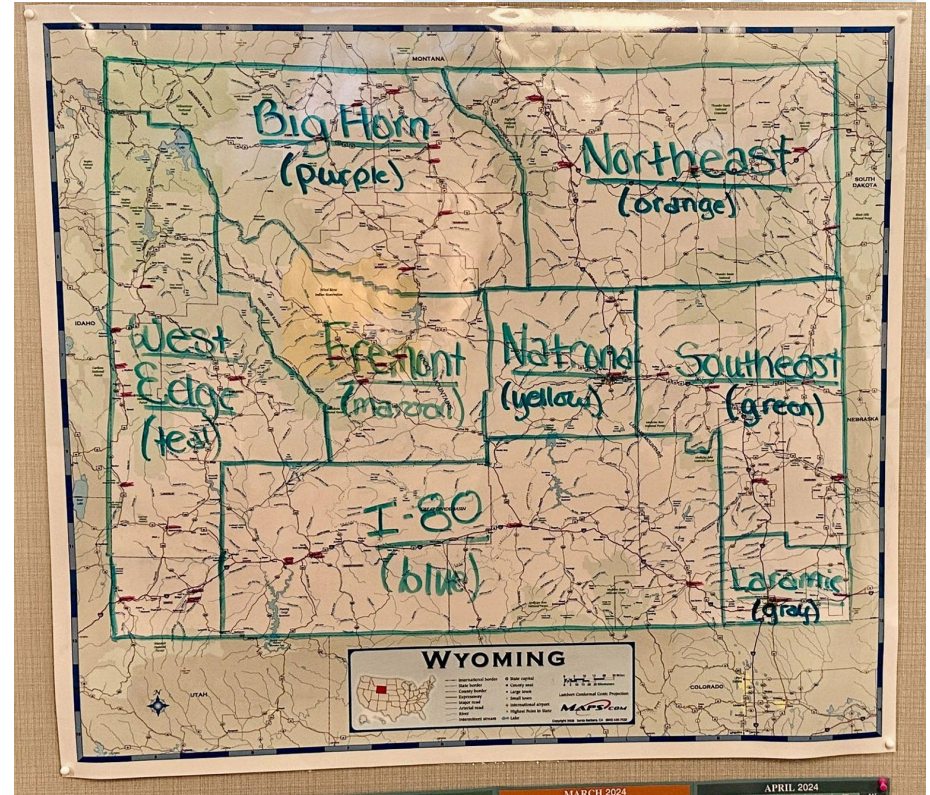
QI program participation

- If you are participating in a QI program and enrolled in the VFC program, let Heidi know!
  - You can receive credit for the IQIP site visit without going through the IQIP process alongside your current QI program

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Questions?

I heard you like quality improvement projects…

So I created a quality improvement project to improve quality improvement projects

Thank you!

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