



Raising Immunization Rates through Quality Improvement Partnerships

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Objectives

- Describe the perfect storm of challenges and opportunities that made Maine's childhood immunization quality improvement partnership successful.
- Examine immunization-related office procedures that are effective for improving immunization rates.
- Identify barriers and potential solutions to sustaining and encouraging immunization rate improvements.

Agenda

- Setting the Stage for Raising Immunization Rates & First STEPS Quality Improvement Project
- Tracking Great Progress: Evaluation of First STEPS
- Instituting a Change Package using Quality Improvement Methodology
- Sustaining Immunization Rate Improvements

Setting the Stage

- **Challenges**
 - Unfavorable parental attitudes
 - Data accuracy and accessibility
 - Workflow strain on ambulatory practices
- **Opportunities**
 - Focus on child healthcare quality improvement; aligning measures/data collection
 - Documented best practices
 - Coordinated patient education/outreach
 - Health Information Systems Integration
 - Universal Childhood Immunization Program



The “Perfect Storm”

Past: General interest among clinicians, public health and others, but little coordinated leadership and action.

Now: A perfect storm of:

- Accountable Care
- Meaningful Use
- Patient Centered Medical Home
- Improving Health Outcomes for Children (IHOC)/CHIPRA Grant
- Maine Universal Childhood Immunization Program
- Pathways to Excellence

The Players

- IHOC/CHIPRA Grant - MaineCare
- Maine Quality Counts - First STEPS Initiative
- Maine Immunization Coalition
- Maine Vaccine Board
- Maine Immunization Program (MIP)
- Maine Office of Information Technology
- Health Systems
- ME Primary Care Association, ME Chapter of American Academy of Pediatrics, ME Academy of Family Physicians
- Muskie School of Public Service, USM
- Maine Child Health Improvement Partnership (ME CHIP)

MaineHealth

- Not-for-profit, integrated family of healthcare organizations
- Community hospitals, physician practices, long-term care facilities, home care agencies, and support services in Maine's southern, central, mid-coast, and western regions
- Serve 11 of Maine's 16 counties (75% of the state's population)
- Ranked #67 among the nation's top 100 integrated delivery networks ('11)
- Dedicated to concepts of Triple Aim: improve population health, reduce per capita cost of care and enhance the patient experience
- Focus on improvement in community health, clinical care, patient safety, education, healthcare policy and research

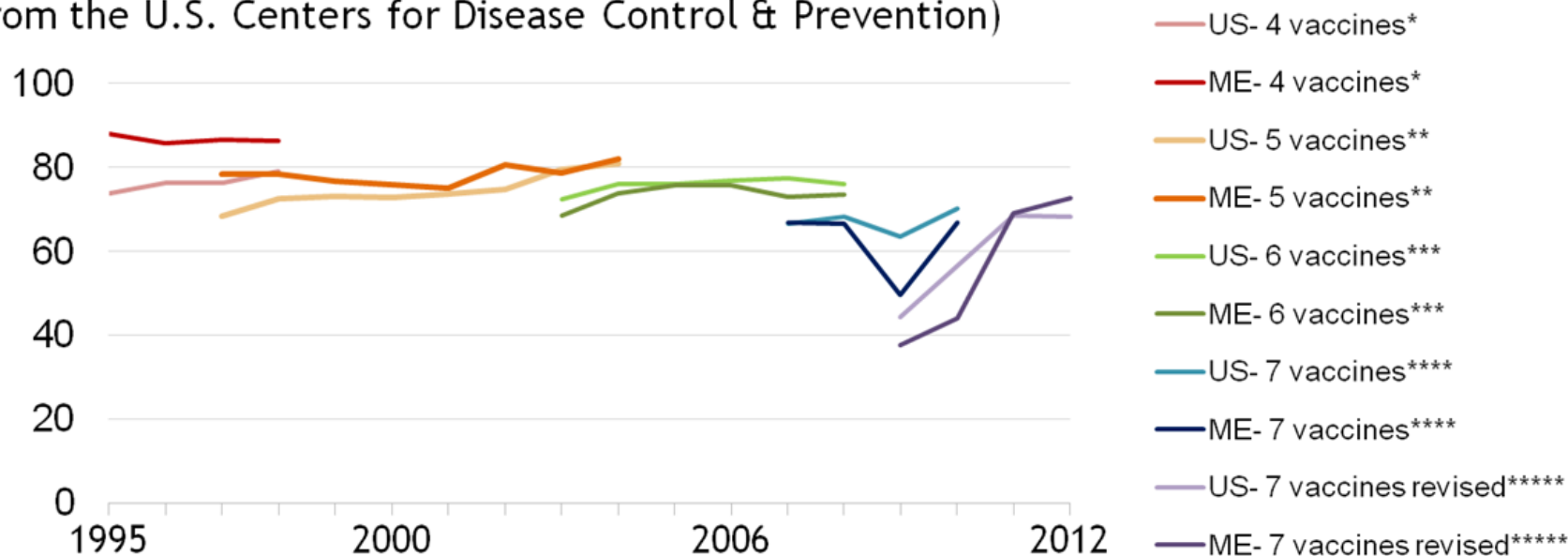
MaineHealth Vision:

Working together so our communities are the healthiest in America

National Immunization Survey 1995-2012

Percent of 19-35 Month Olds in Survey Sample Up-to-Date For Recommended Immunizations

(All doses received on time, based on schedule from the U.S. Centers for Disease Control & Prevention)



***4 Vaccines** include Diphtheria-Tetanus-Pertussis (4+doses), Polio (3+ doses), Measles-Mumps-Rubella (1 dose), and Haemophilus Influenza B (3+ doses)

****5 Vaccines** include four listed above plus Hepatitis B (3+ doses)

*****6 Vaccines** include five listed above plus Varicella (1 + doses)

******7 Vaccines** include the six listed above plus Pneumococcal Conjugate Vaccine (4+ doses)

*******7 Vaccines revised**- same seven vaccines listed above, with change in definition for Haemophilus Influenza B; it changed from (3+ doses) to (Full series- primary series plus booster dose).

Improving Health Outcomes for Children (IHOC) CHIPRA Quality Demonstration Grant

Building a public-private framework and system for measuring and improving the quality of child healthcare services and outcomes

Collaborating with health systems, pediatric and family medicine providers, associations, state programs and consumers to:

- Select and promote a set of child health quality measures
- Build a health information technology infrastructure to support the reporting and use of quality measurement information
- Transform and standardize the delivery of healthcare services by promoting a patient centered medical home model

Lead Agencies: Office of MaineCare Services in partnership with the Maine Center for Disease Control and Prevention, the Muskie School of Public Service at the University of Southern Maine (USM), and Maine Quality Counts (QC for Kids)

First STEPS Learning Initiative

First STEPS (Strengthening Together Early Preventive Services) is a four year quality improvement initiative focused on improving children's health care & preventive health (EPSDT*) screenings:

- 4 Phases: Childhood Immunizations/Bright Futures, Developmental, Autism, and Lead Screening, Healthy Weight and Oral Health, Spreading Developmental Screening Lessons; each phase is 8 months
- Targeted to practices serving high volumes of children (>1000) covered by Maine's Medicaid program
- Promotes the use of the American Academy of Pediatrics Bright Futures Guidelines and the Principles of the Patient Centered Medical Home

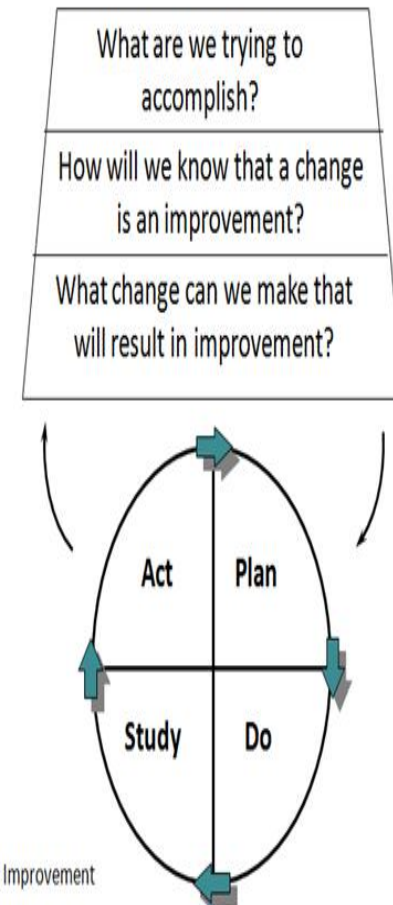
First STEPS Learning Initiative

Phase 1: Childhood Immunizations

- 24 practices work on immunizations (Sept '11-Feb '12)
- 2 Learning Sessions; Monthly Practice Calls; Monthly PDSA Cycles reported
- Monthly immunization rate reports from Aug '11- Apr '12 (from ImmPact, Maine's Immunization Information System)
- Quality Improvement Coaching
- Practices found data reports helpful in continuing their quality improvement work so immunization rate reports were provided quarterly from Aug '12-Oct '13; 2 additional reports provided in 2014

Guided by the Science of Quality Improvement

- Focus on systems, not people
- Use a balanced set of measures, understand the variation of data measured continuously over time
- Continuously improve quality
- Set goals, use PDSA cycles
- Understand reasons and motivations of people to act



From: Associates in Process Improvement

First STEPS Phase I

Goals and Final Evaluation Results

Within **12 months** of beginning of learning collaborative, achieve an average increase of

GOAL 

4 Percentage Points

in overall immunization rates above baseline, across all First STEPS practices.

Sept 2012: **12 months** after beginning of learning collaborative, data showed an average increase of:

ACHIEVED 

5.1 Percentage Points

in overall immunization rates above baseline, across all First STEPS practices

Dec 2012: **15 months** after beginning of learning collaborative, data showed an average increase of:

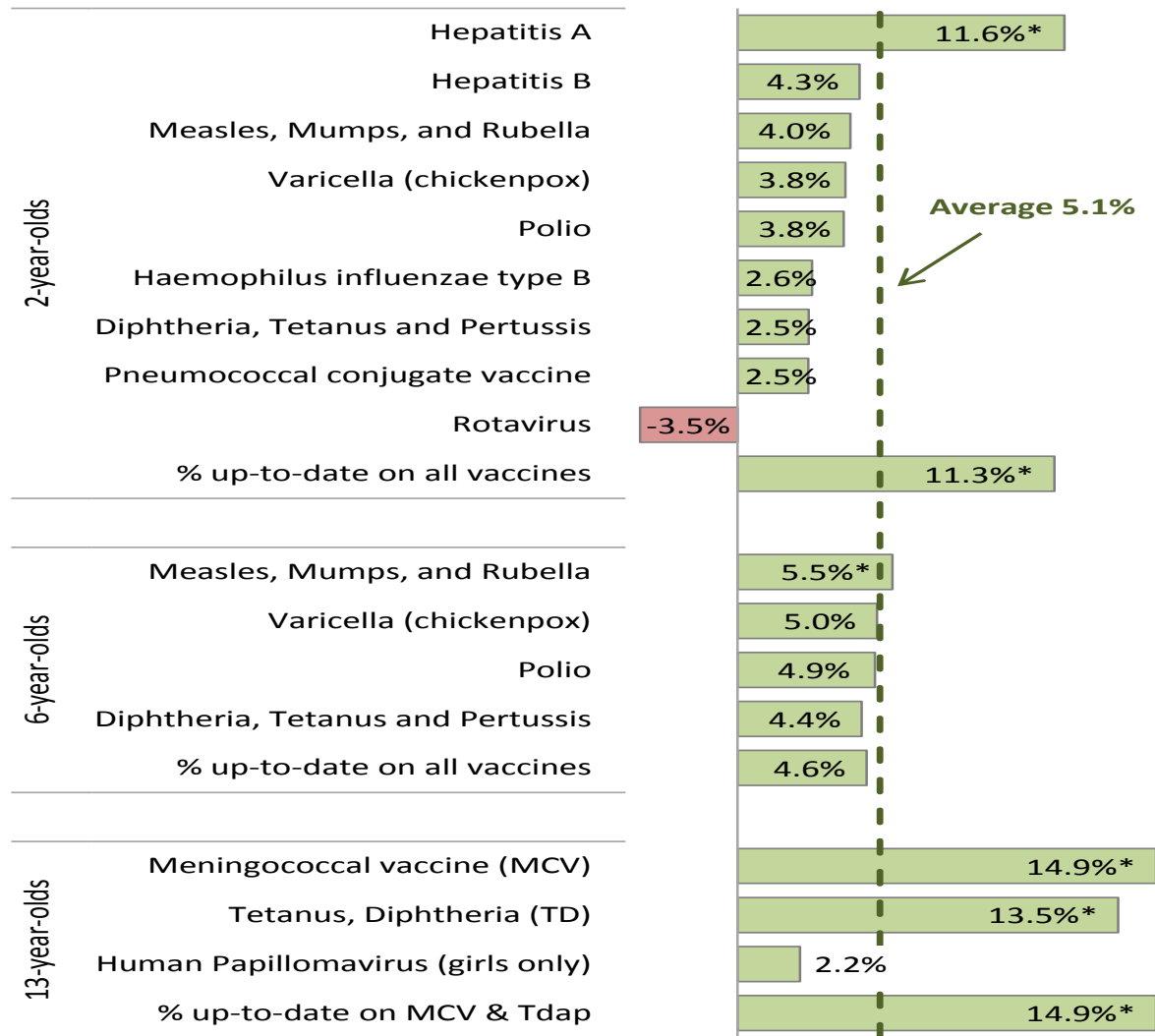
ACHIEVED 

7.1 Percentage Points

in overall immunization rates above baseline, across all First STEPS practices

Source: *Improving Health Outcomes for Children (IHOC) First STEPS Phase I Initiative: Improving Immunizations for Children and Adolescents Final Evaluation Report*, Muskie School of Public Service, University of Southern Maine, March 2013.

Percentage Point Change in Immunization Rates in First STEPS Phase I Practices after 1 year



*statistically significant (p<.05)

Significant Changes in Immunization-related Office Systems

- Training staff in how to discuss importance of vaccinations with hesitant patients/parents
- Using recall and reminder systems for children due or past due for vaccinations
- Routinely reviewing practice vaccination rates
- Reviewing and updating ImmPact dose data
- Reviewing ImmPact to identify vaccinations received at alternate sites

Source: IHOC First STEPS Phase I Initiative: Improving Immunizations for Children and Adolescents Final Evaluation Report, Muskie School of Public Service, University of Southern Maine, March 2013.

Other Best Practices/Lessons Learned

- Value of having monthly data reports to track progress
- Using and/or updating data in the ImmPact registry
 - Reviewing immunization history from ImmPact at every visit
 - MOGE patients from ImmPact
- Establishing shared goals and a standardized immunization schedule for all providers in the practice
 - Changing the immunization schedule (e.g. administering the Hepatitis A vaccine to children at 18 months instead of at 24 months)

Source: IHOC First STEPS Phase I Initiative: Improving Immunizations for Children and Adolescents Final Evaluation Report, Muskie School of Public Service, University of Southern Maine, March 2013.

System Changes to Continue to Support Improvements in Immunization Rates

- Piloting IHOC measures in First STEPS practices helped gain support to use these measures in other pay-for-performance and public reporting efforts in Maine
 - Pathways to Excellence (PTE) added IHOC immunization measures
 - Many health systems have added IHOC immunization measures into provider contracts for incentive payments
- IHOC Immunization Coverage Report functionality is available to generate reports at 2, 6 and 13 years old by practice from ImmPact

Source: *IHOC First STEPS Phase I Initiative: Improving Immunizations for Children and Adolescents Final Evaluation Report*, Muskie School of Public Service, University of Southern Maine, March 2013.

Improving Immunization Rates Change Package

Aim:

To improve preventive services for Maine's children.

Aim/Outcome: Between September 2011 & September 2012, improve immunization rates (2010) by $\geq 4\%$ in practices that serve a high volume of MaineCare.



Leaders as champions for change.



Team based and evidence based system of care with informed, engaged and competent staff.



Access to care.



Immunization information and tracking systems (HIT) that support improving immunizations.



Engage partners in improving immunization rates.

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Immunization

Rates for:

2-Year Olds

6 Year Olds

13 Year Olds

**Primary
Driver #3
(Process)**

Secondary Drivers

**Foundational
Change Ideas**

**Systems in place to
optimize patient
flow and access for
patients**

Look for every opportunity to minimize and eliminate missed opportunities to vaccinate

Standing orders for all routine immunizations

Implement ways to ensure vaccinations are readily available to patients

Access to Care

**Patient costs
minimized**

Office policies and procedures

Standing Orders for All Routine Immunizations

Tasks and Specific Tests of Change

Review existing example standing orders from evidence based resources.

Customize standard order set based on individual practice and provider needs.

Review standing orders with clinical support staff to identify potential challenges, including processes related to where standing orders will be available for staff to use (EMR, binder, etc.)- revise orders as necessary.

Seek any necessary approvals and test standing orders using PDSA cycles.

Implement standing orders to allow staff to independently screen patients, identify opportunities for immunization, and administer vaccines under physician supervision (or in accordance with local regulations).

System Index: Assessing Your System

A. First STEPS Immunization System Index

Practice Name: _____ Date: _____
Person(s) Completing: _____

Please circle your answer:

1. **Yes or No.** Have you identified a physician champion and an office manager or nurse champion to improve immunization rates?
2. **Yes or No.** Do you have a practice team that includes a physician champion, nurse, and office manager that meets at least once a month to review immunization data/quality metrics?
3. **Yes or No.** Have clinicians agreed upon, documented, and posted a standard immunization **schedule** for the practice?
4. **Yes or No.** Does the practice routinely use a reminder system for children who will be due for immunizations? Many practices/clinics call the patients who don't keep appointments (i.e., no shows). However, this approach misses children who never make an appointment in the first place and is not adequate.
5. **Yes or No.** Does the practice routinely use a recall system for children in need of immunizations?
6. **Yes or No.** Does your practice routinely record immunizations electronically in ImmPact2 at the time of patient visits?
7. **Yes or No.** Does your practice routinely update patient information in ImmPact2 using MOGE (Moved or Gone Elsewhere) rules?
8. **Yes or No.** Does someone from the practice routinely assess the immunizations needs of each child before *all* visits (including non-preventive care) and alert the responsible clinician about those needs?
9. **Yes or No.** Does the staff document reasons why a due vaccine cannot be administered?
10. **Yes or No.** Does your office schedule "shots only" visits?
11. **Yes or No.** Does your office offer immunizations during evening, weekend and drop-in appointments?
12. **Yes or No.** Have clinicians agreed upon, documented, and posted a common immunization **policy** for the practice?
13. **Yes or No.** Has your practice implemented standing orders for all routine vaccinations?
14. **Yes or No.** Has your staff received clinical training or refreshers on storage, handling and proper immunization techniques and how to talk with parents that are hesitant about vaccination?
15. **Yes or No.** Has your staff received training on using a standard documentation form like the "AAP immunization refusal to vaccinate form" to record refusals?

For Questions 1-15, Total Yes _____ Total No _____

Sustaining Improvements: MaineHealth's Story

How do you maintain momentum for an immunizations quality improvement project after grant funding ends?

INVOLVE YOUR PARTNERS –
HEALTH SYSTEMS

How did MaineHealth build off of First STEPS?

Goal of MaineHealth Childhood Immunizations Program

- Increase Maine's 7-series immunization rate of children 19-35 months from 67% (2010) to 82% or higher in 2016
- All member-owned family and pediatric practices achieve at least a "GOOD" rating for their performance related to the childhood immunizations metrics from Maine Health Management Coalition's (MHMC) Pathways to Excellence (PTE) Program
- Childhood Immunizations is a priority area for:
 - MaineHealth Health Index
 - MaineHealth Systems Measures
 - Improving Health Outcomes for Children/First STEPS program

Why Create a Clinical Improvement Plan for Childhood Immunizations?

- Establish common standards for measurement and reporting to support increasing childhood immunization rates within member-owned practices
- Align MaineHealth (MH) efforts with state and national quality program requirements
- Embed the program within existing work
- Establish baseline data and compare results across the health system to identify opportunities for improvement
- Create common supports and ways of recognizing member-owned practices for their excellent work

Measures

- Maine Health Management Coalition's (MHMC) Pathways to Excellence (PTE) Childhood Immunization Metrics
- Reflect the core set of federal childhood immunizations metrics (CHIPRA); comprehensive and stringent
- Immunizations up-to-date at age 2 years (includes Hep A, Rotavirus and Flu)
- Immunizations up-to-date at age 13 years (HPV, MCV and Tdap)

Reporting

- Use of ImmPact registry-based reporting
- MH staff has access to download practice-level reports from ImmPact for member-owned practices
- Compare to PTE scoring matrix; determine achievement level
- Results of the measures (immunizations up-to-date at age 2 and 13 years) to be reported in:
 - MMC PHO Quarterly Transparency Reports MH Health Index Report (annually)/Website (quarterly)
 - PTE Website

Supports and Resources

- First STEPS Change Package Toolkit (system index, checklist of improvement ideas, action planning and full change package as needed)
- Access to a Practice Improvement Advisor
- Centralized resources and programs (free):
 - ImmPact-Epic Interface
 - Childhood Immunizations Education and Training Program for clinical support staff
 - Patient education materials
 - MOGE service
 - Reminder/recall systems
 - Other (projects as defined by the MH Childhood Immunizations Task Force, e.g. Standing Orders, Common Pediatric Immunization Schedule for MaineHealth)

Rewards and Incentives

Member-owned practices that achieve the PTE Good Rating will receive:

- Plaque – featuring a child-friendly work of art selected from a Raising Readers illustrator as well as a statement of recognition
- Recognition in MaineHealth Publications
- Notification/press releases to local newspapers and organization's senior leadership

Implementation

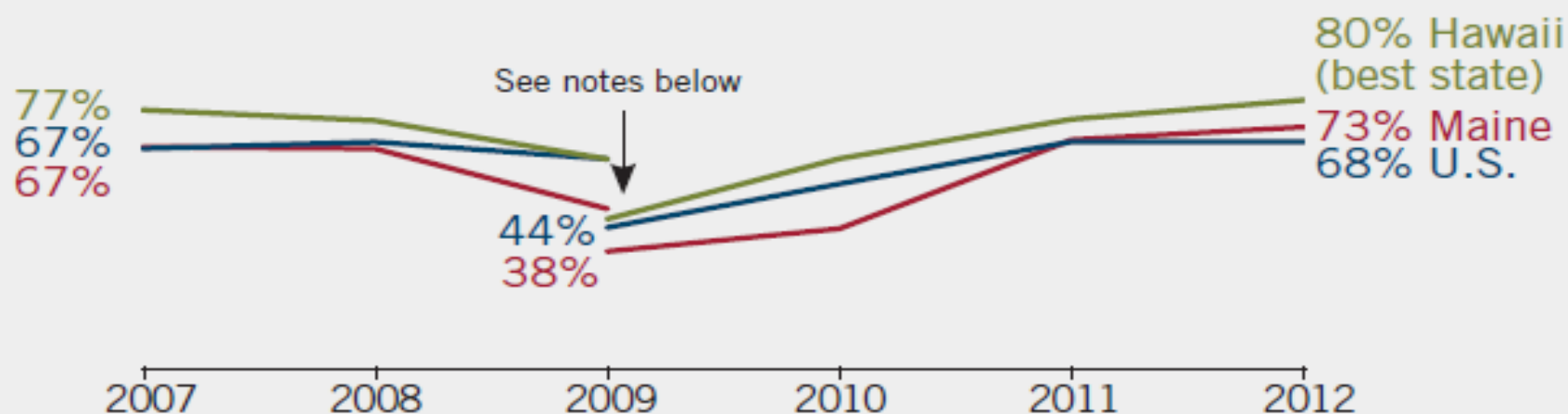
- Run CHIPRA reports from ImmPact beginning in Oct '13 (in reality, this began in November)
- Meetings with member-owned practices serving high volumes of children and reporting immunization rates below those that would qualify for PTE's Good Rating – complete First STEPS survey and ID areas of change
- Check-in meetings as requested by practices
- Reporting to MMC PHO and MH Health Index
- Incentives and rewards distributed

How Maine Compares to the U.S.

Figure 2

Percent of 19- to 35-Month-Olds Up-to-Date for a Series of Seven Immunizations

2016 MaineHealth target: 82% or more



- 1 A national shortage of Haemophilus Influenza B vaccine in 2009 resulted in delayed booster shots and, in turn, reduced up-to-date rates for the series graphed above.
- 2 In 2009, the National Immunization Survey began reporting a measure that more accurately estimated the true up-to-date rate in each state. These more accurate estimates (lines from 2009 to 2012) are not directly comparable to the older measure's rates in 2007-2009.

Lessons Learned

- Alignment of metrics across initiatives is critical
- Reduce burden on practices: get metrics/practice reports from an HIT system and eliminate double data entry of vaccines into state registry/EMR (one point of data entry)
- Practices need ongoing training, support and coaching, especially with staff turnover
- Standard immunization schedule across practice(s) is important; standing orders can reduce missed opportunities
- System for sustainability and accountability after a quality improvement project ends is crucial to continued success

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