Quality Improvement Strategies and New Reports to Improve Childhood Immunization Rates

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Agenda

• Setting the Stage
  – Introduction to IHOC, MECHIP, and First STEPS
  – Model for Improvement

• What is it we are trying to improve?

• How will we know that the change is an improvement?
  – Reporting
    • ImmPact
    • Maine Health Management Coalition—Pathways to Excellence

• What changes can we make? Testing changes—support and resources
  – System Index
  – Check list of improvement ideas
  – Action planning & Change Package

• Open Discussion of Breakthroughs and Barriers related to improving childhood immunization rates
IHOC Maine
CHIPRA Quality Demonstration Grant
(Feb 2010-Feb 2015)
Improving Health Outcomes for Children (IHOC) Focus:

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
• Create a Maine Child Health Improvement Partnership (ME CHIP)
Maine Child Health Improvement Partnership (ME CHIP)

**Mission**
To optimize the health of Maine children by initiating and supporting *measurement-based* efforts to enhance child health care by fostering public/private partnerships.

**Vision**
All practices providing health care to children will have the skills, support, and opportunities for collaborative learning needed to deliver high quality health care.

ME CHIP is part of the National Improvement Partnership Network (NIPN)
First STEPS Learning Initiative

First STEPS (Strengthening Together Early Preventive Services): *First STEPS is a four year Quality Improvement Initiative focused on improving children’s health care & improving preventive health (EPSDT*) screenings:*

- Phase 1: Introduce Bright Futures 3rd Ed and Childhood Immunizations
- Phase 2: Developmental, Autism, and Lead Screening
- Phase 3: Healthy Weight and Oral Health
- First STEPS 2014: Spread lessons learned on developmental screening
- Each 8 month phase: 2 Learning Sessions; Monthly Practice Calls and PDSA Cycles
- First STEPS Learning Initiative (1-3) targeted to practices serving high volume of children (>1000) covered by Maine’s Medicaid program; 28 practices collectively serving 33,985 kids* enrolled in MaineCare (26% of total)* (*based on 2010 MaineCare data)

*First STEPS promotes the use of the American Academy of Pediatrics (AAP) Bright Futures Guidelines and the Principles of the Patient Centered Medical Home (PCMH)*
Guiding Improvement Using the Model for Improvement

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?

From: Associates in Process Improvement
Getting Started

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
Improvement in Immunization Rates

First STEPS Phase 1 Final Evaluation Results for 21 Practices

Within **12 months** of beginning of learning collaborative, achieve an average increase of **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: **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: **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.
Overall Immunization Rate Increase in First STEPS practices

In 2013, we continue to see improvements in population based immunization rates

- 2012- Maine Universal Immunization Coverage Law ensures access to vaccines for all children <19 years
- America’s Health Rankings on December 11, 2013: Maine’s 2 year old immunization rate (NIS data) increased from 69% to 72.6% and the adolescent immunization (13-17 year old) rate increased from 59.5% to 65%
Using Data to Guide Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Act

Plan

Study

Do

From: Associates in Process Improvement
Reporting

• Data for Improvement
  – Use of ImmPact registry-based reporting
• Data for Accountability
  – Pathways to Excellence
ImmPact Rate Reports

- The “IHOC Quick Picks” generate reports for four IHOC Immunization Measures (at Age 2, 6, and 13 years)
  - Three of the four immunization measures align with CHIPRA measures for 2 year olds and 13 year olds
  - One of the four immunization measures aligns with the National Quality Forum’s Meaningful Use measures for children and adolescents

- The IHOC Quick Picks were designed for use by authorized ImmPact users to run practice-level immunization reports in support of quality improvement efforts at practices and health systems. Practices need to submit per client dose information to run reports.

- Practices can use these reports to submit data to the Pathways to Excellence (PTE) program.

- Questions about reports should be directed to the ImmPact Support Line @1-800-906-8754

- Instructions on how to print IHOC (CHIPRA) Childhood Immunization Metrics from ImmPact are available at: http://www.mainequalitycounts.org/image_upload/IHOC%20Quick%20Picks%20in%20ImmPact%20Info%2024-2014.pdf
IHOC Quick Picks
Immunization Coverage Report
Criteria Page
Gender Label and Dropdown:

<table>
<thead>
<tr>
<th>Field</th>
<th>Option</th>
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<tbody>
<tr>
<td>Organization(s)</td>
<td>IHOC TEST CENTER</td>
</tr>
<tr>
<td>Site(s)</td>
<td>IHOC 22, IHOC 33</td>
</tr>
<tr>
<td>Association</td>
<td>Primary</td>
</tr>
<tr>
<td>MaineCare</td>
<td>MaineCare and Non-MaineCare</td>
</tr>
<tr>
<td>Gender</td>
<td>All Clients</td>
</tr>
<tr>
<td>Birth Date Range</td>
<td>6/15/2010 to 6/15/2011</td>
</tr>
<tr>
<td>UTD Rule to Apply</td>
<td>CASA Rules (Valid by Age Two)</td>
</tr>
<tr>
<td></td>
<td>ACIP Schedule (Valid by Schedule)</td>
</tr>
<tr>
<td>Effective Date</td>
<td>Immunized as of N/A</td>
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</table>

Org: IHOC TEST CENTER • Site: IHOC 11 • User: Jin Liao
# Sample Excel Coverage Report for IHOC at Age 2 Measure

<table>
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<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
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<tbody>
<tr>
<td>1</td>
<td>Overall Coverage Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Organization</td>
<td>Site</td>
<td>Total Clients</td>
<td>Number Dose Count Met</td>
<td>Number Off Schedule</td>
<td>Percent Dose Count Met</td>
<td>Percent Off Schedule</td>
<td>Report Run On</td>
<td>Immunized</td>
</tr>
<tr>
<td>4</td>
<td>IHOC TEST CENTER</td>
<td>IHOC 11</td>
<td>107</td>
<td>11</td>
<td>96</td>
<td>10%</td>
<td>90%</td>
<td>6/14/2013 9:09</td>
<td>N/A</td>
</tr>
<tr>
<td>5</td>
<td>Individual Antigen Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Organization</td>
<td>Site</td>
<td>Total Clients</td>
<td>Total DCM%</td>
<td>DTP/aP 4</td>
<td>Polio 3</td>
<td>MMR 1</td>
<td>Hib 3</td>
<td>HepB 3</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>DCM Clients</td>
<td></td>
<td>107</td>
<td>11</td>
<td>54</td>
<td>101</td>
<td>80</td>
<td>102</td>
<td>91</td>
</tr>
<tr>
<td>10</td>
<td>DCM Percentile</td>
<td></td>
<td>10%</td>
<td>50%</td>
<td>94%</td>
<td>75%</td>
<td>95%</td>
<td>85%</td>
<td>72%</td>
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Pathways to Excellence Childhood Immunization Metrics

• Reflects 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)
MHMC Pathways to Excellence
Childhood Immunization Metrics

- New Changes Implemented in April 2014
- Hep A changed from 2 doses to 1 dose in 2 year individual vaccine rates
- Hep A benchmarks were set at 86% and 93%
- HPV for Males changed from optional to mandatory reporting
- HPV for Males benchmarks were set at 5% and 10% added
- Total points available for immunizations increased to 107 points- each vaccine benchmark is 3.5 points (14 vaccines x 2 benchmarks x 3.5 points) + 9 points for participation in ImmPact with entry of per dose client data
- Immunizations Ratings changed to Good ≥ 45 Points, Better ≥ 65 Points, Best ≥ 90 Points (add ≥)
- PTE ratings good-better-best cut-offs will be evaluated in summer of 2014: Consider increasing cut-offs by 5 points for good and better ratings for both immunizations and asthma in 2015
How to Submit to PTE

SUBMISSION INSTRUCTIONS:

1. Complete form and have responsible provider sign (form below is only an example, if submitting, please use the form found here: http://www.mehmc.org/providers/pte-resources/pediatric-technical-specifications/ under “Immunizations” entitled “Excel Worksheet for Calculating Practice Rates on PTE Pediatric Immunization Metrics.” Even if submitting via an ImmPact report, this form must be completed, signed, and submitted along with your PTE ImmPact report).

2. Send to the Maine Health Management Coalition either by fax, or scan and email:
   a. Fax: 207-899-3207
   b. Email to PTE@mehmc.org (preferred)

3. Practice agrees to participate in on-site validation of the data, upon the MHMC’s request.

4. Recognition will be effective for 2 years from the date of submission and the practice agrees to be publically reported on the GetBetterMaine reporting website.

5. Practices who do not meet the lowest level of scoring criteria (<45 points) will be notified and reported as “Did Not Report” on the aforementioned reporting website. These practices can resubmit data quarterly to participate in the reporting or to improve their ratings (practices who currently have the PTE “Good” or “Better” rating may resubmit for a higher rating prior to their expiration date).

http://www.mehmc.org/providers/pte-resources/pediatric-technical-specifications/
# How to Submit to PTE

<table>
<thead>
<tr>
<th>PTE Pediatric Immunization Measures</th>
<th>Enter Practice Score Here</th>
<th>CDC National Average</th>
<th>90th Percentile</th>
<th>Equal or better than CDC (worth 3.5)</th>
<th>Equal or better than 90th Percentile</th>
<th>Total Points</th>
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<tbody>
<tr>
<td>2 YR Old-4 DTaP</td>
<td></td>
<td>84%</td>
<td>93%</td>
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<td>0</td>
<td>0.0</td>
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<tr>
<td>2 YR Old-3 IPV</td>
<td></td>
<td>93%</td>
<td>94%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-1 MMR</td>
<td></td>
<td>91%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-3 Hib (type B)</td>
<td></td>
<td>90%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-3 Hepatitis B</td>
<td></td>
<td>91%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-1 Varivax</td>
<td></td>
<td>90%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-4+ PCV</td>
<td></td>
<td>83%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 YR Old-3 Rotavirus (RV) (See #5 inclusion criteria). Please</td>
<td></td>
<td>59%</td>
<td>85%</td>
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<td>2 YR Old-1 Hepatitis A</td>
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<td>86%</td>
<td>93%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
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<tr>
<td>2 YR Old-2 Influenza (Seasonal Rate, Sept-April of)</td>
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<td>42%</td>
<td>75%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
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<tr>
<td>13 YR Old-1 dose of Tdap or Td &gt;10 yrs of age</td>
<td></td>
<td>63%</td>
<td>85%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>13 Yr Old-1 dose MCV</td>
<td></td>
<td>63%</td>
<td>85%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>13 Yr Old-3 doses of HPV for</td>
<td></td>
<td>23%</td>
<td>30%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>13 Yr Old-3 doses of HPV for Boys</td>
<td></td>
<td>5%</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
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<tr>
<td>Do you submit patient level data to ImmPact 2? (worth 9 points - enter &quot;9&quot;) here</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
</tr>
<tr>
<td>Total Points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
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</tbody>
</table>
Using Data to Guide Improvement

From: Associates in Process Improvement
Testing Changes: Supports and Resources

• First STEPS Change Package Toolkit
  – System Index
  – Checklist of improvement ideas
  – Action planning and full change package as needed
A. First STEPS Immunization System Index

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. Have 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 _____
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

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)

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

Aim:
To improve preventive services for Maine's children.
Aim/Outcome: Between September 2011 & September 2012, improve immunization rates (2010) by ≥ 4% in practices that serve a high volume of MaineCare.

DRIVERS

- 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.

Immunization Rates for:
- 2-Year Olds
- 6 Year Olds
- 13 Year Olds

QC for Kids
Maine Quality Counts
Primary Driver #3 (Process)

Secondary Drivers

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

Foundational Change Ideas

- 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
- Office policies and procedures

Access to Care

Patient costs minimized
# Standing Orders for All Routine Immunizations

<table>
<thead>
<tr>
<th>Tasks and Specific Tests of Change</th>
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<tr>
<td><strong>Traditionally</strong></td>
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<tr>
<td>Review existing example standing orders from evidence based resources.</td>
</tr>
<tr>
<td>Customize standard order set based on individual practice and provider needs.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>Seek any necessary approvals and test standing orders using PDSA cycles.</td>
</tr>
<tr>
<td>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).</td>
</tr>
</tbody>
</table>
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
Testing Changes: Examples of Supports and Resources for MaineHealth Practices

- 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)
Now it's your turn.
Contact Information

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• **Cassandra Cote Grantham**, MA, Director, Child Health, Community Health Improvement, MaineHealth, cotec1@mainehealth.org

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