Maine Immunization Program EVALUATION OF AFIX PROCESS



Using a Quality Improvement Workplan to Improve Delivery Service and Immunization Rates 2011





Dear Maine Immunization Program (MIP) Provider,

Maintaining and improving childhood immunization rates is a challenge for everyone involved with public health. Research has shown that participating in AFIX site visits where immunization records are reviewed can help to identify areas needing improvement.

Last year, the MIP initiated a pilot project focused on identifying strategies to help practices improve their immunization rates. During 2010 AFIX site visits a Quality Improvement (QI) Workplan was developed that identified steps practices could implement to enhance immunization delivery and increase immunization rates. AFIX staff then followed up with providers to discuss the progress and/or outcome of the QI Workplan.

Over the last few months, MIP evaluated the new AFIX process and the outcomes of implementing individual QI Workplans. Pre and post immunization rates from 193 providers with QI Workplans in 2010 were analyzed. In addition, feedback was received, through two separate provider surveys. This information assisted MIP in reviewing the QI Workplan process through identifying barriers to improving immunization rates. These findings will guide MIP on developing ways to address these issues. In addition, identifying strategies that have been successful in helping providers improve rates, allows MIP to share these successes with other providers.

This report includes successful strategies and barriers providers have experienced during the last year. MIP staff are working together to review feedback submitted by providers to identify major themes, to indicate where work is already under way on the issues, and to determine strategies for moving forward collaboratively to address issues and concerns that have been brought to our attention.

The MIP appreciate the time and effort taken by providers to implement strategies that can help raise immunization rates and value your expertise and continued commitment to Maine's children.

Sincerely,

Maine Immunization Program Staff

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EXECUTIVE SUMMARY

In 2010, MIP AFIX site visit staff assisted providers in developing QI Workplans during AFIX visits. Data was analyzed to determine how the Workplans could contribute to improving immunization rates in provider offices. In addition, feedback from two provider surveys was collected. The first survey asked for feedback regarding providers' level of satisfaction with the AFIX site visit. The second survey asked for input regarding the implementation of QI Workplans. Information from the survey responses has been analyzed and results included in this report.

Benchmark assessment rates from 07/01/2010 of 156 VFC providers enrolled in ImmPact2 prior to the development of a QI Workplan were compared to assessment rates on 01/01/2011 after the QI Workplan was implemented. This was done by electronically transferring, from ImmPact2 into CoCASA, immunization data of children aged 24 – 35 months, as of the date the assessment was run. The up-to-date (UTD) rate for all children assessed for the 4DTaP 3Polio 1MMR 3HIB 3HepB 1Var 4PCV (4:3:1:3:3:1:4) series increased from 49% (4647 children) in 2010 to 69% (6191 children) in 2011.

Thirty-seven paper-based providers developed QI Workplans during their 2010 AFIX site visit. Evaluation of these providers would have required MIP AFIX staff to conduct on-site visits for the purpose of reviewing, and manually entering, patient immunization history into CoCASA to get 2011 assessment rates. Due to time constraints, evaluation of immunization rate results in this study has been limited to ImmPact2 providers.

QI project evaluation demonstrated that immunization rates can be improved when identifying specific opportunities within vaccination systems. Specifically, through providing enhanced communication and education related to immunization practices, providers gain a better understanding of how strategies targeted to their individual practices' impact their immunization rates. Results of this evaluation offers evidence that AFIX QI Workplans can contribute to improved immunization rates.

INTRODUCTION

Raising immunization levels for Maine children is one of the highest priorities for the Maine Immunization Program (MIP). Immunization service delivery in Maine is complicated by many factors, including meeting the needs of large urban areas and sparsely populated rural areas. Limited data on vaccine coverage levels complicate efforts to monitor the effect of immunization activities. No single intervention strategy alone is successful in increasing vaccine coverage levels. A combination of best practices that are implemented consistently is needed.

Several key barriers to timely vaccinations have been identified including knowledge, beliefs, and attitudes of parents. Moreover, a belief by some parents that the timing of vaccinations is not important, parents not knowing when vaccines are due, and fear of adverse reactions all contributes to lower immunization rates.

Specific provider practices and beliefs can also contribute to under-vaccination. These include the lack of reminder/recall systems or any system to identify under-vaccinated children in their practice and failure to adequately assess a child's immunization status at all visits, usually termed "missed opportunities." Many physicians underestimate the number of vaccines that can be administered during one visit or over-estimate the contraindications to vaccination; both of these situations lead to missed opportunities to vaccinate. A complex schedule with an increased number of routinely recommended childhood vaccines also leads to confusion.

Providers are sometimes unsure of how to improve their immunization rates but research has shown that participating in AFIX site visits can help. An assessment of immunization records is conducted during the AFIX site visit. The purpose of the assessment is to give the provider information regarding their vaccine coverage level and identify areas for improvement. Last year, MIP initiated a pilot project focused on enhancing individual provider immunization delivery and increasing immunization rates by improving the quality and effectiveness of AFIX feedback sessions through development of QI Workplans. Analysis of project outcomes is presented in this report.

PROJECT GOAL AND OBJECTIVES

Goal:

Enhance individual provider immunization delivery and increase immunization rates by improving the quality and effectiveness of AFIX feedback sessions through development of QI Workplans.

Objectives:

- Increase provider knowledge
- Increase provider motivation
- Increase immunization coverage
- Change in office practices and policies
- Decrease missed opportunities
- Decrease invalid doses
- Decreased vaccine preventable disease

PROJECT ACTIVITES

In 2010, MIP AFIX staff developed QI Workplans with providers during AFIX site visits. At the visit, immunization assessment rates were reviewed and specific opportunities for improvement were addressed. Feedback given to practice staff included the presentation and discussion of assessment findings regarding their immunization service delivery practices. Findings were shared with the goal of improving and sustaining immunization coverage levels. Feedback included development of a Quality Improvement (QI) plan. The QI plan identified opportunities for improvement, and included the following:

- 1. Defined action steps (strategies) to improve immunization practices;
- 2. Staff member(s) responsible for implementation of the QI plan;
- 3. Materials and/or training AFIX staff supplied to implement the improvement;
- 4. Date(s) for reassessment and measurement of intervention effectiveness;
- 5. Follow up with practices to discuss the progress and/or outcome of the QI Workplan.

MIP evaluated assessment rates of VFC providers enrolled in ImmPact2 prior to the development of the QI Workplan and compared those rates with assessment rates of those same providers after the QI Workplan was developed and implemented.

Information collected from two surveys were also analyzed. Within two weeks of the AFIX site visit, providers were mailed a copy of the QI Workplan that was developed during their visit. An AFIX site visit satisfaction survey was included in that mailing. Responses from the survey provided data used to identify the level of satisfaction providers had with the AFIX process. In addition, a provider survey was sent to practices in May 2011 asking for feedback related to their 2010 AFIX QI Workplan. Information from these surveys was used to help evaluate the quality and effectiveness of AFIX feedback sessions and the QI Workplan process.

IMMUNIZATION RATES – Providers with QI Workplan

WHO was evaluated?

156 VFC provider sites enrolled in ImmPact2

- Received a 2010 AFIX site visit
- A QI Workplan was developed
- AFIX staff completed follow up
- Discussed the progress/outcome of the QI Workplan

WHAT was evaluated?

Immunization rates **BEFORE** QI Workplan

(24 - 35 months of age as of 07/01/2010)

Immunization rates AFTER QI Workplan

(24 - 35 months of age as of 01/01/2011)

4DTaP:3Polio:1MMR:3HIB:3HepB:1Var:4PCV

(individual antigens and series)

AFIX PROCESS EVALUATION

HOW was AFIX process evaluated?

Responses analyzed from:

- > 2010 AFIX site visit satisfaction survey
- ➤ 2010 QI Workplan provider survey

IMMUNIZATION RATE EVALUATION

- QI Workplan vs. No QI Workplan

WHAT was evaluated?

Immunization rates of all ImmPact2 Providers

(24 - 35 months of age as of 7/01/2010)

and

(24 - 35 months of age as of 01/01/2011)

Clients up-to-date for 4DTaP:3Polio:1MMR:3HIB:3HepB:1Var:4PCV

SUMMARY – IMMUNIZATION RATES (2010 TO 2011)

ImmPact2 providers that implemented a 2010 QI Workplan

Number of sites: 156 providers

Number of sites with improved immunization rate for 4-3-1-3-3-1-4: 113 providers

Percent of sites that increased up-to-date rate for:

▶ 4-3-1-3-3-1-4: 72%

▶ DTaP4: 56%

▶ Polio3: 53%

➤ MMR1: 53%

► HIB3: 80%

► HepB3: 56%

➤ Var1: 53%

➤ PCV4: 53%

AFIX SITE VISIT EVALUATION SUMMARY

2010 AFIX site visit satisfaction survey (93 responses):

92% strongly agree or agree with site visit survey statements, indicating satisfaction with AFIX process.

Comments from 2010 AFIX site visit satisfaction survey

"Any support to help increase immunization rates is appreciated."

"I found the site evaluation to be productive and helpful."

"I found the AFIX staff to be professional and courteous. Information was constructive and helpful."

AFIX QI WORKPLAN EVALUATION SUMMARY

2010 QI Workplan provider survey (94 responses):

Comments from 2010 QI Workplan provider survey

"It was great to have someone come in and refresh myself and staff on the processes and motivate with education!" "The site visit was informative and helpful."

"I appreciate the feedback which is specific to our audit result during the face to face encounter to address issues." 58% of providers strongly agree or agree that implementing action steps that were outlined in their QI Workplan helped to increase their immunization rates.

Page 8 of this report identifies the top responses to selected questions from the QI Workplan provider survey and the percentage of providers that chose each response.

AFIX QI WORKPLAN EVALUATION SUMMARY

Top responses to selected questions from the QI Workplan provider survey

During your AFIX site visit in 2010, what suggestions were made to address issues specific to your practice regarding immunization rates?

- 1. Reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere): 65.9%
- 2. Following up with parents/guardians who missed scheduled appointments: 61.5%
- 3. Running Reminder/Recall: 59.3%

Of the suggestions made, which were easiest to implement?

- Following up with parents/guardians whom miss scheduled appointments: 46.6%
- 2. Reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere): 43.2%
- 3. Calling to remind parents/guardians of upcoming appointments: 40.9%

Of the suggestions made, which were the most difficult to implement?

- 1. Running Reminder/Recall: 31.9%
- 2. Following up with parents/guardians whom miss scheduled appointments: 26.1%
- 3. Flagging patient charts to identify missing immunizations: **15.9%** (*tied*)
- 3. Reviewing records to identify patients that have MOGED: **15.9%** (*tied*)

What do you feel has been the biggest barrier for your practice when trying to implement improvement strategies?

1. Parent/guardian refusal to vaccine: **57.6%**

2. Missed appointments: 51.1%

3. Staff time: **44.6%**

Do you feel that the outcome of this initiative has been worth the staff time/costs incurred?

Yes: 56.5%

Don't Know: 34.8%

No: **8.7%**

How strongly do you agree that the action steps outlined in your QI Workplan has helped to increase your immunization rates?

Neutral: **39.1%**

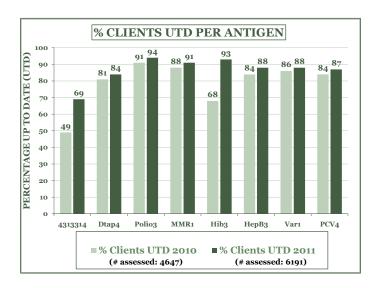
Agree: **37.0%**

Strongly Agree: 20.7%

Disagree: 3.3%

COMPARISON OF IMMUNIZATION RATES <u>BEFORE</u> AND <u>AFTER</u> IMPLEMNTATION OF QI WORKPLANS

ImmPact2 provider immunization rates for the 4:3:1:3:3:1:4 antigen series were evaluated in 2010, as a baseline prior to the implementation of QI Workplans. The data was then compared to 2011 immunization rates for the 4:3:1:3:3:1:4 series after the providers developed and implemented QI Workplans. Seventy-two (72%) of providers who participated in this study increased immunization rates during the evaluation period.



Of providers that participated in this evaluation, the percent of clients up-to-date for the 4:3:1:3:3:1:4 series in 2010 (prior to development of a QI Workplan) was 49% compared to 69% up-to-date for the same series after a QI Workplan was developed and implemented. In addition, up-to-date rates for all single antigens in the series also increased.

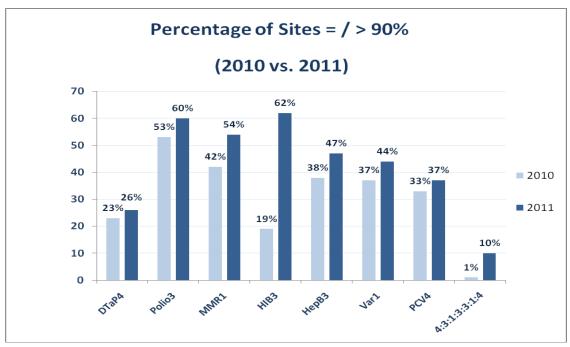
In 2010, the average
UTD rate for
4:3:1:3:3:1:4 was 40%.
The average UTD rate
for the same antigen
series increased to 56%
in 2011. The table at
the right illustrates
that the average UTD
rate for all single
antigens have
improved as well.

AVERAGE UTD ANTIGEN RATE PER SITE 2010 AND 2011				
Antigen	Antigen Average UTD Rate Average UTD R per Site 2010 per Site 2011			
4-3-1-3-3-1-4	40%	56%		
Dtap4	68%	72%		
Polio3	83%	88%		
MMR1	80%	87%		
Hib3	68%	89%		
HepB3	75%	82%		
Var1	75%	82%		
PCV4	70%	77%		
156 Sites Evaluated				

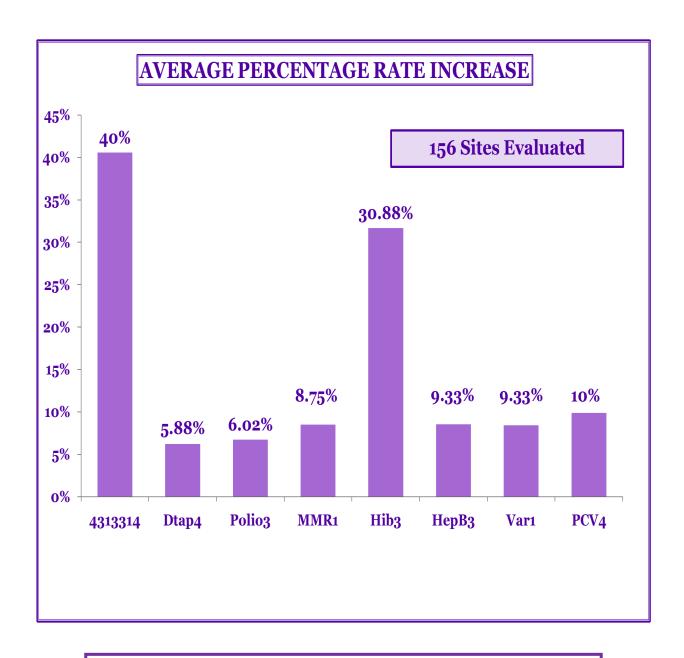
COMPARISON OF IMMUNIZATION RATES <u>BEFORE</u> AND <u>AFTER</u> IMPLEMENTATION OF QI WORKPLANS

The number of sites with a 90% or greater UTD rate increased for all 4:3:1:3:3:1:4 single antigens as well as the antigen series.





IMMUNIZATION RATES EVALUATION 2010 to 2011



- The average percent increase per antigen from 2010 to 2011 ranged from **5.88%** for DTaP4 to **30.88%** for HIB3.
- The average percent increase from 2010 to 2011 for providers for the 4:3:1:3:3:1:4 series was 40%.

ASSESSMENT OF 2010 AFIX SITE VISIT SATISFACTION SURVEY

Within two weeks of the AFIX site visit, providers were mailed a copy of the QI Workplan that was developed during their visit. An AFIX site visit satisfaction survey (*Appendix A*) was included in that mailing. MIP received 93 completed AFIX site visit satisfaction surveys which were related to 2010 AFIX site visits. Responses from the survey provided data identifying what was discussed during the AFIX site visit and also indicated the level of satisfaction providers had with the AFIX process. Evaluation of provider responses to statements regarding 2010 AFIX site visits can be found on pages 13 through 18. Provider comments from the 2010 AFIX site visit satisfaction survey can be found in *Appendix B*.

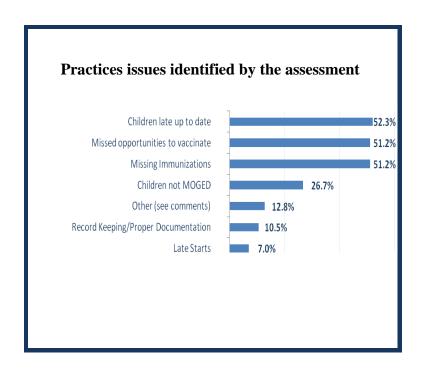
Evaluation shows that the majority of providers that responded to this survey are satisfied with the AFIX process. Providers indicated that they strongly agreed or agreed that the AFIX feedback was constructive (99%) and timely (92%)* and materials that were provided during the visit were useful (90%). In addition, providers felt that AFIX site visit staff were knowledgeable (96%) and courteous and professional (98%). Eighty-seven percent (87%) of providers strongly agreed or agreed that assessment reports of immunization rates were informative. When asked whether they would recommend participating in an AFIX site visit to a colleague, eighty-three percent (83%) strongly agreed or agreed that it would be beneficial.

* MIP runs assessment reports for AFIX site visits at the beginning of the year. Several providers questioned why the assessment reports could not be run closer to the time of their actual AFIX site visit and some wanted the opportunity to view the results and get children in for "missing" immunizations before final rates were recorded. Up-to-date rates for assessment reports are calculated by looking at where children, aged 24 – 35 months, are in the 4:3:1:3:3:1:4 series *as of 24 months of age*. Therefore, the date that assessment reports are run is irrelevant. AFIX assessment reports should be viewed as a "picture in time" and information from the reports should used to identify areas of vaccine delivery that can be improved upon.

Furthermore, "missing" doses administered to children identified as not up-to-date on assessment reports will not count toward forthcoming up-to-date rates for a provider because those children would already be older than 24 months of age when the vaccine(s) is administered. Remember that the up-to-date rate is based upon immunizations a child has had as of 24 months of age. As a result, children who receive missing vaccines based upon AFIX assessment reports would be considered "late up-to-date" and administration of vaccinations for those children would not improve AFIX assessment rate.

Assessment of 2010 AFIX Site Visit Satisfaction Survey (93 Surveys)

Statement:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Did Not Answer	Percent Strongly Agree or Agree
1. Feedback identifying areas of strength and opportunities for improvement was constructive .	57 (61%)	35 (38%)	0 (0%)	0 (0)%	1 (1%)	0 (0%)	92 (99%)
2. Feedback was timely .	54 (58%)	32 (34%)	6 (6%)	0 (0%)	1 (1%)	0 (0%)	86 (92%)
3. The materials provided were useful.	51 (55%)	33 (35%)	7 (8%)	0 (0%)	1 (1%)	1 (1%)	84 (90%)
4. Assessment of immunization rates was informative.	48 (52%)	33 (35%)	9 (10%)	2 (2%)	1 (1%)	0 (0%)	81 (87%)
5. AFIX staff was knowledgeable.	60 (65%)	29 (31%)	3 (3%)	0 (0%)	1 (1%)	0 (0%)	89 (96%)
6. AFIX staff was courteous and professional.	71 (76%)	20 (22%)	0 (0%)	0 (0%)	1 (1%)	1 (1%)	91 (98%)
7. Used as a tool to help with operation management and improving the practice for future assessment, I would recommend participating in an AFIX site visit to a colleague.	55 (59%)	22 (24%)	11 (12%)	1 (1%)	1 (1%)	3 (3%)	77 (83%)



Other issues identified:

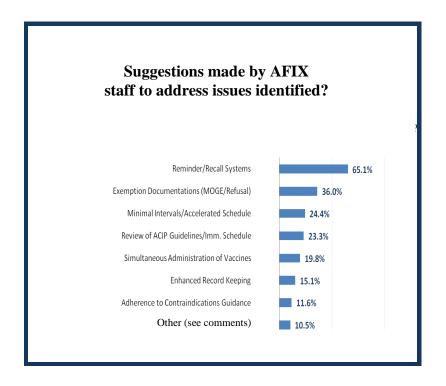
"Invalid doses"

"Parents refusal"

"Recall using ImmPact2"

"Place vaccine information in waiting room"

"Prevnar administration"



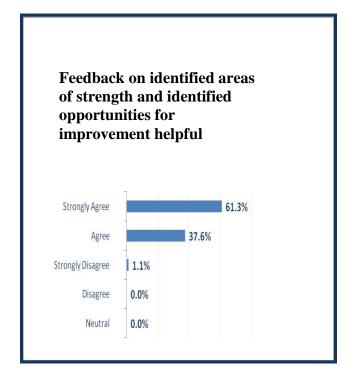
Other issues identified:

"Parental education"

"Flag charts"

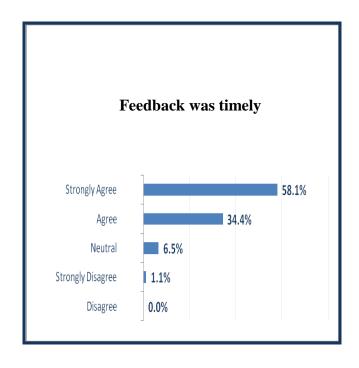
"Enter all children into ImmPact2"

"Avoid delays in immunization schedule"



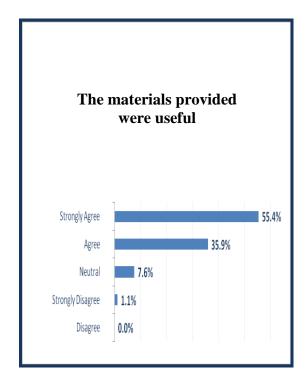
COMMENTS:

- "Feedback of areas for improvement included action steps to meet goals"
- "Give new moms a folder with all the immunization information"
- "AFIX staff person was very pleasant and complimentary on the practice policies"
- "Encourage parents who refuse vaccines to have their children vaccinated"
- "AFIX staff person was very helpful and professional"



COMMENTS:

- "Report was received within two weeks of site visit"
- "Did not have time to review report and provide corrections"



COMMENTS:

"Great resources including hard copies and web sites"

"Didn't realize there was a book called Parents Guide to Childhood Immunizations. I did order a few for the waiting room"

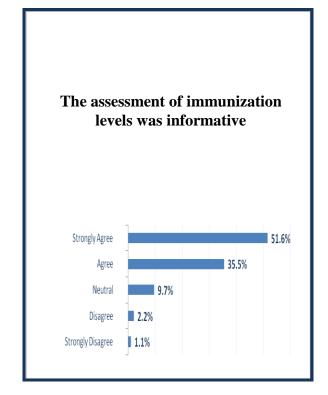
"Thought material was extremely helpful"

"I have used the provider resource website list several times since the site visit and found it to be very helpful"

"Outdated"

"AFIX site visit staff provided access to numerous materials and even gave us extra to provide materials for our upcoming health fair"

"AFIX site visit staff had TONS of great information"



COMMENTS:

"It broke down areas into populations assessed (DOB) within specific timeframe"

"Although assessment report showed 0% up-to-date it was actually back to 88% by time of visit"

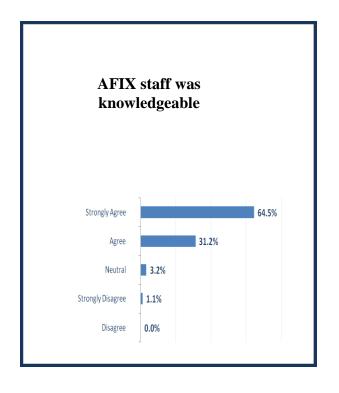
"Very informative"

"Results reflect March data so when we discussed results, they were no longer pertinent"

"I learned I can run my own reports through ImmPact2 to check on immunizations due"

"We check these through ImmPact2 as well"

"I found the data used in the review did not take into account recommendations to defer HIB and once able to administer again not to call in but catch up on next visit. We were deficient because 19 to 30 days late"



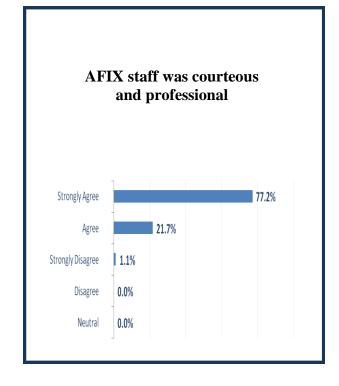
COMMENTS:

"Very helpful and understanding of problems"

"Had a wealth of information"

"Staff very knowledgeable and answered all my questions"

"Very helpful"



COMMENTS:

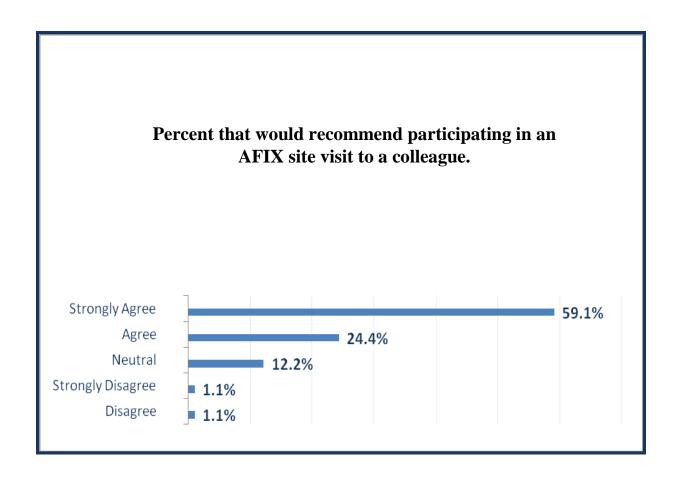
"Very helpful, professional and courteous"

"AFIX site visit staff person was professional in delivery of CoCASA data"

"I found this site evaluation to be productive and helpful. Made this visit pertinent"

"Very professional"

When asked whether they would recommend participating in an AFIX site visit to a colleague, a majority of providers indicated that they would.



ASSESSMENT OF 2010 AFIX QI WORKPLAN SURVEY

In an effort to evaluate the quality and effectiveness of AFIX feedback sessions, providers were asked by MIP to complete a survey. The intention of the survey was to obtain feedback from providers about the Quality Improvement (QI) Workplan developed during 2010 AFIX site visits.

The MIP mailed a cover letter and copy of the QI Workplan survey (*Appendix C*) to 156 ImmPact2 providers and 37 paper-based providers in May 2011. MIP received ninety-four (94) completed surveys. Aggregate data from survey responses can be found on pages 20 - 24.

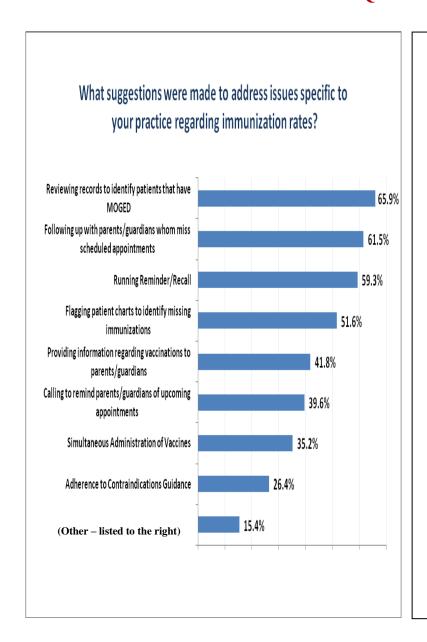
Responses to the question "If funding became available, what types of resources/materials/ assistance would be beneficial to your practice in helping to improve delivery service or increase immunization rates?" can be found in Appendix D.

Responses to the question "Are there any suggestions or comments you would like to share regarding the QI Workplan process?" can be found in Appendix E.

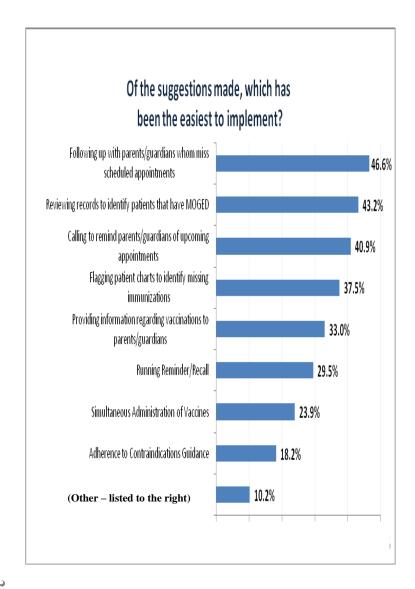
MIP used the information collected from surveys to review the QI Workplan process and to facilitate improvement in training AFIX staff. MIP used the survey responses to help identify the level of difficulty providers experienced when implementing strategies outlined in their QI Workplan.

Future efforts will focus on promoting strategies that providers found to be successful, such as utilizing ImmPact2, running reminder/recall, calling to remind parent/guardian of upcoming immunization appointments and reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere). In addition, MIP will work to identify ways to eliminate barriers that have been identified and expand immunization delivery.

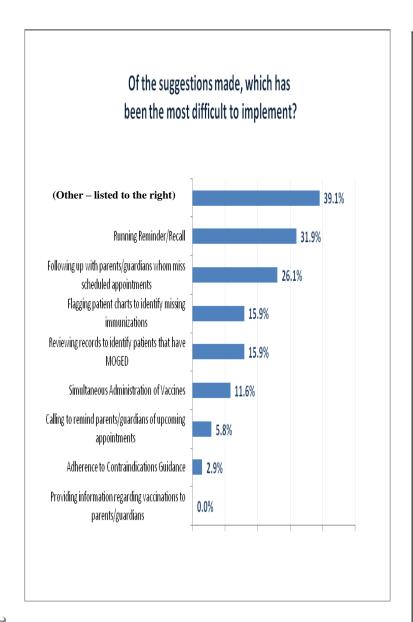
MIP will also continue to utilize the AFIX QI Workplan during AFIX site visits as it has been proven to be effective in raising immunization coverage levels and improving standards of practices at the provider level.



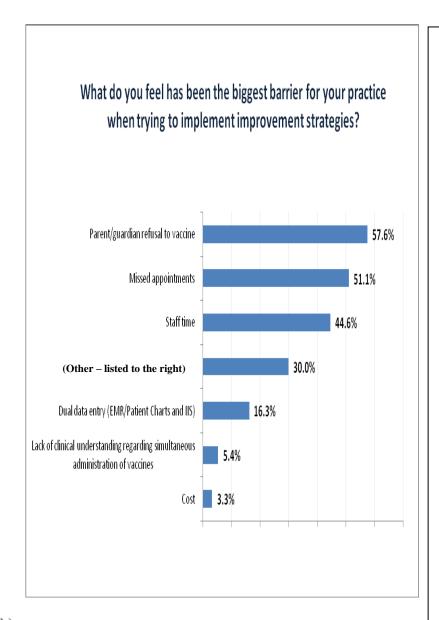
- Missed opportunities and vaccine administration intervals. i.e., DTaP 3 to DTaP 4 (usually the problem is that it is given too early.
- Missing HIB vaccines (due to shortage). All have been caught up.
- Catch patients when they are at the office for a different reason.
- We have just started to run reports and follow up on missed immunizations.
- Avoid alternative immunization schedules.
- Run a report from ImmPact2 on 2 year olds periodically and follow up on this to get parents in.
- PCV is given at patients soonest appointment to due time or immunization, which is sometimes outside of the recommended guidelines.
- Call help desk for assistance in running reports if needed.
- Review "Guide to Vaccine Contraindications & Precautions."
- Have information in waiting room about safety/benefits of immunizations.
- Keep staff current on vaccine changes.
- Benefits of ImmPact2
- Give immunizations at every visit unless contraindications.
- Document why a vaccine is not given.



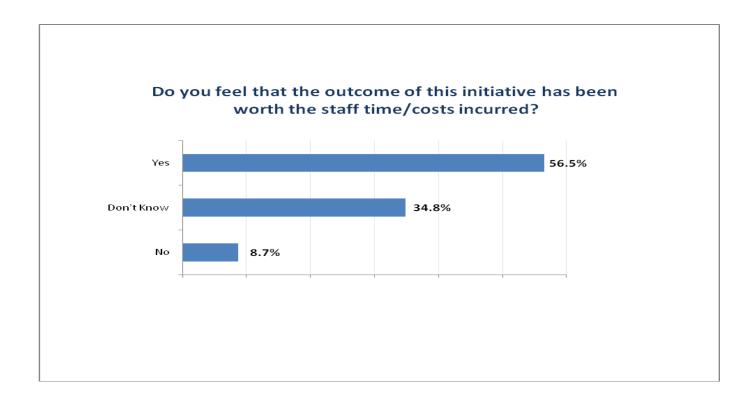
- We have a care manager who calls all patients (parents) that were a "no show"
- Flagging patients charts in our EMR system is done for us by immunization that is needed turns to a red colored area.
- Staff have been more careful to check record and more teaching around this issue by RNs and attending physicians.
- We now run reports to make corrections or call patients to come back in for vaccine catch up.
- Running reports in ImmPact2 of patients missing immunizations.
- Vaccines given according to ACIP unless parents adamantly refuse some vaccines or insist patients get no more than 2 vaccines at a time.
- Providers recommend following ACIP and do so to extent possible.
- Providers made aware to immunize at all opportunities.
- Running 2 year old list and following up on it.
- Putting information in waiting room.
- ImmPact2

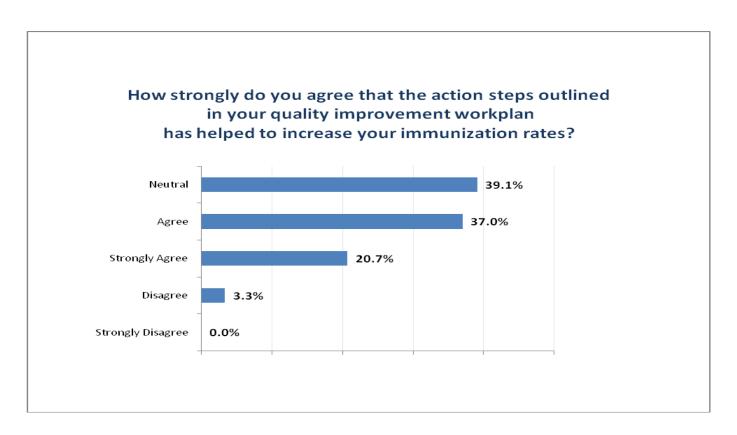


- We have not had the staffing to implement reviewing records to identify patients that have MOGED.
- Our biggest problem, I believe is the amount of no shows to scheduled appointments and families moving away and returning, without records or staff not checking past vaccines records.
- Parents sometimes do not return call to reschedule.
- Finding time and staff to recall patients once we have identified who needs vaccines that were missed.
- Parents are not willing to have multiple vaccines same day.
- Some parents repeated no shows makes more difficult.
- Avoidance of alternative immunization schedule regarding varivax.
- Providing information regarding vaccinations to parents/guardians who refused vaccination.
- There are a few parents that no matter what info the doctor gives them they refuse vaccines. That's our worst area and brings down the rates.
- Our practice does its best to follow academy of pediatrics guidelines and we have "our own" vaccine schedule. Generally don't give more than 4 vaccines at one time.
- Running reminder/recall is time consuming.
- Running reminder/recall report by itself is not the problem but weeding through to eliminate the ones who have refused vaccines vs. those who have fallen behind is time consuming.
- There are several parents who want vaccines split up. Then when the child is supposed to come back they do not show.
- Addresses and phone numbers change frequently.
- Not enough training to run reminder/recall
- Some parents have refusal of vaccines and there is no way of getting credit for this.
- We do not have the time or the personnel to vaccinate at every visit when possible.
- We vaccinate at well child checks or separate immunization visits.



- Parents delaying or "spreading out" vaccinations
- Our patients rarely refuse vaccines but many don't come to their appointments for various reasons; i.e., transportation, understanding the meaning of an appointment time, too many children to keep track of appointments.
- Provider adherence to recommendations.
- It is easy to run a report but need staff to review and contact patients.
- Do a fairly low volume of vaccines. If just a few patients are behind greatly skews our numbers.
- Difficulty reaching patients who move frequently and change phone numbers.
- We've sent letters and made phone calls to patients' parents regarding overdue immunizations and still no response.
- Health care provider does not adhere to the varivax schedule.
- Parent/guardian wishes to delay vaccines & give 1 at a time.
- This practice has always been under-staffed. Finding time to get everything done takes more time then the medical assistants have.
- Providers will only vaccinate 2 vaccines at a time.
- Parents wanting to space out vaccines then missing appointments, then trying to play catch up.
- Provider buy in.
- Type of community. Seasonal residents/workers, visiting families who want physicals when convenient but we are not primary provider.
- Dr. preference concerning immunizations.





QI Workplan vs. No QI Workplan

Impact evaluation assesses the changes that can be attributed to a particular intervention. It is structured to answer the question: how would outcomes such as participants' immunization rates have changed if the intervention had not been undertaken? This involves counterfactual analysis, that is, "a comparison between what actually happened and what would have happened in the absence of the intervention."

Evaluation is the process of assigning "worth" or determining the "value" of a program or activity. When evaluation is done, information is collected about a program activity's actual inputs and/or outcomes and then compared with compatible data from another group that did not partake in the activity being evaluated. Using a comparison group helped MIP address the question of whether this initiative is "making a difference" at its most fundamental level. Utilizing ImmPact2, immunization rates were assessed in July 2010 and again in January 2011. Rates of ImmPact2 providers that had a 2010 QI Workplan developed were compared with immunization rates of ImmPact2 providers that did not have a 2010 QI Workplan developed. Results showed that the percent of clients up-to-date for the 4:3:1:3:3:1:4 series that have providers who developed a QI Workplan increased 41% (from 49% in 2010 to 69% in 2011). This compares to a 19% improvement rate (from 48% in 2010 to 57% in 2011) for clients of providers that did not have a QI Workplan developed in 2010.

Considerations:

Program evaluations, even ones that use comparison groups, generally do not "prove" that the initiative made a difference; however, program evaluation can help provide credible evidence that it could make a difference for participants. Program participants can differ from non-participants in characteristics that cannot be observed by evaluation of data. For example, program participants may be individuals who have the most to gain from participating in a particular program and are more motivated to commit to program activities. Thus, outcome changes observed among these nonrandom groups of individuals would indicate the program's impact on motivated participants, but may not reflect how the program on average would affect the target population. Also, it is not known if external influences, such as social media helped to create the change in rates or whether the participants in this study would have had changes in rates without implementing the QI Workplan.

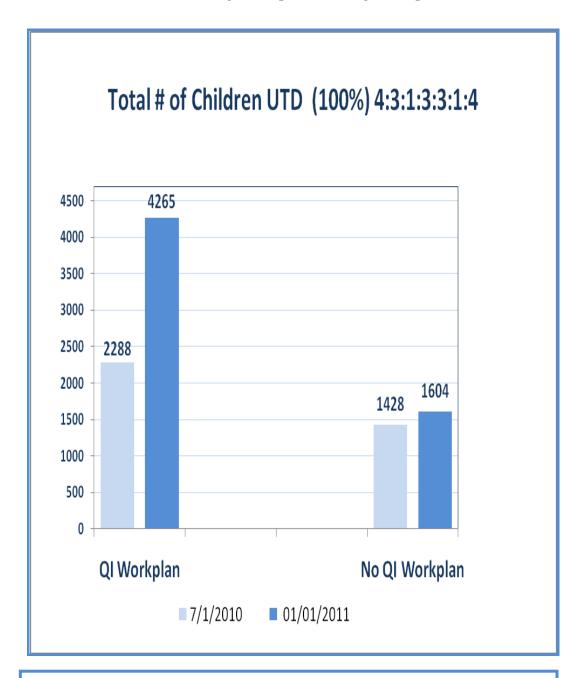
COMPARISON OF IMMUNIZATION RATES

QI Workplan vs. No QI Workplan

С	hildren U	p-to-Date ((UTD) *	
	Total # of Children 07/01/2010	Total # of Children UTD 07/01/2010	Total # Children 01/01/2011	Total # of Children UTD 01/01/2011
QI Workplan (156 sites)	4647	2288 (49%)	6191	4265 (69%)
No QI Workplan (69 sites)	2969	1428 <i>(4</i> 8%)	2810 1604 (57%)	
Si	ites ≥ 90%	% for 4:3:1:	:3:3:1:4	
	# of Sites Assessed 07/01/2010	# Sites ≥ 90% UTD 4313314 07/01/2010	# of Sites Assessed 01/01/2011	# Sites ≥ 90% UTD 4313314 01/01/2011
Providers with QI Workplan	156	2 (1%)	156	15 (10%)
Providers with No QI Workplan	68	9 (13%)	69	4 (6%)

^{*} **Up to date** – have received all doses for 4DTaP:3Polio:1MMR:3HIB:3HepB:1Var:4PCV antigen series and were up to date by 24 months of age.

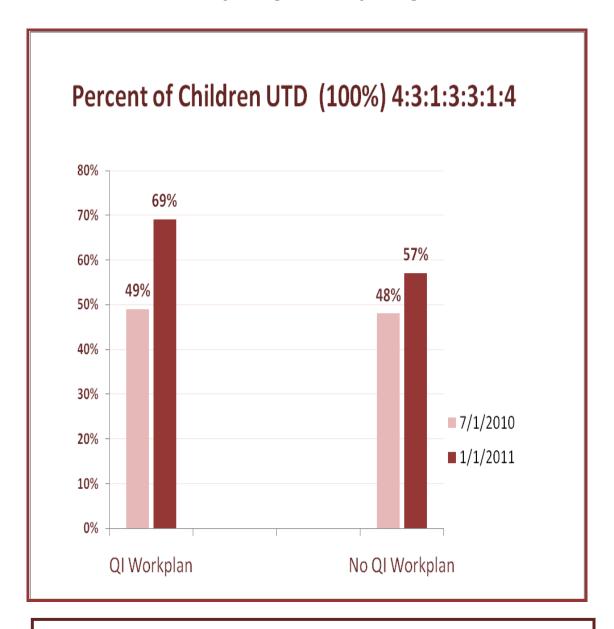
QI Workplan vs. No QI Workplan



Number of Clients Up-to-Date for 4:3:1:3:3:1:4

Results showed a significant increase in the total number of up-to-date clients from 2010 to 2011 for providers whom implemented a QI Workplan compared to the increase in the total number of up-to-date clients for providers that did not implement a QI Workplan.

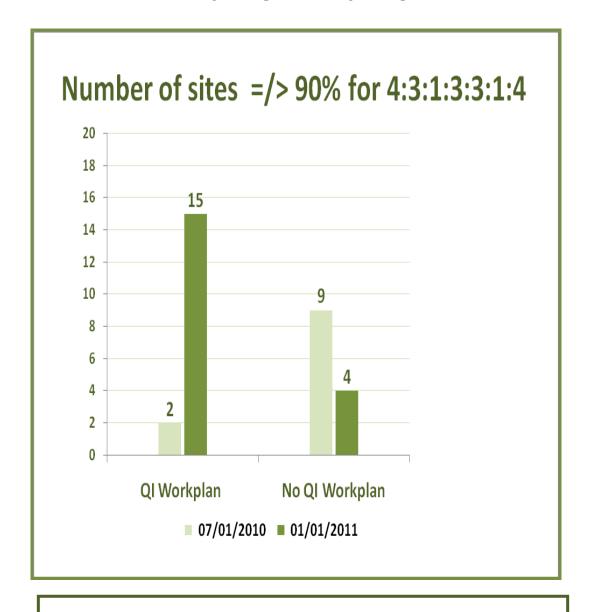
QI Workplan vs. No QI Workplan



Percent of Clients Up-to-Date for 4:3:1:3:3:1:4

Results showed a **41%** increase in the percent of up-to-date clients from 2010 to 2011 for providers whom implemented a QI Workplan compared to a **19%** increase in the percent of up-to-date clients for providers that did not implement a QI Workplan.

QI Workplan vs. No QI Workplan



Sites with \geq 90% Immunization Rate for 4:3:1:3:3:1:4

Providers that implemented a QI Workplan increased the number of sites that had \geq 90% immunization rate from **2 sites** in 2010 to **15 sites** in 2011. The providers that did not implement a QI Workplan decreased the number of sites that had \geq 90% immunization rates from **9** in 2010 to **4** in 2011.

NEXT STEPS

Provider responses were reviewed throughout this project and barriers to improving immunization rates have been identified. MIP will focus future efforts on developing strategies to:

- Recruit and enroll providers into the Maine VFC program.
- Promote the use of ImmPact2 to increase the number of provider sites participating in the statewide childhood immunization registry.
- Provide training to the health care workforce to ensure they are knowledgeable about vaccines, vaccine preventable diseases, and delivery of vaccination services.
- Decrease missed opportunities due to provider misinformation about when vaccination is contraindicated during illness.
- Increase the number of providers who use ImmPact2 to look up immunization data on their patients at every appointment.
- Encourage physicians to use reminder/recall systems to increase vaccine coverage levels of children two years old and younger as well as improve coverage levels of all patients.
- Develop and implement a plan with special emphasis on improving the vaccine coverage levels of children two years of age or younger.
- Inform and educate the public about vaccines and vaccine-preventable diseases.
- Moreover Identify strategies to reach out to under-immunized populations.
- Continue to utilize the AFIX Quality Improvement Workplan during AFIX site visits.



2010 AFIX Site Visit Satisfaction Survey

Pract	ice Name:	PIN#:
Name	e of Contact:	Telephone:
Name	e of AFIX Staff whom conducted AFIX site	visit:
	Yere hard copies of the immunization assessm X feedback portion of the site visit? Yes	nent results presented to someone in your practice at the time of the No
1A.	What types of issues specific to your practice (please check all that apply) Late starts Missing immunizations Children late up to date Record keeping/Proper Documentation	missed opportunities to vaccinate Children not MOGED Other Other
2A.	What suggestions were made by AFIX st	aff to address the issues identified in 1A? (please check all that apply)
	Minimal Intervals/Accelerated Schedule Simultaneous Administration of Vaccines Adherence to Contraindications Guidance Reminder/Recall Systems Enhanced Record Keeping	
3.	Was a Quality Improvement Workplan	n developed at the time of the AFIX site visit? Yes
4.	As a result of the AFIX site visit, has	your practice changed or plan to change any policy or procedures?
If ye	s, please describe:	
5.		zation Program offers individualized in-services to practices vaccine ordering/shipping/management, VFC program age reports? Yes No
6.	Would you be interested in receiving a Yes No	an in-service from the Maine Immunization Program?

Please tell us how strongly you agree or disagree with each of the following statements:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Feedback identifying areas of strength as					
well as identifying opportunities for					
improvement was constructive					
Comments:					
Feedback was timely					
Comments:					
The materials provided were useful					
Comments:					
The assessment of immunization levels was					
informative					
Comments:					
AFIX Staff was knowledgeable					
Comments:					
AFIX Staff was courteous and professional					
Comments:					
Used as a tool to help with operation					
management and improving the practice for					
future assessment, I would recommend					
participating in an AFIX site visit to a					
colleague					
Additional Comments:					

Thank you. Please return this survey to the Maine Immunization Program in the enclosed self-addressed stamped envelope, or fax to 1-800-437-5743.

COMMENTS FROM 2010 AFIX SITE VISIT SATISFACTION SURVEY

- Any support to help increase immunization rates is appreciated.
- These visits are always helpful especially in a practice this small. Good reminders.
- It was a pleasure meeting Barbara. She was really helpful & knowledgeable. Thank you.
- Fold we were doing well and gave AFIX staff person ideas to pass on to others.
- RN site nurse very helpful, informative.
- I think the site visit is a great way to (re)address our practice management.
- It was nice to know that we are doing things correctly. It is nice to know that incentives are available, and to feel that the state program is here to assist us although I did feel a little "judged" for those children who are not "UTD" on vaccines when many cases this was parental choice to follow an alternate vaccine schedule.
- The visit was informative as long as computer programs are altered to reflect state mandated delays in vaccine administration. A 50% rate as of 3/4/10 was actually a reflection of a HIB booster 4 days over 2nd birthday on 1 child and 19 days on another. All vaccines are up-to-date.
- If the "snap shot" would have been in June rather than March our results would have been better. Suggest these be printed closer to time of visits in future. We consistently work to improve the "statistics" or "numbers"
- Reports are not user friendly. It is difficult understanding the Summary Report to know specifically what the results mean or how to correct the problem.
- I would very much like to see the time-stamp and initial line print-out on the immunization reports. Thank you for your time and consideration.
- We learned a lot about our vaccines. Especially in catching up our children that have not yet received all 3 doses of HIB. We had a huge shortage and were frequently out of the vaccine. We have plenty now and are catching everyone up!
- Very friendly and informative.
- A few of the patients we were assessed on had moved away. I fixed them in the computer before the visit but they still counted against us.
- I found AFIX staff person to be professional, courteous and helpful. I did not feel put down rather her criticism was constructive and helpful.



Department of Health and Human Services Maine Center for Disease Control and Prevention 286 Water Street 11 State House Station Augusta, Maine 04333-0011 Tel. (207) 287-8016 Fax (207) 287-9058; TTY (800) 606-0215

May 19, 2011

Dear Maine Immunization Program (MIP) Provider,

MIP is currently evaluating the quality and effectiveness of AFIX feedback sessions. In 2010, you participated in an AFIX site visit. During the visit, your immunization assessment rates were reviewed and specific opportunities for improvement were discussed. A Quality Improvement (QI) Workplan was developed that identified steps your practice could implement to enhance immunization delivery and increase immunization rates. AFIX staff followed up with you to discuss the progress and/or outcome of the QI Workplan.

Please take a few minutes to complete the enclosed survey. Your responses, as they relate to your 2010 QI Workplan, will help MIP identify the level of difficulty in implementing suggested strategies. A copy of your QI Workplan which includes documentation of the follow-up progress and/or outcome is attached for your convenience. We hope that QI Workplans improve the quality and effectiveness of AFIX feedback sessions. Your participation in this survey will help us evaluate the results of these efforts. In addition, survey findings will be utilized to improve training provided to AFIX site visit staff and to improve future feedback sessions.

Your name/practice will not be included in any reports and none of your answers will be linked to you or your practice in any way. The information that you provide will be combined with information from everyone else who participates in this survey. Evaluation results will be made available to providers later this year.

Thank you for taking the time to provide MIP with this information. If you have any questions, please contact me at 207-287-6988. The survey can be sent back to MIP in the postage paid envelope included in this mailing.

Sincerely,

Terri Nickerson
AFIX Coordinator
Maine Immunization Program
Maine CDC/DHHS
286 Water Street
Augusta, Maine 04330
Terri.Nickerson@maine.gov

PROVIDER SURVEY – QUALITY IMPROVEMENT (QI) WORKPLAN EVALUATION

(Optional – any information provided in this section will be kept confidential) 1. PIN#:
1. 1 H4#
2. Facility Name:
3. Provider Contact Name:
3.1 Tovider Contact Name.
4. Provider Contact Phone:
5. During your AFIX site visit in 2010, what suggestions were made to address issues specific to your practice regarding immunization rates? (check all that apply)
Running Reminder/Recall
Simultaneous Administration of Vaccines
Adherence to Contraindications Guidance
Reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere)
Providing information regarding vaccinations to parents/guardians
Calling to remind parents/guardians of upcoming appointments
Following up with parents/guardians whom miss scheduled appointments
Flagging patient charts to identify missing immunizations
Other (please specify):
6. Of the suggestions made, which have been the easiest to implement? (check all that apply)
Running Reminder/Recall
Simultaneous Administration of Vaccines
Adherence to Contraindications Guidance
Reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere)
Providing information regarding vaccinations to parents/guardians
Calling to remind parents/guardians of upcoming appointments
Following up with parents/guardians whom miss scheduled appointments
Flagging patient charts to identify missing immunizations
Other (please specify):

7. Of the suggestions made, which have been the most difficult to implement? (check all that apply)
Running Reminder/Recall
Simultaneous Administration of Vaccines
Adherence to Contraindications Guidance
Reviewing records to identify patients that have MOGED (Moved or Gone Elsewhere)
Providing information regarding vaccinations to parents/guardians
Calling to remind parents/guardians of upcoming appointments
Following up with parents/guardians whom miss scheduled appointments
Flagging patient charts to identify missing immunizations
Other (please specify):
8. What do you feel has been the biggest barrier for your practice when trying to implement improvement strategies?
Staff time
Cost
Parent/guardian refusal to vaccine
Dual data entry (EMR/Patient Charts and IIS)
Missed appointments
Lack of clinical understanding regarding simultaneous administration of vaccines
Other (please specify):
9. Do you feel that the outcome of this initiative has been worth the staff time/costs incurred?
Yes
□ No
☐ Don't Know
10. How strongly do you agree that the action steps outlined in your QI Workplan has helped to increase your immunization rates?
Strongly Agree
Agree
☐ Neutral
Disagree
Strongly Disagree
11. If funding became available, what types of resources/materials/assistance would be beneficial tyour practice in helping to improve delivery service or increase immunization rates?
12. Are there any suggestions or comments you would like to share regarding the QI Workplan process?

If funding became available, what types of resources/materials/assistance would be beneficial to your practice in helping to improve delivery service or increase immunization rates? (other) -p. 1

- If we had a bi-directional interface between our EMR and ImmPact2 this would not only make both systems more accurate but save staffing time of double entry which can lead to errors.
- I'm not sure what more we can do considering our refugee population. The school clinics have been a great help with catching children up. We work very closely with them and I believe that school clinics and the money spent there is cost effective.
- If we had materials or resources letting parents know what could happen if their children do not get their immunization.
- Computerized medical records.
- An ImmPact2 system that shared information with our EMR. This would allow us to document in the EMR and it would flow to ImmPact2 or the other way around.
- More ImmPact2 training which you've already scheduled.
- If all children could be vaccinated with state supplied vaccines.
- I think EMR download or upload would be very beneficial to our practice.
- Reminder cards.
- Literature on importance of completing vaccines on schedule and bringing their children in for annual well child checks.
- > Universal vaccines
- Some parents are difficult to get a hold of as they move often. Resources that allow you to look anyone up with any new address or phone number.
- Funds for adult vaccines; zoster vax, Tdap, college age folks.
- Centricity EMR & Immpact2 speak to each other to avoid dual entry and more accurate reporting.
- To have state funded immunizations available to all patients under 18 years old.
- Due to costs, a lot of patient's parents refuse vaccinations.
- More educational materials for staff and parents.
- "Lunch and learn" sessions for staff members.

If funding became available, what types of resources/materials/assistance would be beneficial to your practice in helping to improve delivery service or increase immunization rates? (other) – p. 2

- I think that, if the funding were available, it would be in the best interests of the patient to have a designated person doing only ImmPact2. They would have ample time to, not only manage the immunizations, but, to also keep track of all patient immunizations. I feel it would benefit public health in general if there were a person designated just to immunizations. Unfortunately, that would not be fiscally possible in a lot of cases.
- Having all vaccines available from the state.
- I have seen some books with stories from families who have children who were affected by vaccine preventable diseases. They were very convincing and I often wish I had them to share with patients.
- More information on how important vaccines are for children. How having a child not vaccinated and traveling can bring disease.
- More educational tools to help parents understand why immunizations are really important.
- ImmPact2 and EMR feeding information to each other.
- Hopefully our EMR will soon have the ability to run reports which will help identify patients missing immunizations.
- Having ImmPact2 read from our EMR so it is only one data entry instead of two.
- Provide immunizations to all school aged children as well as other children. Very difficult to maintain two separate supplies.
- Lowering costs overall to all patients for vaccines.
- Not sure. Our parent population is not eager to immunize their children on the state schedule. They have their own schedule to follow.
- Multi-dose vaccines such as pentacel are great.
- The booklet called "Parents Guide to Childhood Vaccines"
- Increase ease of finding kids who are behind in immunizations.
- Doing something out in communities to educate parents what will happen if any of these diseases come back because of lack of vaccination. "Scare tactics"
- Letters being mailed to patient when vaccines are due, letters coming from the state rather than doctor's office. I believe this would keep patients closer to the recommended guidelines, rather than providers preference. Also may push patients to call office to schedule immunization injection appointment.

If funding became available, what types of resources/materials/assistance would be beneficial to your practice in helping to improve delivery service or increase immunization rates? (other) -p. 3

- Assistance to encourage MaineCare family/patients to keep appointments and follow up visits.
- Getting the EMR link working and in our office would be 1st choice.
- Getting some outside help with reminder/recall would be great.
- EMR ImmPact2 communication avoiding dual entry.
- Universal immunizations.
- Updated information delivered every six months here in our office by a qualified person from MIP.
- Having multiple vaccines in one injection for all children. Pentacel has been a great asset for us.
- Parent literature on the importance of getting vaccines within the recommended intervals so that you don't have to play catch-up.
- More public announcements to let patients and parents know the safety of vaccines.
- Make a standardized method to consistently check our pediatric patients on where they are and how to catch them up or get them in.
- Mailings based on urgency of immunizations to those who refuse.
- The availability of vaccines for state. This area has a great deal of MaineCare.
- The availability for access to all immunizations for patients would be great.
- More staff time to follow up.
- If we had more combo vaccines (DTaP, IPV), MMR-V, or universal coverage including all vaccines, that would be helpful. Many parent disagree with the number of vaccines and some are just too expensive (i.e. Gardasil) or not covered well under private insurance.
- Copies of books i.e. "The forgotten story" and other related handouts related to immunization.
- Universal vaccines for all children.
- Parents would vaccinate more if vaccines were provided by the state, as insurances don't cover enough and it becomes pricey.
- Helping to transition data to EMR.
- Sending out reminders to patients (helping with cost)

Are there any suggestions or comments you would like to share regarding the QI Workplan process? - p.1

- Our biggest issue is provider preference to not give multiple vaccines at a time.
- We are a very "vaccine oriented" clinic. i.e., patient comes in for an infected finger and their vaccine records are usually assessed and vaccines are given if necessary.
- Some (most) of our children who had "invalid doses" are actually fully immunized perhaps not on time. Numbers seem a bit deceptive.
- There is too much documentation that needs to be done. Working in a small office there is just not enough time. VFC documentation may not seem like it is taking up valuable time but there seems to be so much paperwork. Whatever happened to patient care!
- It continues to be a work in progress. We run reports on patients, flag their charts and call them to come in. If we find a documentation error, it is assigned to the clinical that made the error to correct it. This makes them more accountable and less likely to make any documentation errors in the future.
- I feel we've come a long way in improving our documentation. We look forward to the possibility of merging ImmPact2 with our EMR.
- We are currently in the process of implementing electronic medical records. Right now we are inputting information. Once this is completed we should be able to access which patients are due for immunizations and be able to set up an office visit. This process is very time consuming right now but once everything is loaded into the computer the effectiveness should improve.
- None. It was great to have someone come in and refresh myself and staff (newcomers) on the processes and motivate with education! Thanks a bunch and our rates have gone up drastically since.
- I would suggest that the health providers who order immunizations be a part of the AFIX site visits.
- It works well for me. Thank you for all the help I have been given. The yearly on-site inspection is extremely helpful.
- We have a relatively small number of pediatric patients. Once our patient panel was scrubbed and the MOGED patients were removed it's been simpler to keep up. Our company as a whole has some access issues so at times a well child check is rescheduled just past the recommended time / age for vaccine.
- I love the Immpact2 process. The online storage and the helpfulness of all the staff I have had contact with.

Are there any suggestions or comments you would like to share regarding the QI Workplan process? – p.2

- Very helpful.
- I feel a yearly visit is not necessary. I've had this position for several years now and attend yearly MIP meetings for updates.
- I find this process very confusing and not very helpful. The organization of the visits adds to the confusion. I honestly am confused by all the titles: i.e. / AFIX CoCASA QI.
- It was difficult for the amount of time spent in the face to face for the nurse to be pulled off the floor. Even with advanced warning, it is difficult to cover staff for 1 2 hours. Have questioned if our practice manager would be able to do next time and hopefully will work out.
- While good in concept it is just another report. The timeliness of it was also an issue. The list of my patients that were off schedule were from abstraction done in Feb 2010 and our audit meeting was in Oct 2010. All of my patients on the list had been vaccinated. I have devised my own strategy for getting the kids caught up. It would be helpful to have a one page laminated how to that can show how to identify then contact patients that are due or behind.
- I found that our rates had gone to 50% because of a HIB shortage where we were mandated to hold off until shortage resolved. Once shortage was no longer in place we updated our patients at the next visit as outlined. However, because 2 of these children were 2 weeks late of their 2nd birthday we were considered non-compliant even though we had followed all guidelines. Physicals were 2 weeks late because parents unable to keep appointment and it was moved back. This resulted in our rates being 50% instead of 100%. The children received all appropriate vaccines but not in time frame of program. There should be a way to over-ride these statistics when guidelines are mandated by the state and we follow them.
- When an organization goes live with EMR within the next several months, I'm hoping that will help with cross referencing.
- Having time to implement all the steps that need to take place to successfully keep the children vaccinated at the appropriate age!
- I found many errors on the report we received. Many doses were not counted, or we were penalized for incorrect spacing even though they were given at another practice prior to the child being a patient here.
- Appreciate feedback specific to audit results during a face to face encounter to address issues.
- None. I think our office does very well. The site visit is informative and helpful.

