

*Michigan Department
of Community Health*



Using IIS data with VFC/AFIX site visits in Michigan

Using an Immunization Information System (IIS)
to Improve VFC/AFIX Programs

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Today's presentation:

- ◆ The AFIX methodology
- ◆ The AFIX process in Michigan
- ◆ Michigan Care Improvement Registry (MCIR)
- ◆ CoCASA
- ◆ Using the IIS for AFIX reports

What is AFIX?



What is AFIX?

AFIX is a quality improvement strategy used by grantees to raise immunization coverage levels and improve standards of practices at the public & private provider level.



What is AFIX?

- ◆ Assessment of the healthcare provider's vaccination coverage levels and immunization practices.
- ◆ Feedback of results to the provider along with recommended strategies to improve processes, immunization practices, and coverage levels.
- ◆ Follow Up with providers on progress with making improvements discussed at initial visit
- ◆ Incentives to recognize and reward improved performance.
- ◆ eXchange of healthcare information and resources necessary to facilitate improvement.

What is AFIX?

AFIX is widely supported as an effective and recommended strategy for improving immunization rates and practices in both public and private provider settings. In 2008, the Task Force on [Community Preventive Services](#) updated their original 1999 literature review on the topic and reaffirmed their earlier recommendation of Assessment and Feedback “based on strong evidence of its effectiveness across a range of settings and populations.” This same review is cited in the CDC’s Advisory Committee for Immunization Practices (ACIP) [2011 General Recommendations](#) in their endorsement of Assessment and Feedback.



What is CoCASA?

CDC created and maintains CoCASA (Comprehensive Clinical Assessment Software Application) and most grantees use CoCASA at AFIX visits recording the data from patient charts into the software for analysis.

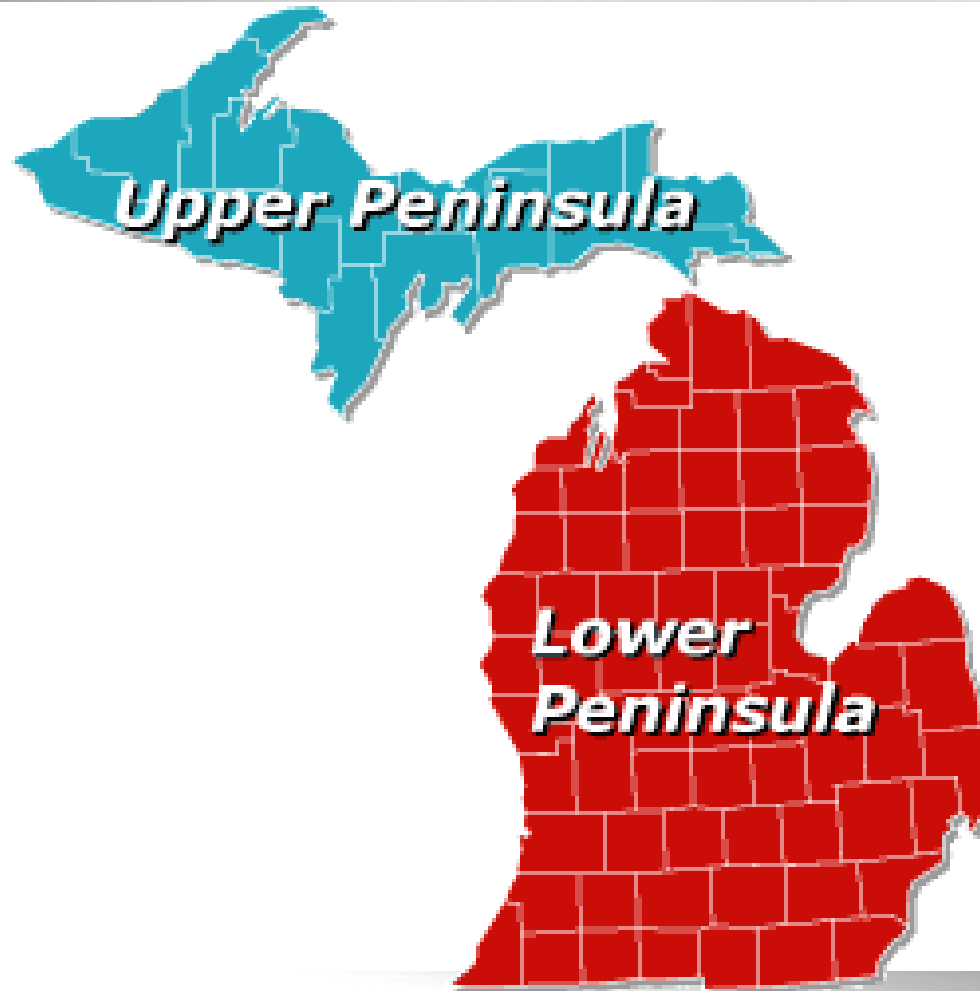
CoCASA is also used to record VFC site visit data and generates reports required by CDC for annual management surveys.



A little Michigan History...

- ◆ Michigan used CoCASA for AFIX visits 1995 - 2007
- ◆ State based staff conducted chart reviews at provider offices
- ◆ A sampling of 200 patient charts, 19-36 months old were reviewed and entered into CASA
- ◆ “CASA” reports were reviewed with staff at provider offices

A little Michigan History...



Michigan Care Improvement Registry

MCIR

- Approximately 14,000 Registered Sites
 - 5,500 Providers, 4,300 Childcare, 4,900 Schools
- 25,000 Registered Active Users
- 15,000-36,000 daily user logins
- 7,300,000 Individuals
- 90,000,000 Immunization Doses
- 9,000-14,000 reports generated daily

MCIR Profile Report

Current Immunization Profile by Provider ID

Report Date: September 12, 2012

Report For: [REDACTED]

Immunization Schedule Specified for Clients

People of age at least (months)	19
but not yet of age (months)	36
Minimum Doses of DTaP/DT/Td/Tdap	4
Minimum Doses of IPV	3
Minimum Doses of MMR	1
Minimum Doses of Hib	3
Minimum Doses of HepB	3
Minimum Doses of Varicella	1
Minimum Doses of PCV7/13 (Prevnar)	4
Minimum Doses of HepA	0
Minimum Doses of Rotavirus	0
Minimum Doses of Influenza	0
Minimum Doses of Meningococcal	0
Minimum Doses of HPV	0
Gender	All
Patient Status	Standard
Migrant People	Exclude

*: People may be considered compliant for Hib and PCV7 even if they do not meet minimum number of doses stipulated if they are assessed as complete.

SUMMARY

	Number	Percent
Clients That Meet Above Criteria	105	41
Clients Not Meeting Above Criteria	150	59
Total Number of Clients Evaluated	255	100

MCIR Immunization Record



STATE OF MICHIGAN
DEPARTMENT OF COMMUNITY HEALTH
Official State of Michigan Immunization Record

MCIR ID#: [REDACTED] Gender: M Patient ID#: [REDACTED]
Name: [REDACTED] Age: 1 Year 8 Months DOB: 12/15/2010
Responsible Party: [REDACTED]
Address: [REDACTED]
City, State, Zip: [REDACTED] 949
Telephone: [REDACTED]
As of: September 12, 2012

Provider: Assessment indicates that vaccinations are overdue and should be administered today if not medically contraindicated.

History of Vaccinations Given by Series							
Vaccine Series	Dose#1	Dose#2	Dose#3	Dose#4	Dose#5	Dose#6	Dose#7
DTP/DTaP/DT/Td/Tdap	02/16/2011	04/19/2011	07/05/2011	04/09/2012			
Polio	02/16/2011	04/19/2011	07/05/2011				
MMR	07/25/2012						
Hib	02/16/2011	04/19/2011	07/05/2011	01/02/2012			
Hepatitis B	12/23/2010	02/16/2011	04/19/2011				
Varicella	01/02/2012						
Pneumococcal Conjugate	02/16/2011	04/19/2011	07/05/2011	04/09/2012			
Rotavirus	02/16/2011	04/19/2011					
Hepatitis A	07/25/2012						
Seasonal Influenza	10/04/2011	11/07/2011					

Immunization Status and Shots Needed				
Vaccine	Next Dose Due	Accelerated Due Date	Recommended Date	Overdue Date
DTaP	5	12/15/2014	12/15/2014	12/15/2015
Polio	4	12/15/2014	12/15/2014	12/15/2015
MMR	2	08/22/2012	12/15/2014	12/15/2015
Hib	Complete			
Hepatitis B	3	06/15/2011	09/19/2011	03/15/2012
Varicella	2	08/22/2012	12/15/2014	12/15/2015
PCV13	Complete			
Hepatitis A	2	01/25/2013	01/25/2013	05/15/2013
Seasonal Influenza (TIV)	1	07/01/2012	08/01/2012	08/01/2012

AFIX in Michigan 2012

- ◆ 100% Registry-Based using MCIR
- ◆ Eliminates manual chart reviews and use of the CoCASA software at site visits
- ◆ Allows more FTEs to do site visits
- ◆ Every VFC provider (with children 19-36 months old) receiving a VFC site visit receives an AFIX visit

MCIR AFIX Reports

MCIR programmers created the AFIX reports to “mimic” the CoCASA AFIX reports

The MCIR AFIX reports contain detailed coverage level and diagnostic information to assist with preparing for the VFC/AFIX site visits

Co-CASA

MCIR

Report Title: **SINGLE ANTIGEN REPORT (CHILDHOOD)** Date Generated: 12/10/2007

REPORT CRITERIA

Provider site name: [REDACTED]

Age range: From 19 to 36 months as of 6/15/2006

Selected series/antigens: 4:3:1:3:3:1 (4DTaP, 3Polio, 1MMR, 3HIB, 3HepB, 1Var)

Compliance: ☐ By age: 0 ☒ By date: 3/23/2006

Additional criteria: ☒ Apply ACIP Recommendations (valid doses only) ☒ Apply four-day grace period ☐ Limited by [REDACTED]

74 # of patient records selected
 0 # of patients moved or gone elsewhere (MOGE)
 74 Total # of Patient Records Assessed

Total # of Patient Records Assessed 74

RESULTS (based on user-selected criteria)

Single Antigen Coverage

Months of Age	3	5	7	9	12	13	16	19	24
# %	# %	# %	# %	# %	# %	# %	# %	# %	# %
1 DTaP1	51 69	59 80	60 81	60 81	60 81	60 81	61 82	61 82	43 86
2 DTaP2		36 49	49 66	52 70	55 74	55 74	56 76	56 76	39 78
3 DTaP3			30 41	43 58	48 65	48 65	50 68	50 68	36 72
4 DTaP4						1 1	20 27	32 43	29 58
5 Polio1	49 66	58 78	59 80	59 80	60 81	60 81	60 81	60 81	43 86
6 Polio2		33 45	47 64	50 68	53 72	53 72	54 73	55 74	38 76
7 Polio3			25 34	38 51	41 55	43 58	48 65	48 65	35 70
8 MMR1						28 38	44 59	47 64	35 70
9 Hib1	48 65	57 77	59 80	59 80	60 81	60 81	60 81	60 81	43 86
10 Hib2		34 46	46 62	50 68	52 70	52 70	53 72	55 74	38 76
11 Hib3			28 38	38 51	42 57	43 58	46 62	46 62	34 68
12 HepB1	56 76	59 80	59 80	59 80	60 81	60 81	60 81	60 81	43 86
13 HepB2	40 54	47 64	52 70	55 74	55 74	55 74	55 74	55 74	38 76
14 HepB3			25 34	38 51	44 59	44 59	45 61	47 64	34 68
15 Var1						27 36	40 54	44 59	32 64
Denominator	74	74	74	74	74	74	74	74	50

12/10/2007	AFIX Single Antigen MCIR Report	Page 1
People of age (months)	19 - 36	Doses of DTaP/DT/Td/Tdap 4
Compliance by	12/10/2007	Doses of IPV 3
Select people by	Provider Id	Doses of MMR 1
Missed Opportunities defined	On LAST immunization visit	Doses of Hib 3
Total # of Patient Records Assessed	42	Doses of HepB 3
		Doses of Varicella 1

Months of Age	3	5	7	9	12	13	16	19	24
# %	# %	# %	# %	# %	# %	# %	# %	# %	# %
DTaP1	35 83	38 90	38 90	40 95	40 95	40 95	40 95	40 95	34 100
DTaP2		31 74	36 86	38 90	39 93	39 93	40 95	40 95	33 97
DTaP3			22 52	32 76	36 86	36 86	36 86	38 90	31 91
DTaP4						3 7	15 36	29 69	27 79

Polio1	35 83	38 90	38 90	40 95	40 95	40 95	40 95	40 95	34 100
Polio2		31 74	36 86	38 90	39 93	39 93	40 95	40 95	33 97
Polio3			20 48	29 69	36 86	36 86	36 86	38 90	31 91

MMR1						23 55	31 74	36 86	29 85
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Hib1	35 83	39 93	39 93	41 98	41 98	41 98	41 98	41 98	34 100
Hib2		31 74	36 86	38 90	39 93	39 93	39 93	39 93	32 94
Hib3			2 5	2 5	2 5	22 52	31 74	36 86	31 91

HepB1	40 95	41 98	41 98	41 98	41 98	41 98	41 98	41 98	34 100
HepB2	33 79	37 88	38 90	40 95	41 98	41 98	41 98	41 98	34 100
HepB3			18 43	29 69	37 88	37 88	38 90	39 93	33 97

Var1						22 52	30 71	35 83	28 82
Immune									

Patient Totals	42	42	42	42	42	42	42	42	34
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Co-CASA

MCIR



Report Title:

INVALID DOSES

Date Generated: 12/10/2007

REPORT CRITERIA		Assessment date: 3/23/2006
Provider site name:	[REDACTED]	
Age range:	From 19 to 36 months as of 6/15/2006	
Selected series/antigens:	4:3:1:3:3:1 (4DTaP, 3Polio, 1MMR, 3HIB, 3HepB, 1Var)	
Compliance:	<input type="checkbox"/> By age: 0 <input checked="" type="checkbox"/> By date: 3/23/2006	
Additional criteria:	<input checked="" type="checkbox"/> Apply ACIP Recommendations (valid doses only) <input checked="" type="checkbox"/> Apply four-day grace period <input type="checkbox"/> Limited by	

Prior to recalling the patients on this list, please review the patient's medical chart for the status of the 4th DTaP. In some cases the 4th DTaP may have been given off the ACIP recommended schedule but does not need to be repeated if administered between 4 and 6 months after the 3rd DTaP.

Total # of Records with Invalid Doses 3

RESULTS (based on user-selected criteria)

Patient Name (Last, First MI)	DOB	Antigen	Date given	Reason not valid
[REDACTED]	05/19/2004	Varicella1	07/13/2005	Interval not compliant.
	11/06/2003	DTaP4	02/07/2005	Interval not compliant.
	11/20/2003	HepB3	07/21/2004	Interval not compliant.

09/11/2012				AFIX Invalid Doses MCIR Report		Page 1	
S [REDACTED]		DTaP/DT/Td/Tdap		4	PCV	4	
People of age (months)		IPV		3	Rotavirus	0	
Compliance by		MMR		1	HPV	0	
Select people by		HIB		3	HepA	0	
Patient Status		HepB		3	Influenza	0	
Missed Opportunities defined		Standard		1	MCV	0	
Total # of Patient Records Assessed		On LAST immunization visit		46			

Prior to recalling the patients on this list, please review the patient's medical chart for the status of the 4th DTaP. In some cases the 4th DTaP may have been given off the ACIP recommended schedule but does not need to be repeated if administered between 4 and 6 months after the 3rd DTaP.

Total # of invalid doses with series not complete: 4

Patient Name	Birthdate	Antigen	Date Given	Reason Not Valid	Series
[REDACTED]	01/25/2010	DTaP4	11/23/2010	Does not meet minimum age	Overdue
	09/21/2009	MMR1	10/11/2010	Live dose given within 28 days of another live vaccine product	Overdue
	06/17/2010	HepB3	10/22/2010	Does not meet minimum age	Overdue
	06/05/2010	DTaP4	12/20/2011	Does not meet minimum interval from last dose	Overdue



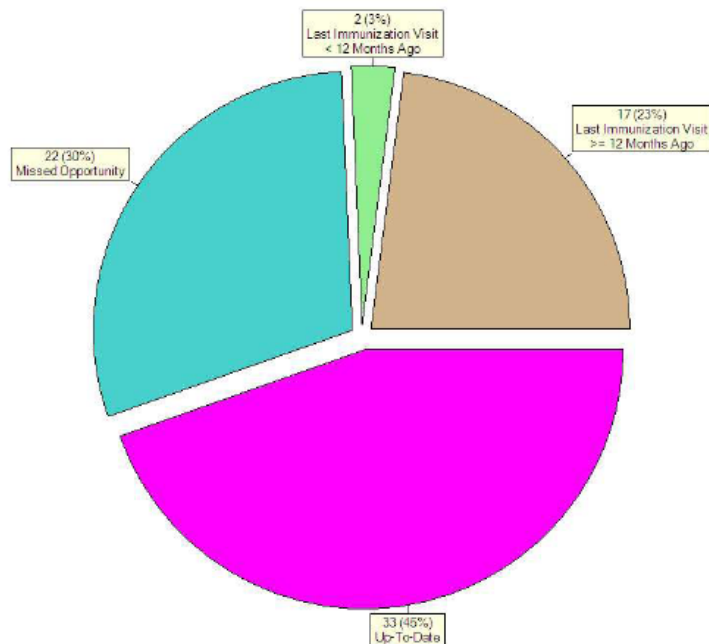
Co-CASA

MCIR

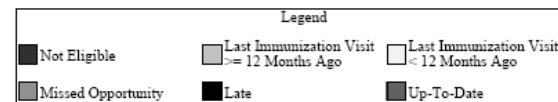
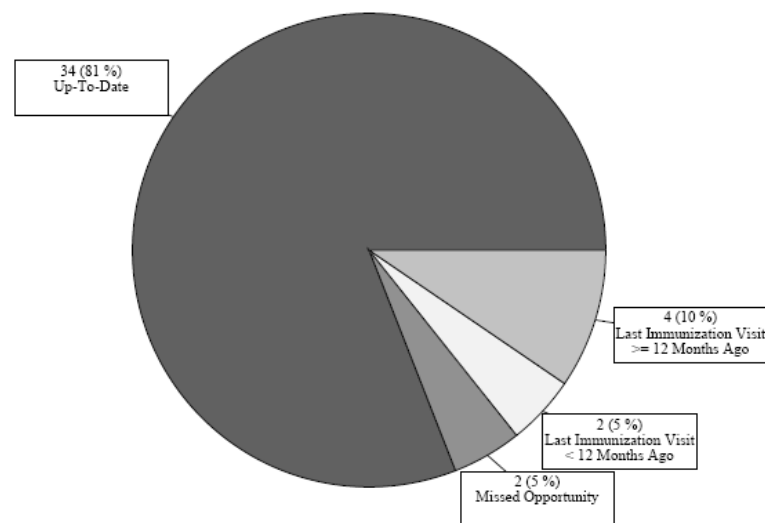
Report Title: **SUMMARY REPORT** Date Generated: 12/10/2007

Provider Site Name: **[REDACTED]** Series: 4:3:1:3:3:1 (4DTaP, 3Polio, 1MMR, 3HIB, 3HepB, 1Var) Compliance: By Date: 03/23/2006

Immunization Results



12/10/2007 AFIX Summary MCIR Report		Page 1
[REDACTED]		Doses of DTaP/DT/Td/Tdap 4
People of age (months) 19 - 36		Doses of IPV 3
Compliance by 12/10/2007		Doses of MMR 1
Select people by Provider Id		Doses of HIB 3
Missed Opportunities defined On LAST immunization visit		Doses of HepB 3
Total # of Patient Records Assessed 42		Doses of Varicella 1



Missing Overdue AFIX Report

09/11/2012		AFIX Missing Immunizations - Overdue MCIR Report		Page 1	
[REDACTED] 4)		DTaP/DT/Td/Tdap	4	PCV	4
		IPV	3	Rotavirus	0
People of age (months)		MMR	1	HPV	0
Compliance by		HIB	3	HepA	0
Select people by		HepB	3	Influenza	0
Patient Status		Varicella	1	MCV	0
Missed Opportunities defined		On LAST immunization visit			
Total # of Patient Records Assessed		193			

Prior to recalling the patients on this list, please review the patient's medical chart for the status of the 4th DTaP. In some cases the 4th DTaP may have been given off the ACIP recommended schedule but does not need to be repeated if administered between 4 and 6 months after the 3rd DTaP.

Total # of Patient Records with Missing Immunizations: 26

Name	Birthdate	Missing Immunizations
[REDACTED]	11/04/2010	DTaP4
	12/30/2010	DTaP4, MMR1
	04/27/2010	PCV3
	09/12/2010	DTaP4, MMR1
	01/16/2010	Polio2, MMR1, HepB1, Var1
	12/14/2009	DTaP2, Polio2, MMR1, Hib2, HepB3, Var1, PCV2
	06/01/2010	DTaP3, Polio3, MMR1, Hib3, HepB3, Var1, PCV3
	02/02/2010	DTaP4, MMR1
	12/28/2010	DTaP4, MMR1, HepB3, Var1, PCV4
	02/14/2010	MMR1, HepB1, Var1, PCV3
	11/17/2010	MMR1, Hib3, HepB1, Var1
	02/24/2010	DTaP4, MMR1
	01/17/2011	DTaP2, Polio2, MMR1, Hib2, HepB3, Var1, PCV2
	10/08/2010	DTaP4, MMR1, Var1, PCV4
	08/31/2010	DTaP1, Polio1, MMR1, Hib1, HepB2, Var1, PCV1
	11/15/2010	MMR1
	08/24/2010	DTaP3, Polio3, MMR1, Hib3, HepB3, Var1, PCV3
	05/14/2010	DTaP2, Polio2, MMR1, Hib2, HepB3, Var1, PCV2
	12/06/2010	DTaP4, MMR1
	02/04/2010	MMR1, Var1
	02/04/2010	MMR1, Var1
	09/23/2009	DTaP4, MMR1, PCV4
	10/11/2010	DTaP4, MMR1
	10/13/2009	Var1
	04/15/2010	DTaP2, Polio2, MMR1, Hib2, HepB3, Var1, PCV2
	06/24/2010	DTaP4, MMR1, Var1, PCV4

MCIR AFIX Reports

Michigan created an additional report

AFIX Basic Overview report

- 1-page that summarizes the assessment data
- Coverage level information (Series and single vaccine)
- General diagnostic information for feedback and exchange of information
- Most used at VFC/AFIX Site Visits

MCIR AFIX Basic Overview Report

09/11/2012

AFIX Basic Overview MCIR Report

Page 1

81034)

People of age (months) 19 - 36
 Compliance by 09/11/2012
 Select people by Provider Id
 Patient Status Standard
 Missed Opportunities defined On LAST immunization visit
 Total # of Patient Records Assessed 193

DTaP/DT/Td/Tdap	<u>4</u>	PCV	<u>4</u>
IPV	<u>3</u>	Rotavirus	<u>0</u>
MMR	<u>1</u>	HPV	<u>0</u>
HIB	<u>3</u>	HepA	<u>0</u>
HepB	<u>3</u>	Influenza	<u>0</u>
Varicella	<u>1</u>	MCV	<u>0</u>

Note: UTD = Up-To-Date for requested criteria

<u>Coverage Levels:</u>	<u>#</u>	<u>%</u>
4 Doses of DTaP	174	90
3 Doses of Polio	185	96
1 Doses of MMR	170	88
3 Doses of Hib	185	96
3 Doses of HepB	182	94
1 Doses of Var	177	92
4 Doses of PCV	180	93
Var Immunity	2	1
Up-To-Date	167	87

Information for Feedback and eXchange of Information:

# of Invalid Doses with series not complete:	7
# of Patients Missing Immunizations and Overdue:	26
# of Patients that need one visit to be UTD:	8
# of Patients that need only one dose to be UTD:	0
# of Patients not UTD that last immunization >= 12 months:	12
# of Patients not UTD with Missed Opportunity for simultaneous administration:	11

MCIR AFIX Reports

- MCIR AFIX Reports are generated overnight
- Local Health Department staff choose which of the AFIX reports to generate and give to provider office at the site visit
 - Details to analyze and present
 - General information for visual presentation
 - Lists of patients in categories of not up to date
- MCIR is the assessment standard
 - Immunization data must be in MCIR

AFIX in Michigan 2012

Staff at 45 Local Health Departments conduct AFIX during annual VFC site visits

- Providers with children 19-36 months old in the MCIR
- Coverage levels for single vaccines and 4313314
- Data and resources in areas to focus efforts to improve immunizations
- One page AFIX basic overview report that can be left with the provider office (data based on MCIR)
- Follow up and assistance is available from state staff (Field Reps, Nurse Educator, AFIX, VFC)
- LHD receives payment for every AFIX visit conducted

AFIX in Michigan 2012

MCIR based vs. CoCASA Chart based Assessment

- ◆ More providers receive AFIX visit (from ~100 to +800)
- ◆ Providers accept the MCIR data and information
- ◆ Increased time for LHD staff at VFC/AFIX site visit met limited resistance
- ◆ LHD acceptance increases each year of site visits

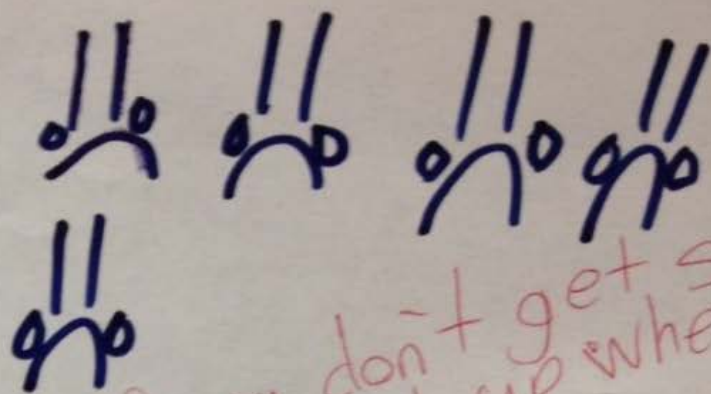
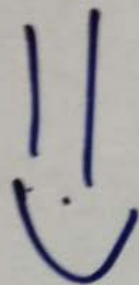
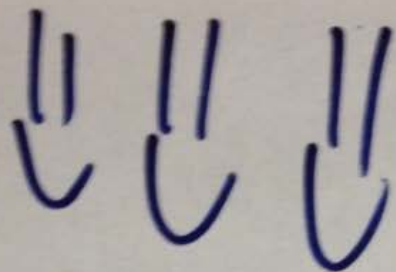
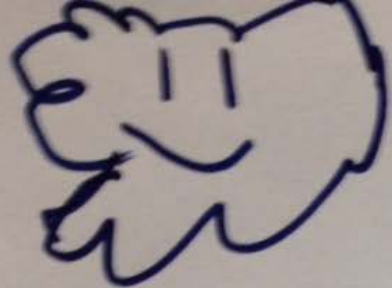
AFIX in Michigan 2012

- Using the MCIR for AFIX reports
 - Increases awareness of provider staff
 - Increases use of MCIR Recall letters
 - Decreases missed opportunities
 - Decreases time spent on manual chart reviews
 - Increases confidence in MCIR data
 - Identifies opportunities for additional immunization education and MCIR training for staff at provider offices

you should always
Get Shots on time
or ~~else~~ else you'll
get Sick like this Person

If you Get
Shots * you
will feel so, so
much better





If you don't get shots
you'll end up where

Get Shots and eat healthy
and you'll end up like
me.



THANK YOU!

*Michigan Department
of Community Health*



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