Challenges & Opportunities

Kobra Eghtedary, PhD Director of Data, Research & Technology Michigan WIC Program

- The purpose of this project is to develop the system and produce reports that are congruent with the CDC Pregnancy Nutrition Surveillance System (PNSS) and Pediatric Nutrition Surveillance System (PedNSS). This includes implementation of existing validation and cleaning, analysis, data storage, file creation, and report generation procedures.
- When CDC stopped producing the PNSS and PedNSS reports in 2012, a vital WIC program planning and evaluation data source was lost. In order to fill the gap, MI–PNSS & PedNSS was developed to collect, analyze, and disseminate data to guide public health policy and action related to WIC population. This information is used for strategic planning, implementation of program priorities and monitoring WIC program effectiveness. The data is also used in evaluation of Block grants and other public health programs.

- Michigan WIC invested to implement a web-based application, the MI–PNSS & PedNSS in 2012. It allows authorized users to upload PNSS & PedNSS extracts to the system. Upon processing the system generates data quality reports, Annual demographic and Health indicator reports. It also has the ability to generate Master and Unique Master files. This project was successfully implemented for the MWR states
- The current bi-regional project attempts to transition the MI-PNSS & PedNSS system from Michigan to the current system contractor, Three Sigma Software (3SSW) in order to facilitate State Agency data submission from multiple USDA regions.

- The MWR States (Indiana, Ohio, Wisconsin and Minnesota) have participated in the MI –PNSS & PedNSS project since 2012. Multiple States & regions have requested to participate since the project was implemented in Michigan.
 - In 2016, USDA approved a grant for the purpose of expanding the project to MWR and MPR States. MI-PNSS & PedNSS was then transferred to a stand alone system as the WIC-PNSS & PedNSS ready to accept data extracts from all WIC programs nationally.

Data Source

WIC-PNSS & PedNSS uses data extracts from the participating state WIC programs. The field requirements for data collection are the same as CDC field definitions and specifications.

Surveillance Reports

The WIC-PNSS & PedNSS application has the ability to generate nutrition surveillance reports for each contributing states and nationally, defined as all participating contributors. A contributor may be a state, US territory or a tribal government. Each contributor can receive more specific reports by state, county, local agency, Metro Area or clinic.

Participating State Agencies

Midwest Region

- Michigan
- Indiana
- Illinois
- Minnesota
- Ohio
- Wisconsin

* Mountain Plains Region

- * South Dakota
- * Kansas
- * North Dakota
- Colorado
- * Cheyenne River Sioux, SD
- * Iowa
- Montana
- Nebraska
- * Rosebud Sioux, SD
- Missouri
- * Standing Rock Sioux Tribe, ND
- * Three Affiliated Tribes, ND
- * Utah
- * Wyoming

Project Team

State Regional Leads: MWR: Kobra Eghtedary, PhD MPR: Rhonda Buntrock

Design & Development Vendor Three Sigma Software

Participating WIC Agencies:

MWR: Michigan, Indiana, Ohio, Minnesota, Wisconsin Mountain Plains: South Dakota, North Dakota, Kansas, Colorado, Iowa, Missouri, Montana, Nebraska, Utah, Cheyenne River Sioux, SD, Rosebud Sioux, SD, Standing Rock Sioux Tribe, ND and Three Affiliated Tribes, ND.



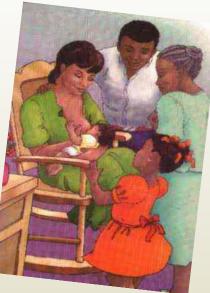
System Features

> Web-based Application – Access through Secure website

Easy Navigation Features

Emphasis on Data Security and Process Automation

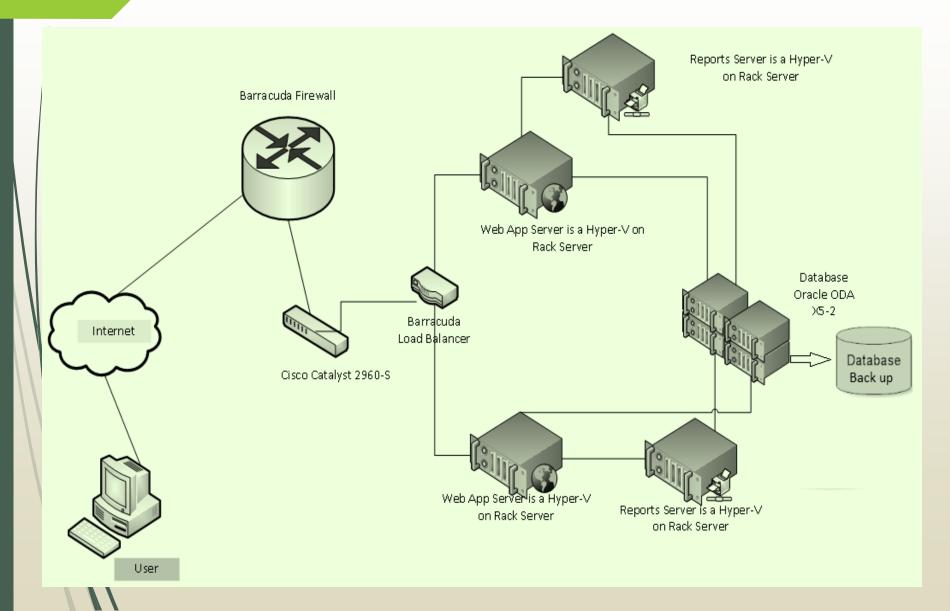
- Secure Role-Based Log in
- Program Rules Application
- Data Edits & Validation
- Data Integrity
- Historic Information
- Report Generation
- Emails to inform coordinators at different stages



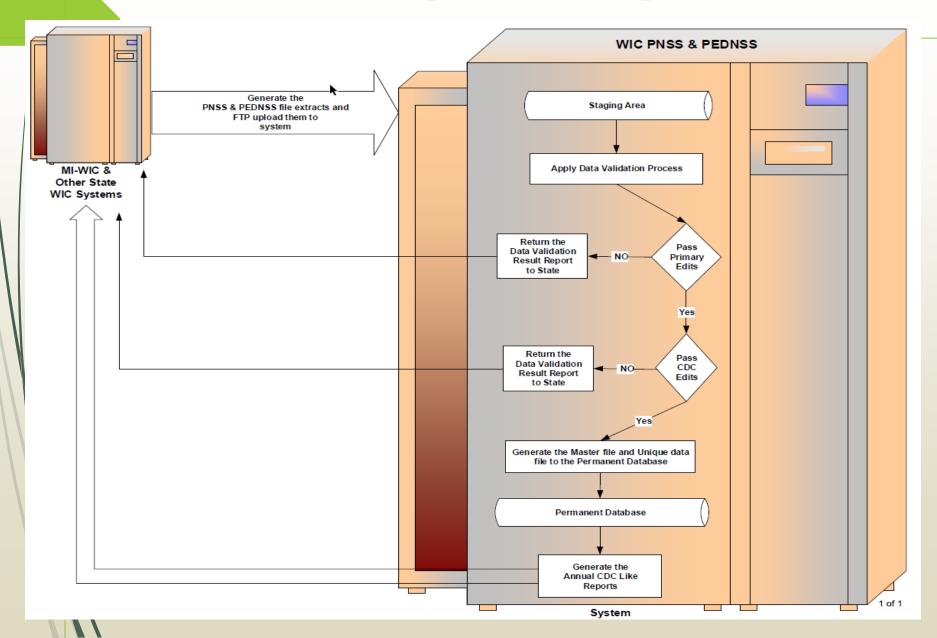
Hardware Architecture Setup

Data center Servers, Network, Hosting	Qty
2 Database servers (production & Test) - Server platform: Oracle T4-2; CPU/Threads : 2/16/128; Memory:128GB; SAN/NAS Size: 1TB	2
Oracle Licenses cost (Initial and First year)	2
Oracle Support cost (Yearly)	1
2 App Servers (Production & Test) - Server platform: Windows 2012; CPU/Threads: 4; Memory:9-16GB; SAN/NAS Size 100gb	2
2 Report Servers (Production & Test) - Server platform: Windows 2012; CPU/Threads: 4; Memory:9-16GB; SAN/NAS Size 100gb	2
Web Accelerator	2
Domain Controller	2
APC Rack PDU (20A/208V)	1
APC AP8858NA3 PDU	2
CAT 5 Cables	1
RSA Appliance - Maintenance and Support	1
KVM Network Switch	1
ACP AP8841 30A/208 PDU	1
Catalyst 2960S Cisco Switch	4
Cisco 2921 Router	2
RSA Secured Appliance	2
Cisco ASA 5520 Security Device	2
Data Center hosting Charges (monthly) & Data center Support Staff Cost	12
1 42U Cabinet	1
20 Mbps of BTP Blended Bandwidth	1
Power –16 amps / AB	1

Hardware Architecture



Data Processing Flow Diagram



Budget

		-							
				PNSS and PEDNSS C	ost Estimate by Stat	e and Region			
Des	scription		Start-up Cost			Ongoing /Maintenance Cost			Total for 5 years
				Year 1	Year 2	Year 3	Year 4	Year 5	
Total Data Center Cost			\$ 300,828.69	\$ 72,000.00	\$ 114,583.48	\$ 114,583.48	\$ 114,583.48	\$ 114,583.48	\$ 831,162.61
Total Program Staff Costs			\$-	\$ 345,670.00	\$ 345,670.00	\$ 345,670.00	\$ 345,670.00	\$ 345,670.00	\$ 1,728,350.00
Total Cost			\$ 300,828.69	\$ 417,670.00	\$ 460,253.48	\$ 460,253.48	\$ 460,253.48	\$ 460,253.48	\$ 2,559,512.61
Total Caseload Participate	d **			1,981,575	1,624,594	1,624,594	1,624,594	1,624,594	
Cost Per Case				\$ 0.21	\$ 0.28	\$ 0.28	\$ 0.28	\$ 0.28	
Region	State	Average		Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost for 5 years
		Monthly		Cost Per Caseload for Each State	Cost Per Caseload for Each				
		Caseload	Start up Cost Per State		State	State	State	State	
Midwest Region	Michigan*	244,829	\$ 150,414.35						
	Indiana	154,485		\$ 32,561.85	\$ 43,766.17	\$ 43,766.17			
	Illinois	247,594		\$ 52,187.07	1 1			· · · · · · · · · · · · · · · · · · ·	
	Minnesota	119,403		\$ 25,167.38				\$ 33,827.31	
	Ohio	244,201		\$ 51,471.90		\$ 69,183.05	\$ 69,183.05		
	Wisconsin	105,504		\$ 22,237.79	\$ 29,889.67	\$ 29,889.67	\$ 29,889.67	\$ 29,889.67	
		1,116,016.00	\$ 150,414.35	\$ 235,230.26		\$ 316,171.45		· · · · · · · · · · · · · · · · · · ·	\$ 1,650,330.42
Mountain Plains	South Dakota*	17,514	\$ 150,414.35	\$ 3,691.54	\$ 4,961.78				
	Kansas	62,850		\$ 13,247.32	\$ 17,805.64	\$ 17,805.64	\$ 17,805.64	\$ 17,805.64	
	North Dakota	11,481		\$ 2,419.93	\$ 3,252.61	\$ 3,252.61	\$ 3,252.61	· · ·	
	Colorado	90,733		\$ 19,124.41	\$ 25,704.99				
	Cheyenne River Sioux, SD	748		\$ 157.66		\$ 211.91			
	lowa	63,481		\$ 13,380.32					
	Montana	18,476		\$ 3,894.31					
	Nebraska	36,960		\$ 7,790.31		\$ 10,470.90		\$ 10,470.90	
	Rosebud Sioux, SD	1,211		\$ 255.25	\$ 343.08	\$ 343.08	\$ 343.08	\$ 343.08	
	Missouri	134,780		\$ 28,408.49	\$ 38,183.67	\$ 38,183.67	\$ 38,183.67	\$ 38,183.67	
	Standing Rock Sioux Tribe, ND	723		\$ 152.39	\$ 204.83			1	
	Three Affiliated Tribes, ND	212		\$ 44.68	\$ 60.06	1			
	Utah	58,995		\$ 12,434.78	\$ 16,713.50	\$ 16,713.50	\$ 16,713.50	\$ 16,713.50	
	Wyoming	10,414		\$ 2,195.03		\$ 2,950.32	\$ 2,950.32	\$ 2,950.32	
		182,578.00	\$ 150,414.35	\$ 107,196.43	\$ 144,082.03	\$ 144,082.03	\$ 144,082.03	\$ 144,082.03	\$ 833,938.88

- As the number of States/Region increase, the Cost per Case goes down proportionately.
- Note; the year 1 data center cost is partially covered during start up cost.



Process for Participating States

- MOU/Agreement
 - Designate a contact person/data coordinator/System User











MOU/ Data Sharing Agreement

State of Michigan

Michigan Department of Health and Human Services, Women, Infant and Children Program

Data Sharing Agreement

I. PARTIES:

This Data Sharing Agreement (DSA) is made and entered into by and between the Michigan Department of Health and Human Services, Women, Infant and Children (WIC) Program located at 320 S. Walnut Street, Lansing, Michigan 48913 and Three Sigma Software Incorporated located at 7901 Sandy Spring Road, Laurel, Maryland 20707

II. PROJECT TITLE:

WIC Pregnancy and Pediatric Nutrition Surveillance System (WIC PNSS & PedNSS System)

III. PURPOSE OF AGREEMENT:

As of 09/30/2012 the CDC no longer produces the PNSS & PedNSS reports. As a result, a vital program planning and evaluation data source has been lost which provided health outcome data for informed policy and activity development and to improve services for WIC clients. The State of Michigan has completed a project to replicate the CDC PNSS & PedNSS creating a national model for State Agencies (the MI-PNSS & PedNSS system).

Three Sigma Agreement letter

PNSS & PEDNSS Processing AGREEMENT

This agreement establishes the terms and conditions under which [Your State WIC Program] and 3 Sigma Software process PNSS & PEDNSS extract files.

1. Purpose.

As of 09/30/2012 the CDC no longer produces the PNSS & PedNSS reports. As a result, a vital program planning and evaluation data source has been lost which provided health outcome data for informed policy and activity development and to improve services for WIC clients. The State of Michigan has completed a project to replicate the CDC PNSS & PedNSS creating a national model for State Agencies (the WIC-PNSS & PedNSS system).

Part of the analytical power provided by the PNSS & PedNSS reports included the ability to compare PNSS & PedNSS data across State Agencies using standardized data definitions and extraction process. The WIC-PNSS & PedNSS has been successfully piloted to include the 6 MWR States and Hawaii. Three Sigma Software Incorporated is under contract to maintain and enhance the WIC-PNSS & PedNSS system while facilitating State Agency data submission from multiple different USDA regions.

The purpose of this agreement is to allow 3 Sigma Software to collect data to continue to supply the analysis and reports to the WIC Program that was previously provided by the CDC Pregnancy Nutrition Surveillance System (PNSS) and Pediatric Nutrition Surveillance System (PedNSS).

 Description of Data. "Data" includes Pregnancy Nutrition Surveillance System (PNSS) indicators including Demographic Variables, Prenatal Behaviors, Birth Outcome, and Infant Feeding Practices.

Process for Participating States

- Data coordinator: Request WIC Directors to designate one data coordinator for their state.
- This person would be able to access WIC-PNSS & PedNSS Application.
- Responsible for uploading extracts, submission to Master, reviewing summary reports.

File Submission

• A maximum of two users from each state is allowed to access the application and will need to request access.

•Once access is set up, the data coordinator will be able to upload data files to the WIC-PNSS & PedNSS Application.

•The uploaded files are processed and data quality report is generated. An email will be sent once this is ready.

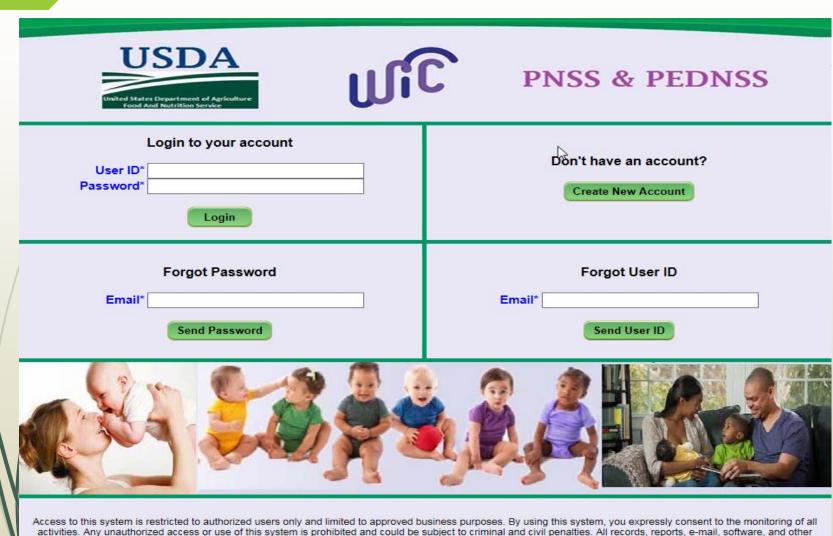
•The data coordinator has the option to review the data quality and make corrections/adjustments or submit the files to Master.

•Upon submission to Master, the files are processed automatically and report is generated

UAT Process

The data coordinator will be responsible to review the report by comparing it with the last CDC generated report (year 2011) and ensure accuracy.

> Any discrepancies will be conveyed to Michigan and Three Sigma for fixing.



data generated by or residing upon this system is promoted and backet of Michigan and may be used by the State of Michigan for any purpose.







New User Request

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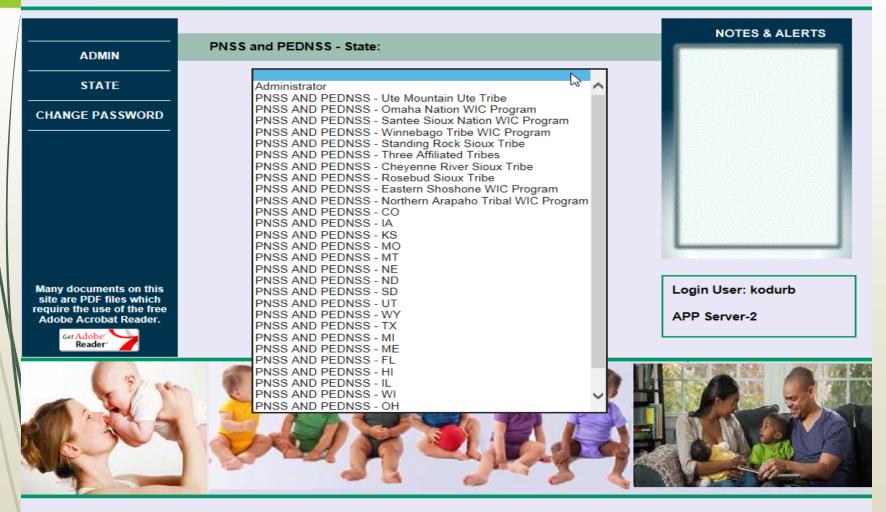
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Access to this system is restricted to authorized users only and limited to approved business purposes. By using this system, you expressly consent to the monitoring of all activities. Any unauthorized access or use of this system is prohibited and could be subject to criminal and civil penalties. All records, reports, e-mail, software, and other data generated by or residing upon this system are the property of the State of Michigan and may be used by the State of Michigan for any purpose.







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04/14/2017	MI	2015	Q3	PNSS	MI_PNSS_2015_Q3.txt	MI_PNSS_2015_Q3.dat	Reports Generat	
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04/14/2017	MI	2015	Q1	PNSS	MI_PNSS_2015_Q1.txt	MI_PNSS_2015_Q1.dat	Reports Generat	
04/14/2017	MI	2015	Q4	PEDNSS	MI_PEDNSS_2015_Q4	MI_PEDNSS_2015_Q4	Reports Generat	
04/14/2017	MI	2015	Q3	PEDNSS	MI_PEDNSS_2015_Q3	MI_PEDNSS_2015_Q3	Reports Generat	
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06/19/2	017	MI	2016	Q1	PEDNSS	PEDNSS_01012016-0	MI_PEDNSS_2016_Q1	Data Quality Err	
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04/14/2	017	MI	2015	Q2	PNSS	MI_PNSS_2015_Q2.txt	MI_PNSS_2015_Q2.dat	Reports Generat	
04/14/2	017	MI	2015	Q1	PNSS	MI_PNSS_2015_Q1.txt	MI_PNSS_2015_Q1.dat	Reports Generat	
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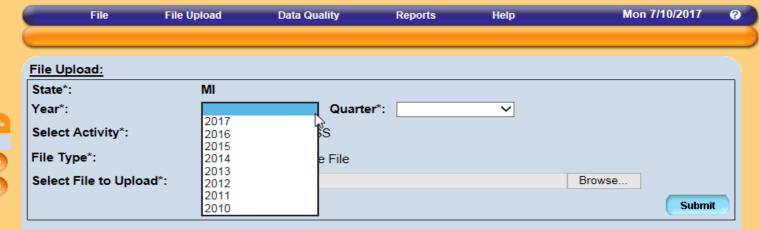
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Error Description	Field Count	
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Mis-coded Data	24	
BIV (Biologically implausible values)	9	
Cross-check Errors	5	
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	EVER_BREASTFED		6	0	0	
	FOOD_STAMPS_POSTPARTUM		18	.1	0	
	FOOD_STAMPS_PRENATAL		17	.1	0	\sim
	GESTATIONAL_DIABETES		240	1.5	0	
	<u>Detail Record:</u>			← 1	Displa	
Version: 1.0.0.10	6	KODURE	3	in State - MI	WICPF	РТ
		KODUKI	LOg	in State - Mi	WICFI	

Data Quality Details

ហ្លាំប		File	e Fi	le Upload	Data Qua	ality	Reports	Help PN & PEDNS		7/11/2017
PNSS & PEDNSS						Data Quali	ity Details			
STATE Module	State	: MI	Activity	PNSS		Year: 20	015	Quar	ter: Q1	
File Upload	Error	Code	Missing Dat	a						
Data Quality 💦 💦		oouc.	initiality but	Field Name	e		Number of Reco	'ds % Fo	ound Thre	eshold %
ata Quality Summary	E	BIRTHWEI	GHT_ENGLISH	I				981	6.3	0
Logoff 💀	E	BORN_ALI	VE_OR_DEAD					252	1.6	0
	0	CIGARETT	ES_LAST_TRI	MESTER				229	1.5	0
	0	CIGARETT	ES_POSTPART	UM				230	1.5	0
	► <u>(</u>	CIGARETT	ES_PRENATAL					93	.6	0
	0	CIGARETT	ES_PRIOR_TO	_PREG			1	.531	9.8	0
			JTOR_SPECIFI				15	100	0	
		CURRENTI	Y BREASTFED)				966	6.2	0 Display
	Detai	I Record	d:							Dispidy
		STATE	SUBSTATE	CLINIC	ZIP CODE	SOURCE OF DATA		INITIAL VISIT DATE	POSTPARTU VISIT DATE	
	1	41	8	000003850	49202	1	1	06262014	02192015	3009201
	1	1I I	8	000006103	49461	1	1	05302014	01142015	30126634
	P	4I	8	000001503	49045	1	1	07112014	07072015	3009223:
	I	4I	8	000008901	48238	1	1	10292014	01082015	3007994:
	1	чI	8	000001503	49022	1	6	07022014		3012763
		II	8	000004113	49509	1	1	07102014	02252015	3008452
	<									>

Data Quality Report

🥭 http	Attps://wicapp.3sigmasoftware.com/wicpp/State/WebForms/RunReport.aspx?fiFAIyRSZXBvcnRQYXJhbXM9J - Internet Explorer									
<i> (</i> htt	ps://wicapp.3sig	gmasoftware.com/wicpp	/State/WebForm	s/RunReport.aspx?fiFAIyRSZXBvcnRQYXJhbXM9JTJGcHByJTJGU	IIBUX0RhdGFfUXVhbGl0eSUyNnBfZmls	ZV9u 😵 Certificate erro				
						Ĩ				
		Run Date: 7/10/2017		Periodic Summary of Record Volume and Data Quality	Page 1 of 32					
		State: MI	Year: 2015		Status: Reports Generated					
		Activity: PNSS	Quarter: Q1		Edit Rule Date: 9/1/2015					
		Records Submitted:	15,662	Pregnancy Nutrition Surveillance System	Data File Received: 04/14/2017					
				Summary						
		Data Quality				_				
		Excluded Duplicates Field Count			0	_				
		Cross-check Errors			5	_				
		Field Count			5	_				
		BIV (Biologically implausible Field Count			9	_				
		Low or High Standard Deviat			2	_				
		Field Count			0					
		Mis-coded Data Field Count			24	_				
		Unusual Data Distributions		•						
		Field Count			2					
		Completion Code and Record Field Count	Linkage Errors		0	_				
		Missing Data								
		Field Count No Errors Identified			45	_				
		Field Count			0	_				

Reports

STATE Module

File Upload Data Quality Data Quality Summary Logoff

	File	File Upload	Data Quality	Reports	Help)		Tue 7/11/2017		0
				PNSS 👆 🕨	State					
				PEDNSS	Local Age	ncy				
			Data Qual	ity Details	County					
Sta	te: MI	Activity: PNSS	Year: 2	015	Clinic	urter	Q1			
Jia	te. mi	Activity. PN35	real. Z	010	Metro Are					
Erro	or Code: Mi	ssing Data			Region					
		Field Name		Number of	kecoras	% Found	ł	Threshold %		
	BIRTHWEIGH	HT_ENGLISH			981		6.3	0		
	BORN_ALIVE	_OR_DEAD			252		1.6	0		
	CIGARETTES	_LAST_TRIMESTER			229		1.5	0		
	CIGARETTES	_POSTPARTUM			230		1.5	0		
•	CIGARETTES	_PRENATAL			93		.6	0		
	CIGARETTES	_PRIOR_TO_PREG			1531		9.8	0		
	CONTRIBUT	DR_SPECIFIC_RACE			15662		100	0		
	CURRENTLY	BREASTFED			966		6.2	0		
								Displ	ay	

Detail Record:

	STATE	SUBSTATE	CLINIC	ZIP CODE	SOURCE OF DATA	COMPLETION CODE	INITIAL VISIT DATE	POSTPARTUM VISIT DATE	
	MI	8	000003850	49202	1	1	06262014	02192015	3009201
	MI	8	000006103	49461	1	1	05302014	01142015	30126634
	MI	8	000001503	49045	1	1	07112014	07072015	3009223:
	MI	8	000008901	48238	1	1	10292014	01082015	3007994
	MI	8	000001503	49022	1	6	07022014		3012763
	MI	8	000004113	49509	1	1	07102014	02252015	3008452
<									>

Version: 1.0.0.10

←

Cancel

Export

I	Rep	orts				
		ters - Internet Explorer 3sigmasoftware.com/Si	tate/WebForms/Oracle	Reports.aspx?fiFAIy	RQYXJhbURhdGE9U1RBVE	
	Year	2016			▼	
	0				Run Report	Cancel

Reports – Michigan PNSS 2016

Table 1C

2016 Pregnancy Nutrition Survelliance (1)

Run Date: 04/05/2017

Michigan

Summary of Demographic Indicators (2)

Total Records	Number	%		Source of D	ata		Nun	nber	%
Complete Records	43,038	71.6	WIC					60,143	100.0
			Maternal Health					0	0.0
Prenatal Records	3,964	6.6	Other					0	0.0
Postpartum Records	13,141	21.8	Total					60,143	100.0
Total Records Accepted	60,143		Excluded Unknown: 0 0.0						
Race/Ethnic Distribution	Number	%	Age Distribution	Number	%	Education Distribution	n	Number	%
White, Not Hispanic	32,209	53.8	< 15 Years	87	0.1	> High School		18,503	31.3
Black, Not Hispanic	17,396	29.1	15 - 17 Years	1,811	3.0	High School		26,502	44.9
Hispanic	6,378	10.7	18 - 19 Years	4,737	7.9	< High School		14,048	23.8
American Indian/Alaska Native	183	0.3	20 - 29 Years	38,125	63.5	Total		59,053	100.0
Asian/Pacific Islander	1,258	2.1	30 - 39 Years	14,232	23.7	Excluded Unknown: 1,09	0 1.8		
Multiple Races	2,389	4.0	>= 40 Years	1,063	1.8				
All Other	0	0.0	Total	60,055	100.0				
Total	59,813	100.0	Excluded Unknown: 88 0.1	İ 👘	Í				
Excluded Unknown: 326 0.5									
Poverty Level	Number	%	Program Participation (3)	Number	%	Migrant Status		Number	%
0 - 50	17,678	37.7	WIC	47,002	100.0	Yes		514	0.9
51 - 100	12,931	27.5	SNAP	46,950	50.1	No		59,629	99.1
101 - 130	5,653	12.0	Medicaid	46,932	88.4	Total		60,143	100.0
131 - 150	2,814	6.0	Tanf	46,975	5.7	Excluded Unknown: 0	0.0		
151 - 185	3,715	7.9	Excluded Unknown:						
186 - 200	1,063	2.3	WIC:	0	0.0				
> 200	2,812	6.0	SNAP:	0	0.0				

PNSS Behavioral Indicators

Table 2C 2016 Pregnancy Nutrition Survelliance

> Michigan Summary of Health Indicators

(1)

04/05/2017

Run Date:

	rs (2)		National	
	Michigan Prevalence		Prevalence	
			(Prior Year)	
	Number	%	Number	%
Medical Care		- 1		
1st Trimester	54,902	82.2	107,398	79.6
No Care	54,902	8.4	107,398	11.2
WIC Enrollment		- 1		
1st Trimester	59,192	32.4	128,068	32.1
2nd Trimester	59,192	29.7	128,068	29.4
3rd Trimester	59,192	16.9	128,068	20.3
Postpartum (3)	59,192	21.1	128,068	18.3
Prepregnancy Multivitamin Consumption (4)	46,023	20.1	101,348	18.4
Mulitivitamin Consumption During Pregnancy (5)	46,578	87.4	98,273	87.7
Smoking		- 1		
3 Months Prior to Pregnancy	53,738	28.6	137,210	28.8
During Pregnancy	46,609	16.9	114,082	20.6
Last 3 Months of Pregnancy	55,530	15.1	134,524	16.4
Postpartum	55,553	16.0	134,525	17.2
Smoking Changes (6)		I		
Quit Smoking by First Prenatal Visit	13,947	44.1	34,081	39.5
Quit Smoking by First Prenatal Visit and Stayed Off Cigarettes	12,776	39.3	29,612	36.7
Smoking in Household		I		
During Pregnancy	46,598	11.9	105,473	16.2
Postpartum	55,576	3.4	126,803	7.8
Drinking		- 1		
3 Months Prior to Pregnancy	53,668	18.5	137,016	13.8
Last 3 Months of Pregnancy	55,588	0.5	128,007	0.4

Health Indicators by Race/Ethnicity

Table 9C

2016 Pregnancy Nutrition Surveillance (1)

Run Date: 04/05/2017

Michigan

Maternal Health Indicators by Race/Ethnicity, Age, or Education

Maternal Health Indicators by Race/Ethnicity, Age, or Education (2)														
		ancy BMI			nt Gain 4)		An	emia (Lo	w Hb/Hct)					
		Under- Weight	Over- Weight		< Ideal	>Ideal	3rd Trimester		Postpartum		Gestational Diabetes		Hypertension During Pregnancy	
	Number	%	%	Number	%	%	Number	%	Number	%	Number	%	Number	%
Race/Ethnicity														
White, Not Hispanic	27,427	4.8	55.7	17,582	17.8	52.5	4,843	35.9	7,138	27.3	29,777	6.9	29,804	10.3
Black, Not Hispanic	14,954	3.9	62.3	10,223	19.5	51.9	3,280	59.2	3,002	52.1	16,282	5.5	16,283	13.6
Hispanic	5,372	3.1	62.6	3,323	24.8	44.2	935	45.3	1,157	33.9	5,830	8.9	5,835	8.5
American Indian/Alaska Native	156	3.2	63.5	78	•	•	22	•	42	•	161	8.1	161	12.4
Asian/Pacific Islander	1,003	7.7	37.9	610	30.7	30.7	183	40.4	298	29.9	1,180	14.6	1,181	5.5
Multiple Races	2,084	4.7	58.0	1,318	19.8	54.9	376	41.2	510	35.9	2,225	6.2	2,225	9.7
All Other/Unknown	20	•	•	6	•	•	3	•	7	•	9	•	9	•
Total	51,019	4.4	58.1	33,141	19.4	51.2	9,642	45.1	12,155	34.6	55,467	6.8	55,501	10.9
Age														
< 15 Years	72	•	•	46	•	•	9	•	6	•	78	•	78	•
15 - 17 Years	1,564	9.3	34.3	992	21.0	48.4	283	50.5	299	48.8	1,663	2.2	1,665	11.1
18 - 19 Years	4,136	7.4	45.0	2,621	19.0	52.7	752	51.7	834	43.8	4,295	2.5	4,291	10.5
20 - 29 Years	32,505	4.5	57.2	21,362	19.0	51.5	6,483	45.0	7,590	35.2	35,292	5.3	35,306	9.9
30 - 39 Years	11,847	2.6	67.5	7,609	19.9	50.6	1,974	42.4	3,171	29.2	13,138	12.2	13,158	13.3
>= 40 Years	833	1.4	72.9	481	26.2	44.7	133	38.3	233	32.2	918	19.1	920	18.2
Unknown	62	•	•	30	•	•	8	•	22	•	83	•	83	•
Total	51,019	4.4	58.1	33,141	19.4	51.2	9,642	45.1	12,155	34.6	55,467	6.8	55,501	10.9
Education														
< High School	11,618	5.8	53.3	7,173	23.8	46.3	2,198	51.3	2,477	41.7	12,906	6.3	12,918	9.5
High School	22,695	4.5	58.3	14,910	18.9	52.1	4,374	45.7	5,003	35.9	24,697	6.5	24,709	11.0
> High School	16,084	3.2	61.6	10,719	17.1	53.2	2,984	39.5	4,456	29.2	17,158	7.7	17,167	11.9
Excluded Unknown	622	4.5	53.5	339	20.1	52.2	86	•	219	32.0	706	7.6	707	10.7
Total	51,019	4.4	58.1	33,141	19.4	51.2	9,642	45.1	12,155	34.6	55,467	6.8	55,501	10.9



Comparison of Health Indicators

Table 16C

2016 Pregnancy Nutrition Survelliance (1)

Michigan

Run Date: 04/05/2017

Summary of Trends in Maternal Health Indicators

Summary of Trends in Maternal Health Indicators (2)												
Year	(3)				Weight Gain (4)			Anemia (Low Hb/Hct) (5)				
		Under- weight	Over- weight		< Ideal	> Ideal	3rd Trime	ster	Postpartum			
	Number	%	%	Number	%	%	Number	%	Number	%		
2016	51,019	4.4	58.1	33,141	19.4	51.2	9,642	45.1	12,155	34.6		
2015	53,599	4.4	56.8	44,460	19.6	50.7	9,750	41.4	12,308	31.6		
2014	56,540	4.3	56.3	45,714	17.2	52.3	9,959	39.6	12,485	28.7		
2013	58,063	4.3	56.0	46,728	16.9	52.4	9,903	38.9	11,995	28.7		
2012	61,321	4.4	54.9	48,759	17.4	51.3	9,736	38.4	12,636	27.9		
2011	62,449	4.4	54.4	50,780	17.6	51.0	10,073	35.7	13,689	27.5		
2010	62,806	54.7	47,992	18.1	50.9	9,772	35.9	14,361	27.8			

(1) Reporting period is January 1 through December 31

(2) Excludes records with unknown data errors.

(3) Based on 2009 IOM report "Weight Gain During Pregnancy": underweight (BMI <18.5), normal weight (BMI 18.5 to 24.9). overweight (BMI 25.0 to 29.9), obese (BMI > 30.0).

(4) Based on 2009 IOM report "Weight Gain During Pregnancy": underweight during pregnancy (ideal weight gain = 28 40 40 pounds), normal weight prepregnancy

(ideal weight gain = 25 to 35 pounds), overweight gain = 15 to 25 pounds), obese prepregnancy (ideal weight gain = 11 to 20 pounds). (5) Based on 1990 MMWR, "Recommendations to prevent and control Iron Deficiency in the United States"; adjusted for altitude and smoking. * Percentages are not calculated if <100 records are available for analysis after exclusions</p>

PNSS Trend Reports

Table 16C 2016 Pregnancy Nutrition Survelliance

Michigan

(1)

Run Date:

04/05/2017

Summary of Trends in Maternal Health Indicators

	Sur	nmary	of Trends	s in Mate	ernal He	alth Indic	ators (2)			
Year	Prepregnancy BMI (3)			,	Weight Ga (4)	in	Anemia (Low Hb/Hct) (5)			
		Under- weight	Over- weight		< Ideal	> Ideal	3rd Trime	ster	Postpartum	
	Number	%	%	Number	%	%	Number	%	Number	%
201	6 51,019	4.4	58.1	33,141	19.4	51.2	9,642	45.1	12,155	34.6
201	5 53,599	4.4	56.8	44,460	19.6	50.7	9,750	41.4	12,308	31.6
201	4 56,540	4.3	56.3	45,714	17.2	52.3	9,959	39.6	12,485	28.7
201	3 58,063	4.3	56.0	46,728	16.9	52.4	9,903	38.9	11,995	28.7
201	2 61,321	4.4	54.9	48,759	17.4	51.3	9,736	38.4	12,636	27.9
201	62,449 4.4 54.4			50,780	17.6	51.0	10,073	35.7	13,689	27.5
201	62,806	62,806 4.3 54.7 47,992 18				50.9	9,772	35.9	14,361	27.8

(1) Reporting period is January 1 through December 31

(2) Excludes records with unknown data errors.

▶___

(3) Based on 2009 IOM report "Weight Gain During Pregnancy": underweight (BMI <18.5), normal weight (BMI 18.5 to 24.9). overweight (BMI 25.0 to 29.9), obese (BMI > 30.0).

(4) Based on 2009 IOM report "Weight Gain During Pregnancy": underweight during pregnancy (ideal weight gain = 28 40 40 pounds), normal weight prepregnancy

(ideal weight gain = 25 to 35 pounds), overweight gain = 15 to 25 pounds), obese prepregnancy (ideal weight gain = 11 to 20 pounds). (5) Based on 1990 MMWR, "Recommendations to prevent and control Iron Deficiency in the United States", adjusted for altitude and smoking.

* Percentages are not calculated if <100 records are available for analysis after exclusions

PNSS 2016 - Ohio

	Table 1C 2016 Pregnancy Nutrition Surveillance (1) Ohio Summary of Demographic Indicators (2)													
Total Records		Numbe	r %	5	ource o	f Data		Number	9	%				
Complete Records	4,941		9.0	WIC				54,825	10	0.0				
Prenatal Records	23.400		42.7	Maternal He	alth			0	0	.0				
				Other				0	0	.0				
Postpartum Records	26,484		48.3	Total 54,825				54,825	10	0.0				
Total	54,82	5	E	cluded Unkno	wn	0	0.0 %							
Race/Ethnic Distribution	Number	%	Age Distribution	Number	%		Educatio	n Distribution	Number	%				
White, Not Hispanic	31,647	57.7	< 15 Years	108	0.2	<	High School		7,188	13.8				
Black, Not Hispanic	15,180	27.7	15 - 17 Years	2,133	3.9	н	ligh School		31,892	61.1				
Hispanic	4,523	8.3	18 - 19 Years	5,631	10.3	>	High School		13,090	25.1				
American Indian/Alaska Native	85	0.2	20 - 29 Years	34,450	62.9		Total		52,170	100.0				
Asian/Pacific Islander	1,266	2.3	30 - 39 Years	11,803	21.5	Exc	uded Unknow	n 2,655 4.8 9	%					
Multiple Races	2,122	3.9	>= 40 Years	656	1.2									
All Other	0	0.0	Total	54,781	100.0									
Total	54,823	100.0	Excluded Unknown: 44 0.1 %											
Excluded Unknown 0 0.0 %														
% of Poverty Level	Number	%	Program Participation (3)	Number	%		Migr	ant Status	Number	%				
0 - 50	28,418	51.9	WIC	54,825	100.0	Y	es		168	0.3				
51 - 100	12,925	23.6	SNAP	54,825	50.2	N	lo		54,657	99.7				

% of Pover	ty Leve	el 👘	Number	%
0 - 50			28,418	51.9
51 - 100			12,925	23.6
101 - 130			5,945	10.8
131 - 150			2,572	4.7
151 - 185			3,343	6.1
186 - 200			443	0.8
> 200			880	1.6
Adjunctive Eligibility			277	0.5
Total			54,803	100.0
Excluded Unknown	299	0.5 %		

Program Participation (3)	Number	%
WIC	54,825	100.0
SNAP	54,825	50.2
Medicaid	54,825	83.8
Tanf	54,825	5.9
Excluded Unknown:		
WIC:	0	0.0
SNAP:	0	0.0
Medicaid:	0	0.0
Tanf:	0	0.0

Migrant S	Number	%		
Yes			168	0.3
No			54,657	99.7
Total			54,825	100.0
Excluded Unknown	0	0.0 %		

Reporting period is January 1 through December 31
Excludes records with unknown data errors.

(3) Prenatal program participation
* Percentages are not calculated if <100 records are available for analysis after exclusions

PedNSS 2016 - Ohio

Run Date: 9/18/2017

Page : 1

2016 Pediatric Nutrition Surveillance (1) Ohio

Table 1C

Summary of Demographic Indicators

Children Aged < 5 Years (2,3)

Total Records	Num	Number				Source of Data				Number %		%
						WIC				237,975	10	0.0
Individual Children	237,9	975				EPSDT				0	0	.0
						Child Health	n-MCH			0	0	.0
						Child Health	n-HMO			0	0	.0
Total Records (All Visits)	380.2	280				HeadStart				0	0	.0
	,-					School Hea	lth			0	-	.0
						Other				0	0	.0
						Total				237,975	10	0.0
					ļl	Excluded Unkn	own		0 0.0 %			
Race/Ethnic Distribution	Num	ber		%		Ag	e Distrik	outio	n (4)	Number	9	%
White, Not Hispanic	123,9	30		52.1	1 1	0 - 5 Month	5			54,288	2	2.8
Black, Not Hispanic	65,00	6		27.3		8 11 Mart				37.410		
Hispanic	23,28	23,288 9.8				6 - 11 Months				37,410	15.7	
American Indian/Alaska Native	298			0.1		12 - 23 Mor	ths			44,471	1	3.7
Asian/Pacific Islander	5,161			2.2		24 - 35 Mor	the			36.059		
Multiple Races	20,26	2		8.5		24 - 35 MOI	iuns			30,058	1	5.2
All Other		30 0.0				3 - 4 Years				65,752	27.6	
Total	237,9	237,975 100.0			Total			237,975	100.0			
Excluded Unknown 0 0.	0%				j i	Total				201,010	10	0.0
% of Poverty Level	Number	%] [Program Particip	ation	Number	%		Migr	ant Status	Number	%
0 - 50	105,050	44.2	1	WIC		237,975	100.0		Yes		385	0.2
51 - 100	64,152	27.0		SNAP		237,975	57.2		No		237,590	99.8
101 - 130	29,042	12.2		Medicaid		237,975	89.2		Total		237,975	100.0
131 - 150	12,857	5.4		Tanf		237,975	5.9		Excluded Unknow	m 0 0.0%		
151 - 185	16,951	7.1		Excluded Unknown								
186 - 200	2,603	1.1		WIC		0	0.0					
Over 200	5,713	2.4		SNAP		0	0.0					
Adjunctive Eligibility	1,433	0.6		Medicaid		0	0.0					
Total	237,801	100.0		Tanf		0	0.0					

(1) Reporting period is January 1 through December 31

174

(2) Analyses based on one record per child

Excluded Unknown

(3) Excludes records with unknown data errors.

(4) Records rejected if date of birth and date of visit unknown

* Percentages are not calculated if <100 records are available for analysis after exclusions

0.1%

In Preparation...

- For the UAT we will need:
- PNSS data extracts (monthly or quarterly, from 2012 2016.
- PedNSS data extracts (monthly or quarterly, from 2012 2016.
- Code files describing to list of agencies/clinics/counties/Metro area/region that were active for each year-sample will be provided
- PNSS and PedNSS reports as received from CDC for 2011 (to be used as reference in UAT).
- Data quality reports from 2011 if available.

Project Contact

Kobra Eghtedary, PhD Director of Data, Research & Technology Michigan WIC Program <u>Eghtedaryk@michigan.gov</u> (517)335-9834