

## INCREASING ADULT IMMUNIZATIONS THROUGH THE USE OF MICHIGAN'S IMMUNIZATION INFORMATION SYSTEM.

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## Michigan Care Improvement Registry (MCIR)

- A statewide, population-based IIS
  - Implemented in 1998 for health care providers to track children's vaccinations
  - Continually populated since 1994 with birth records through a linkage with Michigan's Vital Records
  - Required reporting within 72 hours of administration for children aged less than 20 years
- Expanded to adults in 2006
  - Strongly encouraged reporting for adult vaccinations

## MCIR Participation

	2013 Census	MCIR- MI only* (% of Census)	MCIR – All Persons*
Adults 18+	7,650,421	5,847,809 (76%)	6,405,065
18-49 Years	4,071,197	3,389,268 (83%)	3,835,181
50-64 Years	2,091,631	1,193,814 (57%)	1,243,233
65+ Years	1,487,593	1,264,727 (85%)	1,326,651
All Ages	9,839,187	8,161,445 (83%)	9,104,809

\*As of January 2015

## 1998 Interoperability

Five floppy disks to install an IIS program on computer stations in provider offices. Dial-up modem that dialed an 800 number.

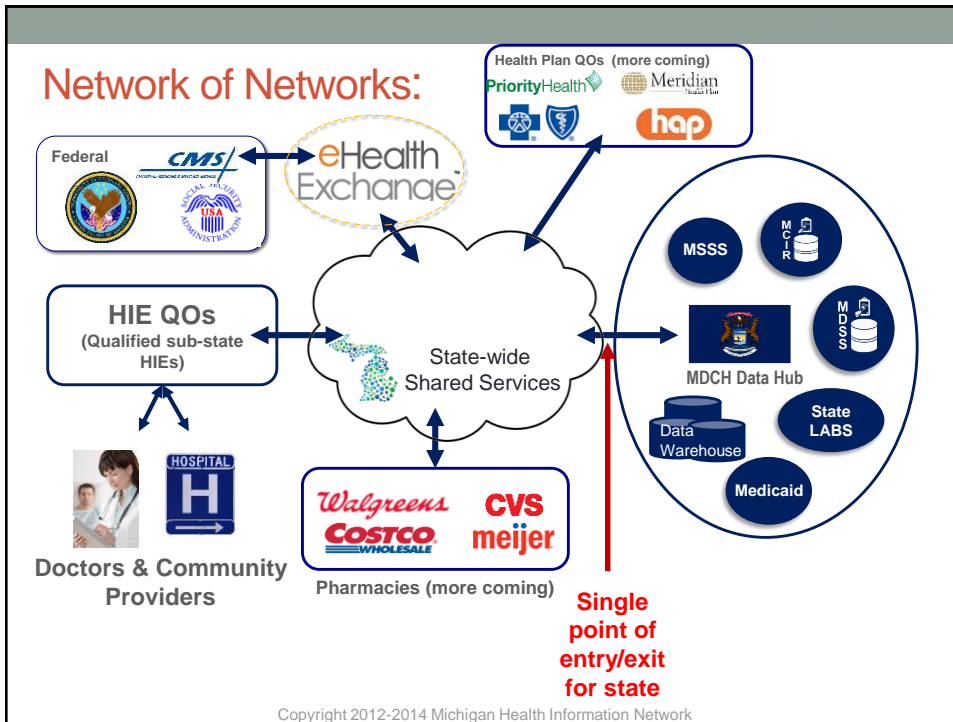


2003



## Michigan Health Information Network (MiHIN)

The Michigan Health Information Network Shared Services (MiHIN) is a public and private nonprofit collaboration dedicated to improving the healthcare experience, improving quality and decreasing cost for Michigan's people by supporting the statewide exchange of health information and making valuable data available at the point of care.



## MCIR Current HL7 Status

- March 2012 production for HL7 2.51 VXU
- 28 EHR Vendors approved to send VXU's to MCIR
- Testing QBP 2.51 (Query Immunization Record)
- Over 1700 provider sites including pharmacies and hospitals submitting VXU's through the HIE to MCIR

# Immunization Reporting

**Public Health Reporting**



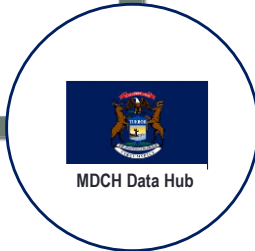
**HIE**  
(QOs, VQOs or sub-state HIEs)



VPN into State



Immunization Registry



# Immunizations via Direct Secure Messaging



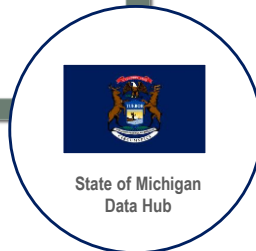
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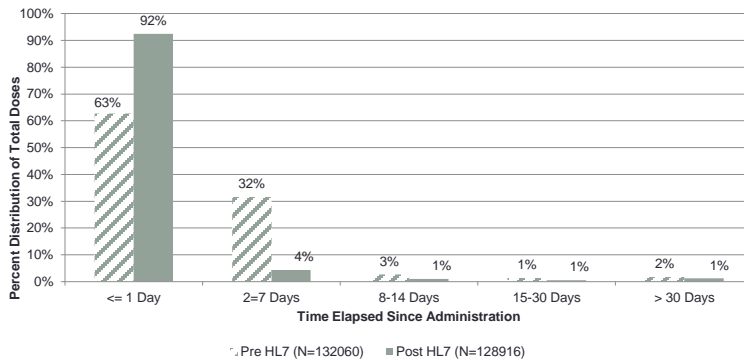


Immunization Registry

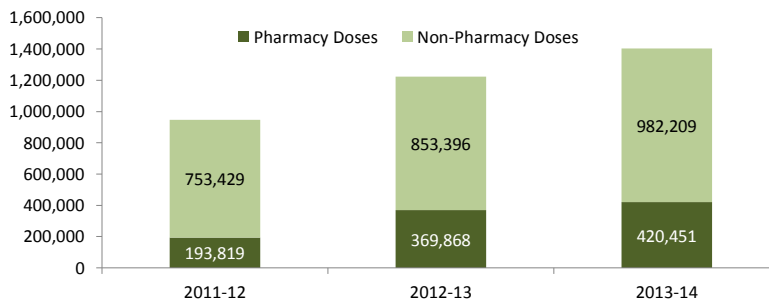


# Timeliness of reporting

**Percent Distribution of Total Doses Entered Target Sites**



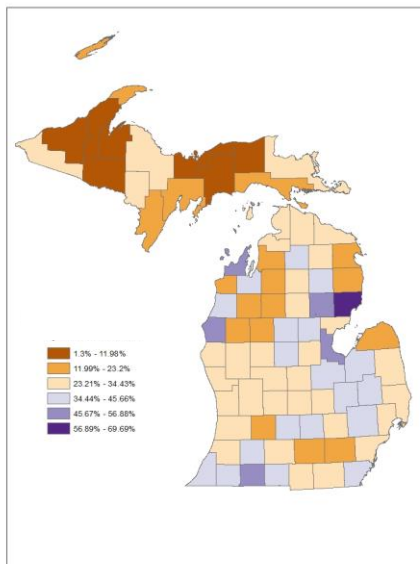
# Influenza Vaccination Doses Reported to MCIR from Pharmacies by Season



## Adult Vaccinations Reported to MCIR from Pharmacies

	2011	2012	2013	2014
Zoster	20,993	60,947	57,025	50,084
PPSV23/PCV 13	8,463	11,712	13,292	15,252
Td/Tdap	6,643	9,968	14,308	17,441

## Proportion of Influenza Vaccinations Reported to MCIR during the 2013-14 Influenza Season by Pharmacies



## Benefits

- HIE “throttles” the HL7 messages being sent to MCIR
- Michigan Health Information Network is recruiting Pharmacies
- Onboarding staff focuses on Data Quality and **not** transport issues
- Biweekly stakeholder calls provide updates on current and future enhancements with Michigan Health Information Network.
- Connected with a State Master Person Index
  - Found over 14,000 duplicate MCIR patient records
  - Medicaid Funding and support for the Immunization Program!!!!

## Lessons Learned

- **Communication and Cooperation**
  - Regular meetings, weekly or biweekly with the partners involved
  - Managing ACKS
  - IIS downtime (scheduled maintenance)
  - Where’s my message? (Communication Plan)
  - Timeliness ( what does the IIS expect?)
  - New way of doing business (letting go)



## Conclusion

- Flu vaccination administered at a large retail pharmacy chain:
  - Records were reported to MCIR more promptly post-HL7
  - Proportion of duplicate records decreased
- HL7 messaging may enable improved flu vaccination surveillance using IIS