

# Use of NYC CIR's HL7 Web Service for Reporting by Adult Practices and Pharmacies

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# Overview of Presentation

- Objective
- Background
- Adult provider registration and reporting trends
- Reporting of Adult Immunizations via the HL7 Web Service
- Limitations, conclusion, challenges and next steps

# Objective

- Describe adult provider registration and reporting to the CIR from 2011 to 2014
  - ❖ All reporting methods
  - ❖ Reporting via the HL7 Web service

# Background: CIR

- Started citywide in 1997
- Mandatory reporting of immunizations for children 0-18 years; reporting for adults  $\geq 19$  years requires verbal consent
- 5.6 million patients and 76 million immunizations
- ~2100 providers reported Jul-Dec 2014
  - ❖ ~1443 pediatric providers
  - ❖ 104 adult providers
  - ❖ 597 providers who see both adults and children (incl. pharmacies)
- Providers report via:
  - ❖ Batch, flat file format
  - ❖ Online Registry (web application)
  - ❖ HL7 Web Service

# Background: HL7 Web Service

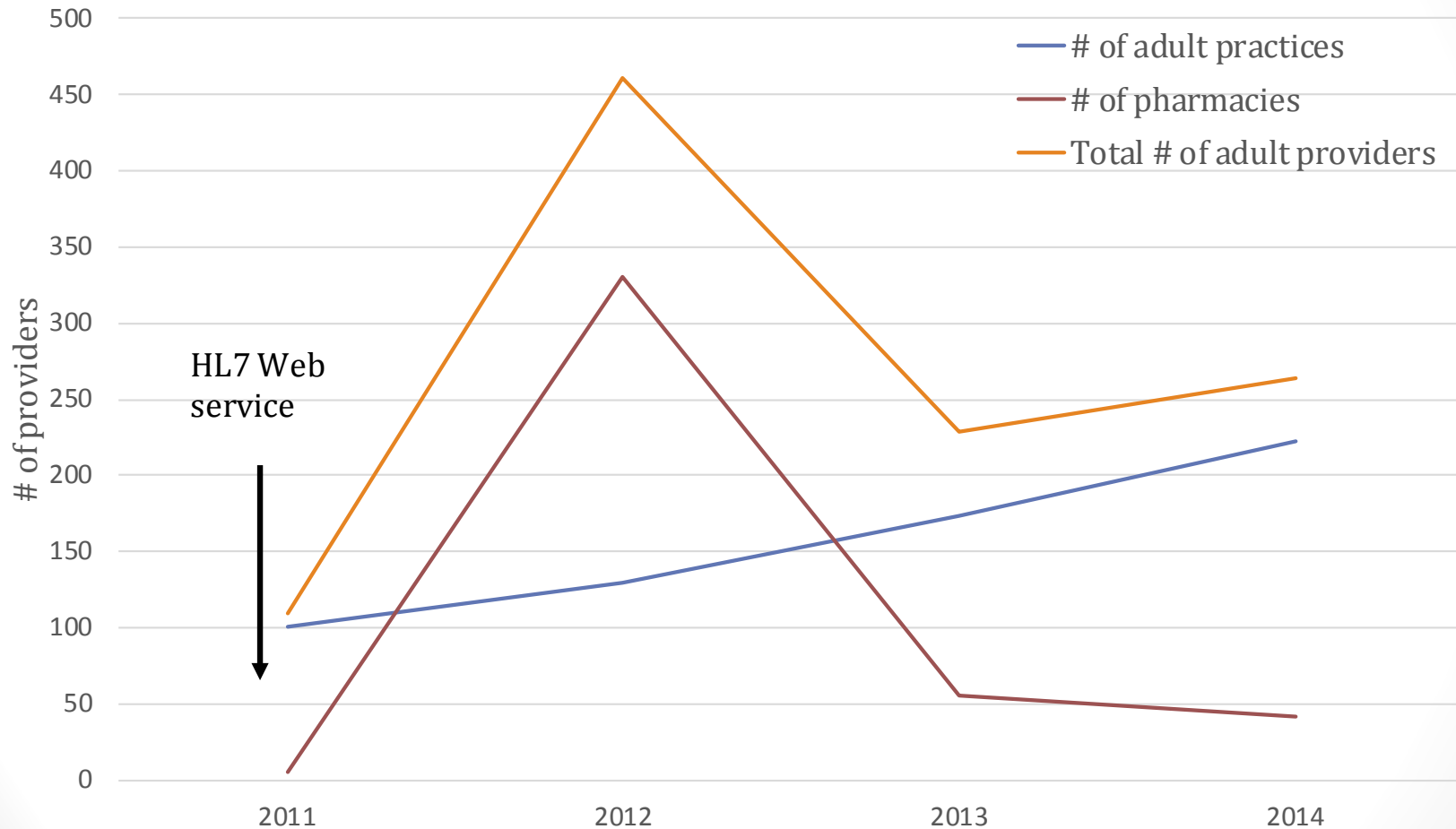
- CIR began accepting immunizations in HL7 format in 2011
- Unidirectional or bidirectional
- As of March 2015, the following were connected:
  - ❖ 652 pediatric and adult providers (252 bidirectional)
  - ❖ Additionally, two large pharmacy chains connected
- ~50% of immunizations reported

# Background: Meaningful Use (MU)

- Promotes use of EHRs for exchanging clinical patient data between healthcare systems
- Monetary incentive for providers to meet established public health criteria
- Stage 1: Providers must perform a test of EHR's capability to send data in HL7 format
- Stage 2: Providers must institute ongoing reporting to an IIS in HL7 2.5.1 format
- Immunization reporting core objective

# Adult Provider Registration and Reporting Trends

# Adult Providers Registered: 2011-2014

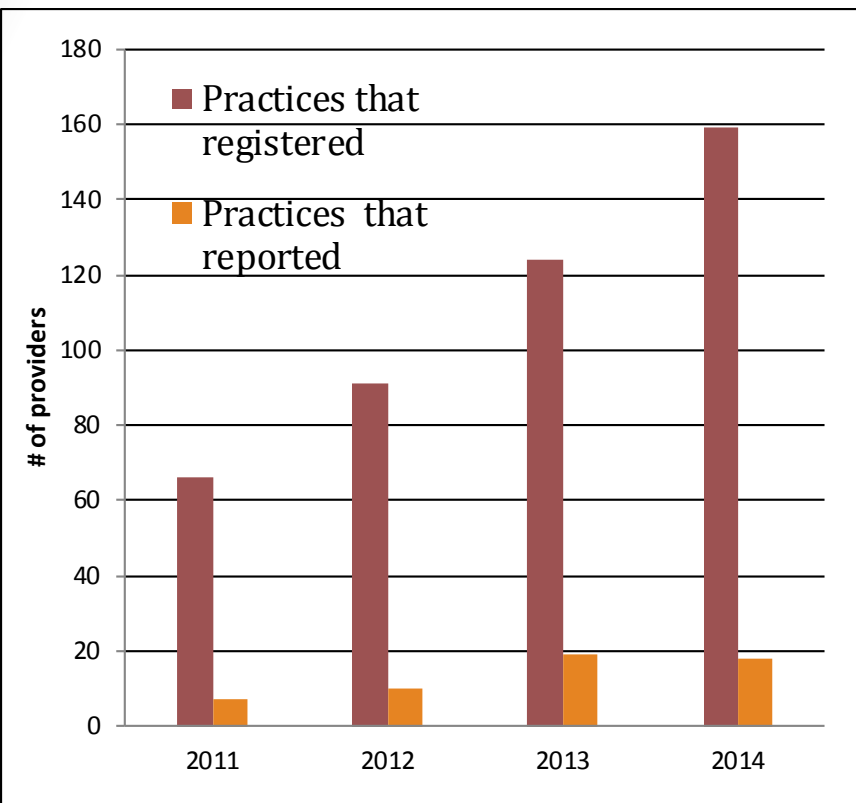




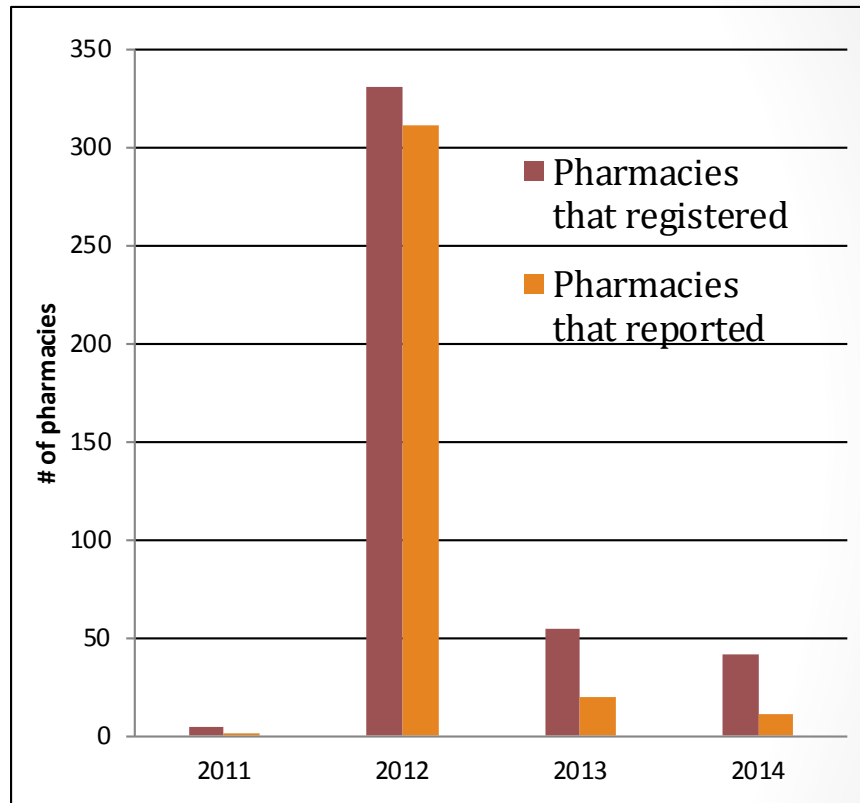
# Number of Pharmacies and Adult Practices Registered Annually: 2011-2014

Year	# of New Adult Practices	# of New Pharmacies
2011	66	5
2012	91	331
2013	124	55
2014	159	42
<b>Total</b>	<b>440</b>	<b>433</b>

## Adult Practices that Registered and Reported by Year

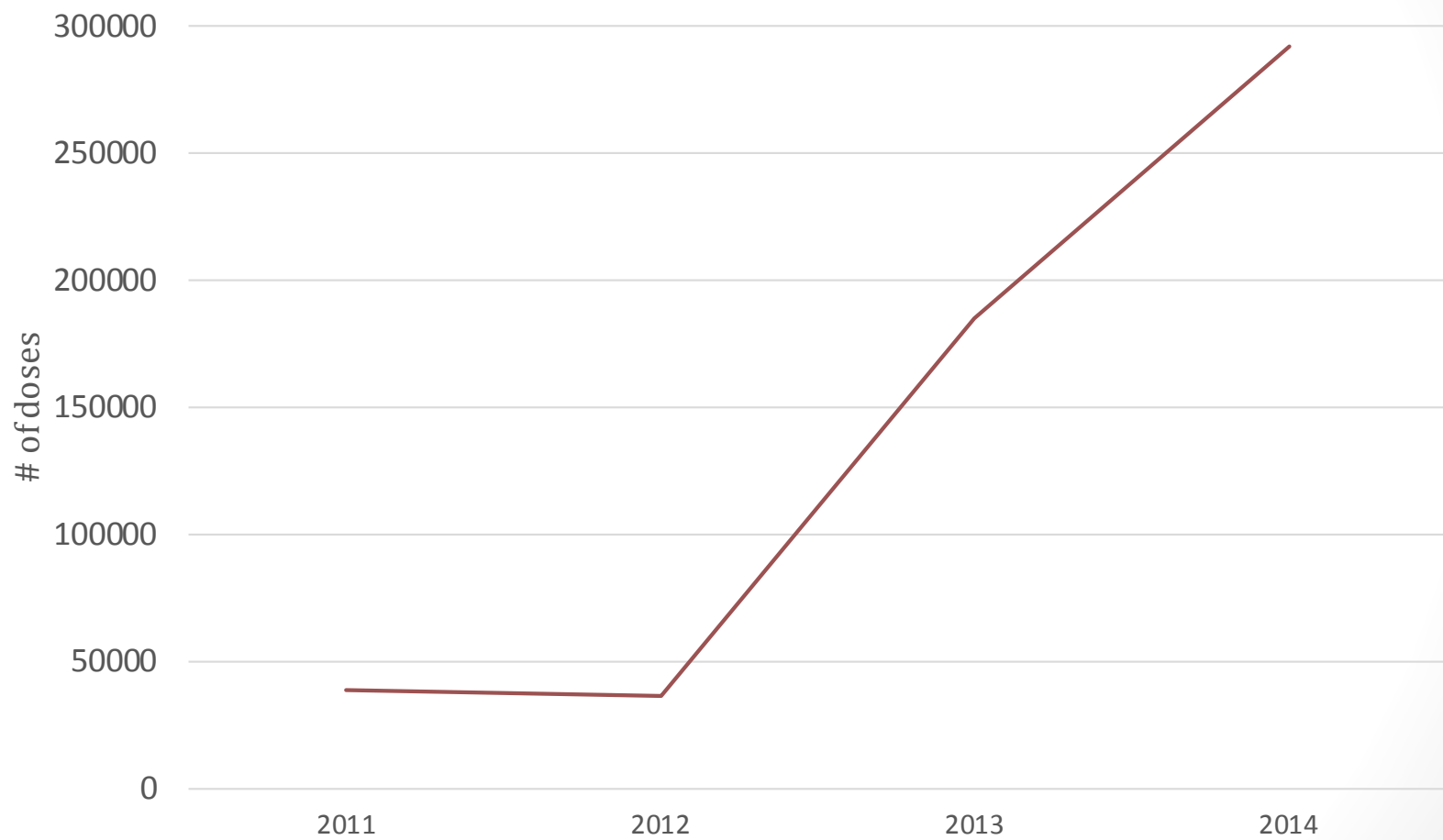


## Pharmacies that Registered and Reported by Year

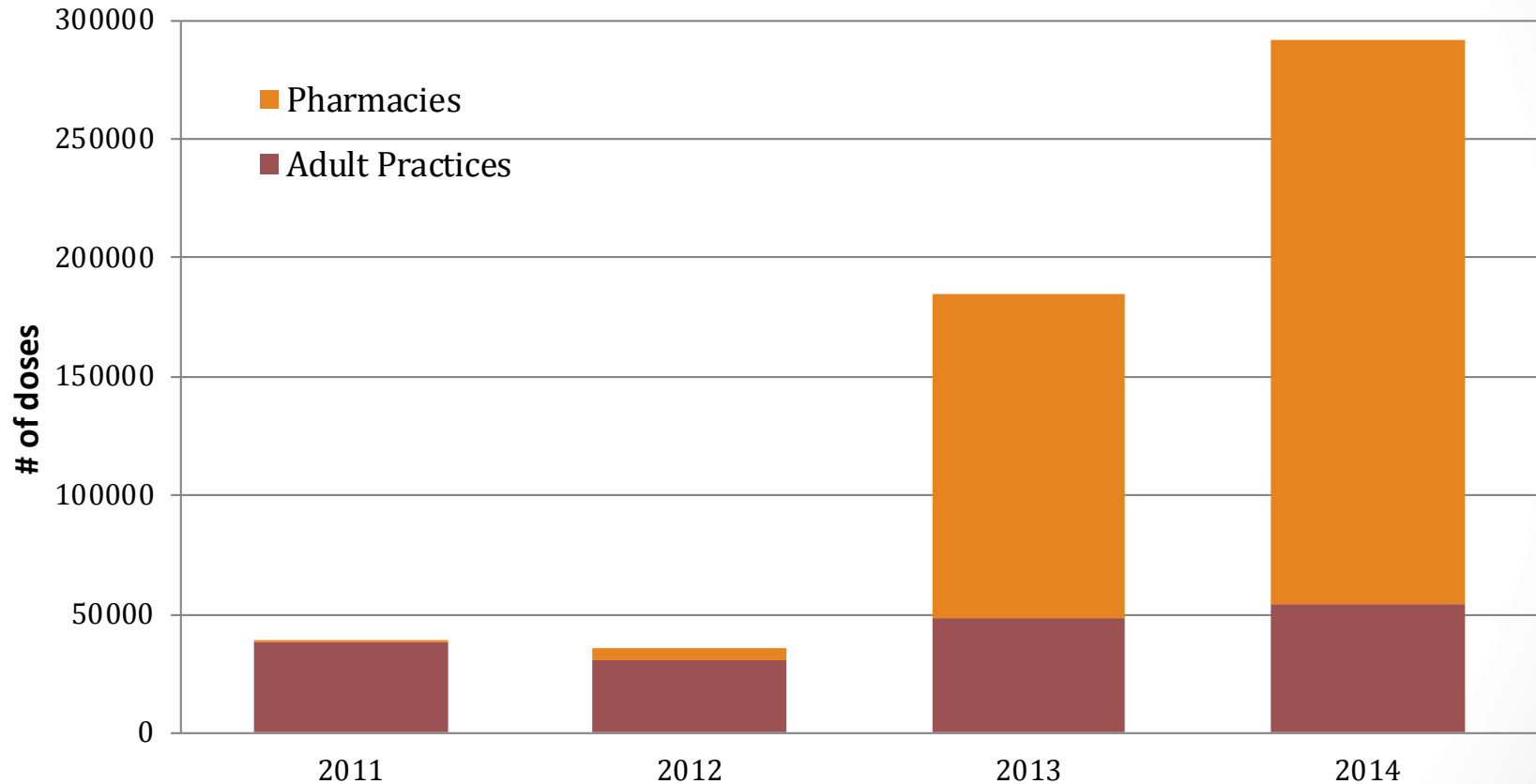


A large number of adult practices registered every year with CIR since the start of MU program, but few actually reported.

# Adult Immunization Doses Reported to CIR (all reporting methods): 2011-2014

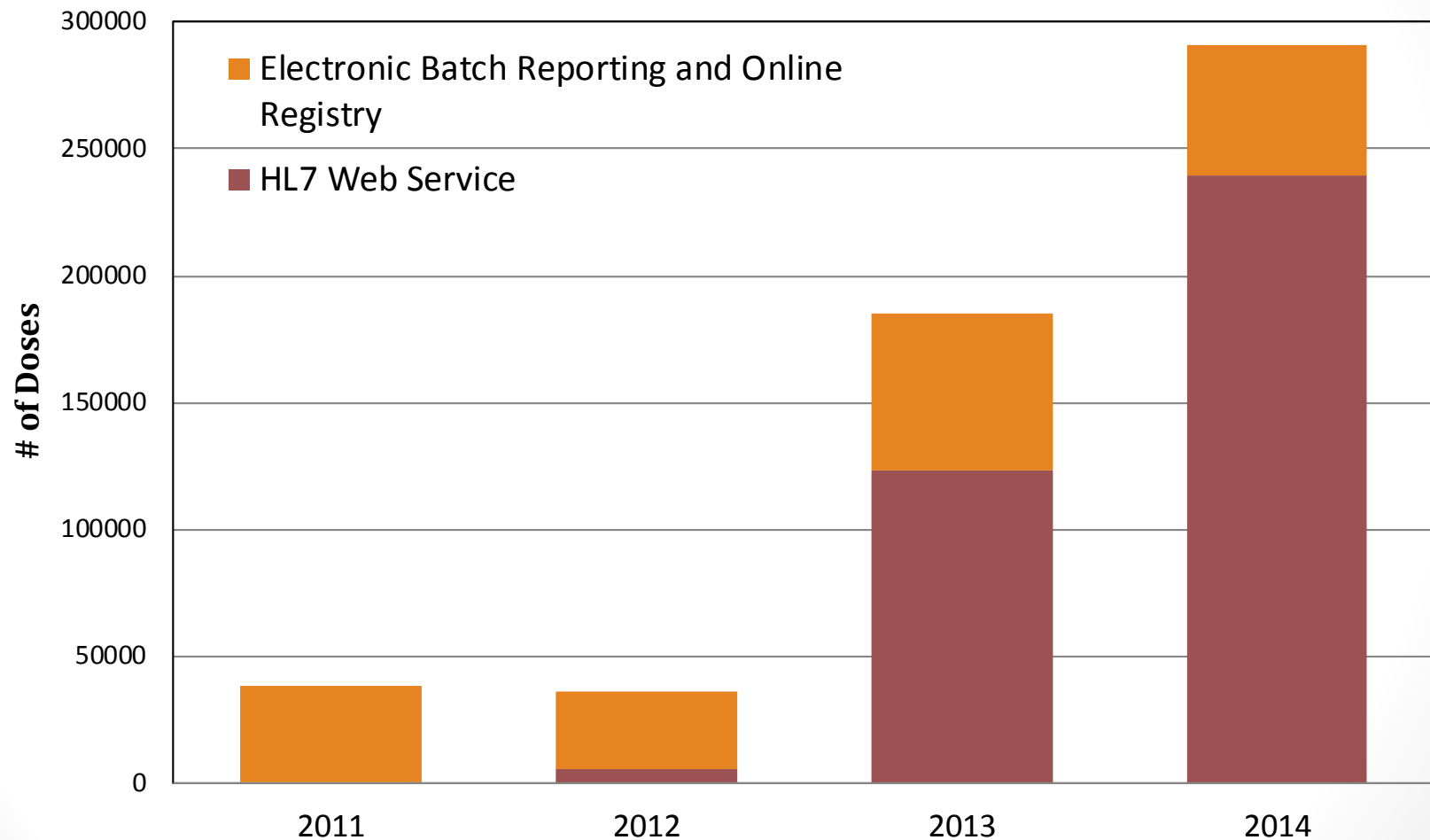


# Adult Immunization Doses Reported (all methods) by Pharmacies and Adult Practices



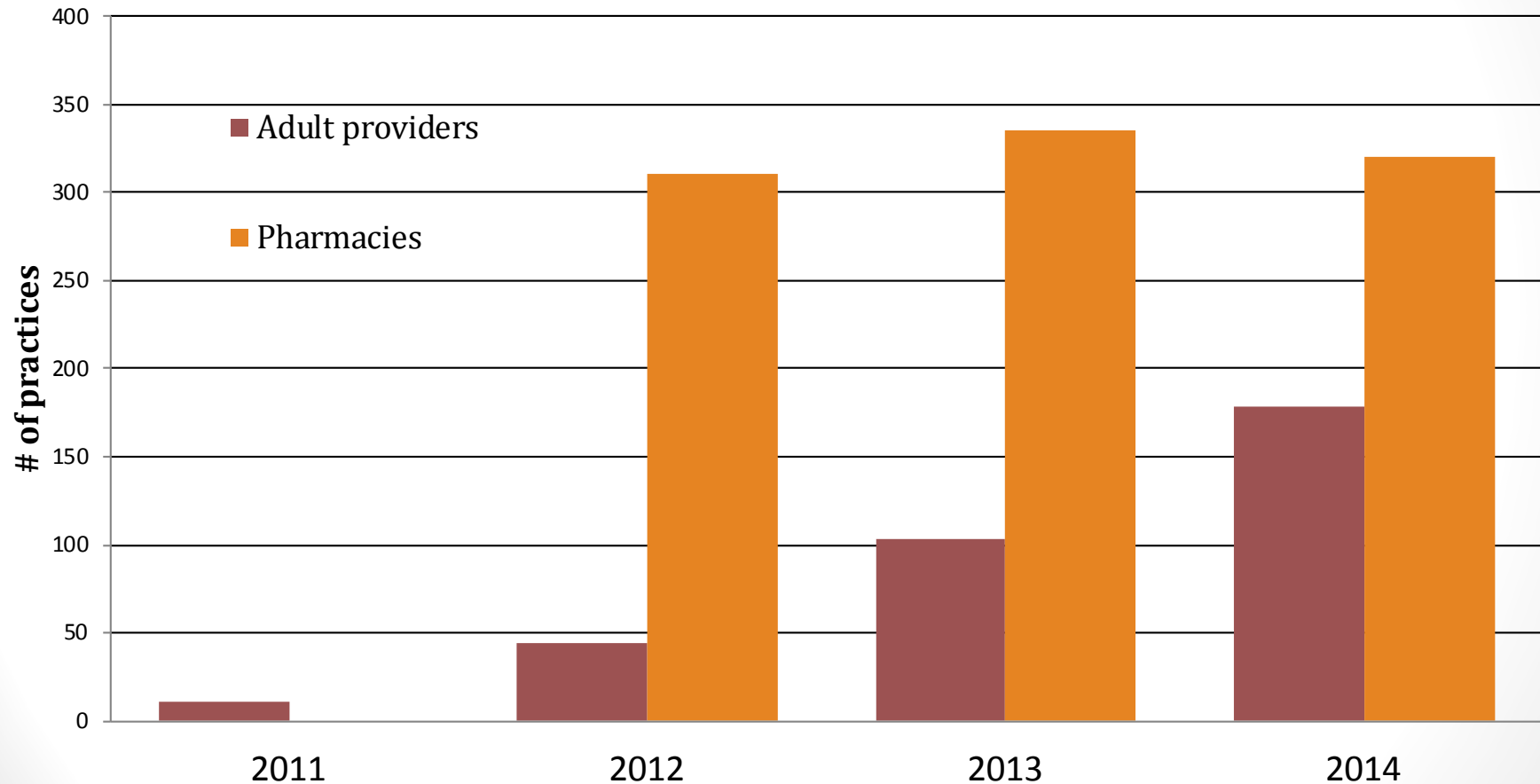
Pharmacies reported ~80% of total adult immunizations to CIR in 2014

# Adult Immunization Doses by Method of Reporting: 2011-2014

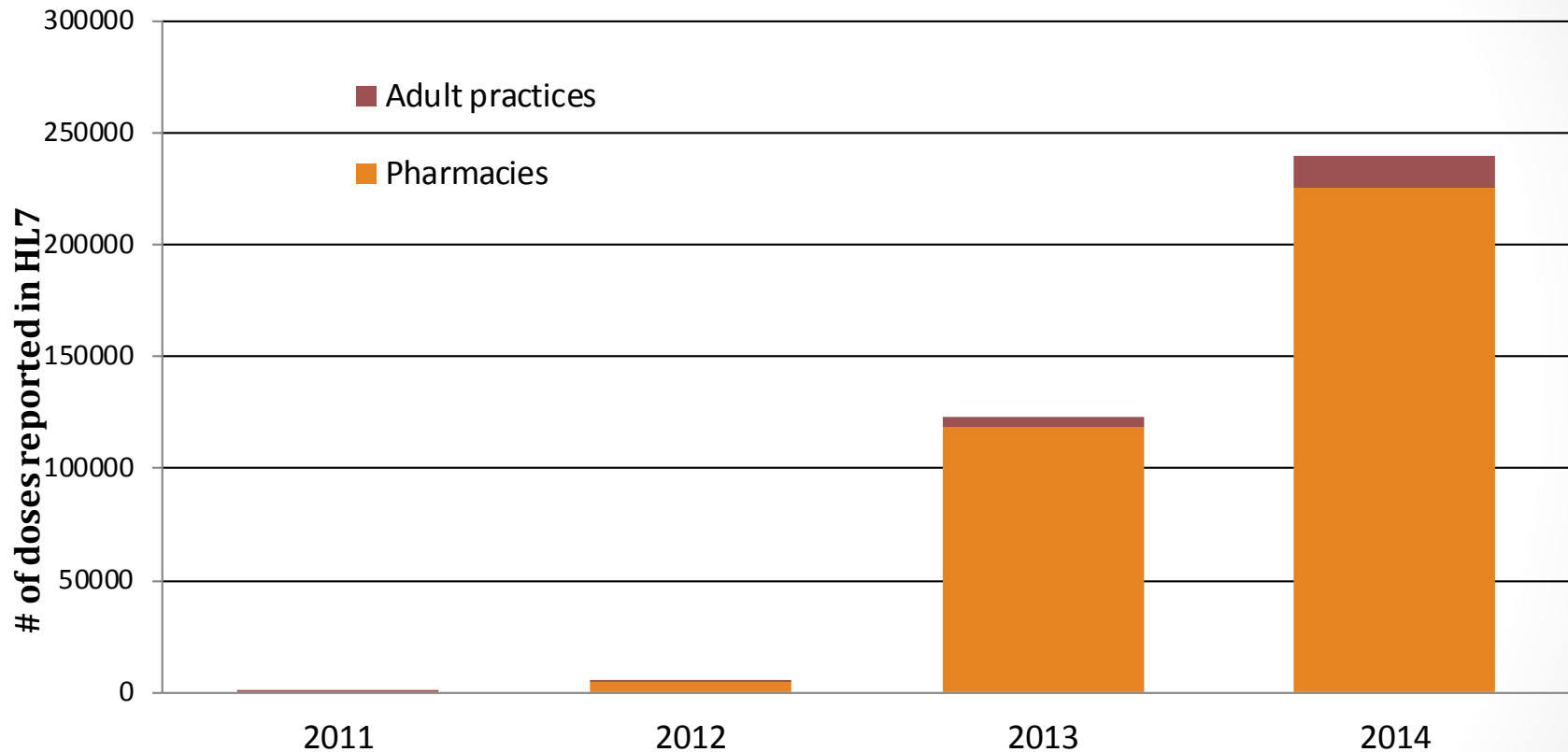


- In 2014, 82% of all adult immunizations were reported via the Web Service

# Number of Adult Providers Reporting via HL7 Web Service: 2011-2014



# Adult Immunization Doses Reported via HL7 Web Service by Pharmacies and Adult Practices



- In 2013, 96% of all HL7 adult immunizations reported by pharmacies
- In 2014 94% of all HL7 adult immunizations reported by pharmacies
- HL7 reporting by non-pharmacy adult practices more than doubled in 2014, compared to 2013

# Limitations of the analysis

- Unable to capture MU status of providers who registered with CIR prior to 2014
- Considered providers who indicate immunizing both adult and pediatric population as “adult” providers
- Misclassification of some adult practices



# Conclusions

- Increase in adult provider registration since 2011
- Increase in registration by non-pharmacy adult practices could be attributed largely to the MU program
  - ❖ However, only 18/159 (11.3%) of adult practices that registered intent of MU in 2014 reported  $\geq 1$  immunization
- Large increase in adult immunizations reported, mostly driven by pharmacies
- Pharmacies and adult providers mainly use the HL7 Web service to report adult immunizations

# Challenges Capturing Adult Immunizations

- No mandate for reporting adult immunizations
  - ❖ Consent requirement
- Providers not motivated to continually report after they obtain their MU incentive
- Limited CIR resources to outreach to adult providers

# Steps to address the challenges

- New law passed in 2015 requires pharmacies and RNs to report adult immunizations, verbal consent still required
  - ❖ Working towards mandatory reporting of adult immunizations with no consent required
- CIR to provide outreach to adult providers participating in MU stage 2 which requires ongoing reporting
- Received Pandemic Flu / Sentinel 3 year grant to improve adult provider/immunization capture
  - ❖ Hire adult outreach coordinator to recruit adult hospital sites, OB/GYNs and providers not registered with CIR
  - ❖ Integrate with DOHMH Emergency Preparedness system containing all Long-Term Care facilities

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