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# Effectiveness of Population-Based Immunization Recall in a Large Urban Area

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## Background

- Immunization reminder/recall is recommended by the Task Force on Community Preventive Services and has been shown to increase vaccination coverage rates among children seen by private providers.
- The effectiveness of using a statewide immunization information system (IIS) to conduct population-based recall for a public health jurisdiction is unknown.

## Objective

To assess the effectiveness of population-based immunization recall in a large urban area with historically low vaccination rates using a centralized approach with a statewide immunization information system (IIS).

## Methods

### Study Setting and Population (n=4,013)

- The source population was identified using the Michigan Care Improvement Registry (MCIR) and included children who were:
  - not up-to-date (UTD) at 19 months for the 4:3:1:0:3:1:4 series (4 DTaP:3 Polio:1 MMR:0 Hib:3 HepB:1 Varicella:4 PCV)
    - Hib was not assessed due to the Advisory Committee on Immunization Practices (ACIP) December 2007-July 2009 interim recommendation to defer the booster dose of Hib vaccine.
  - not blocked from MCIR letter generation (deceased, opted-out, etc.)
  - residing in Wayne County, Michigan

### Recall Intervention

- Children were randomized (recall (n=2,940), no recall (n=1,073)) over four recall cycles (June 2008, September 2008, January 2009, June 2009)
- Recall notices were mailed by the United States Postal Service (USPS) with return service requested

### Undeliverable Addresses

- Undeliverable addresses were identified using the USPS NCOA<sup>Link</sup> process.
- Children with undeliverable addresses were excluded from data analysis (n=625, 16%)

### Outcome Measures

- Evidence of immunization activity (any vs. non) recorded in MCIR:
  - ≥1 new dose administered and data-entered following recall;
  - ≥1 historical dose (i.e. administered prior to recall and late-entered); or,
  - ≥1 waiver data-entered
- Assessed at 60 days following recall

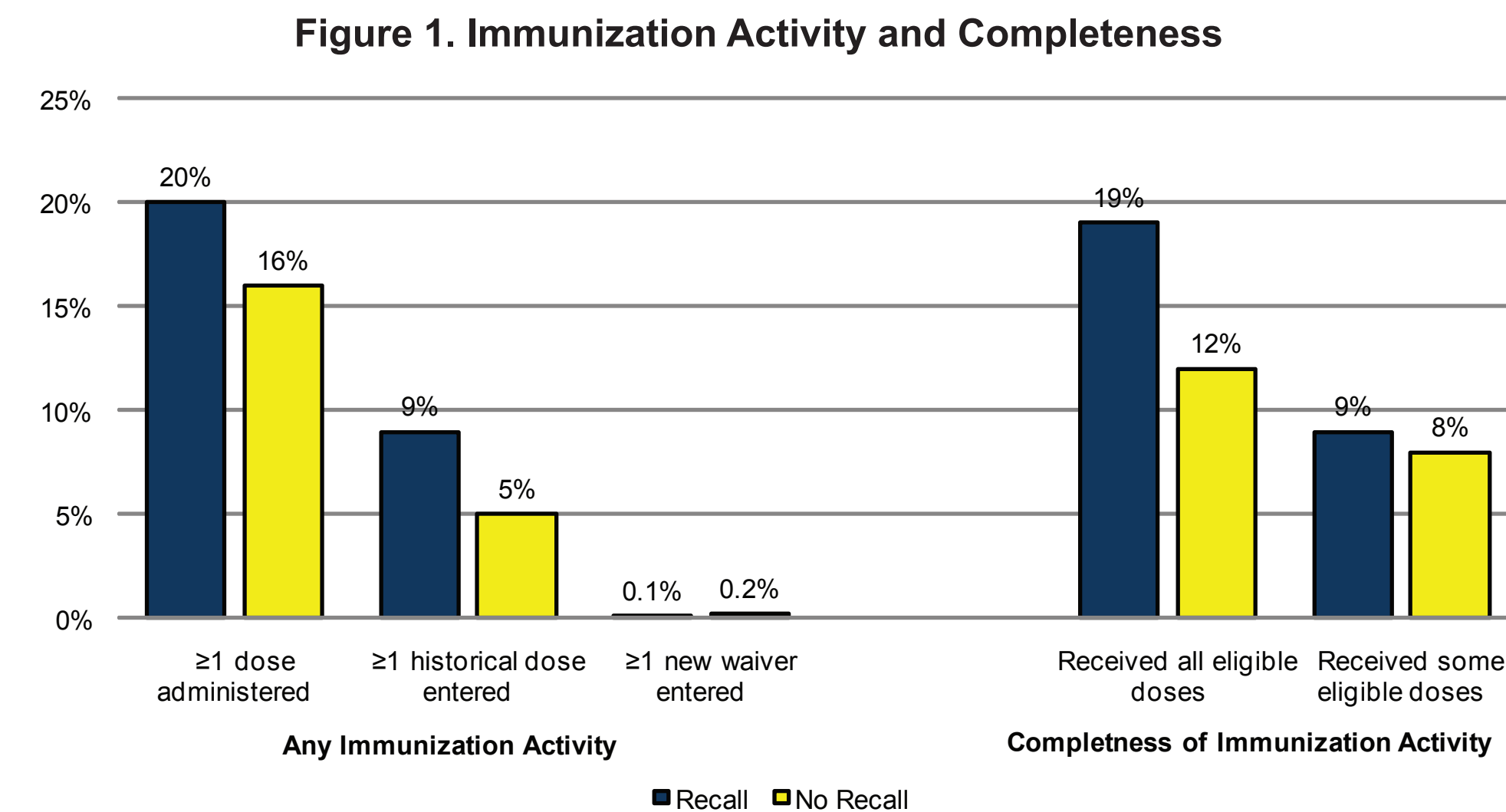
## Results

### Study Population after the Exclusion of Undeliverable Addresses (n=3,388)

- Recall group: 2,497 children
- No recall group: 891 children

### Immunization Activity

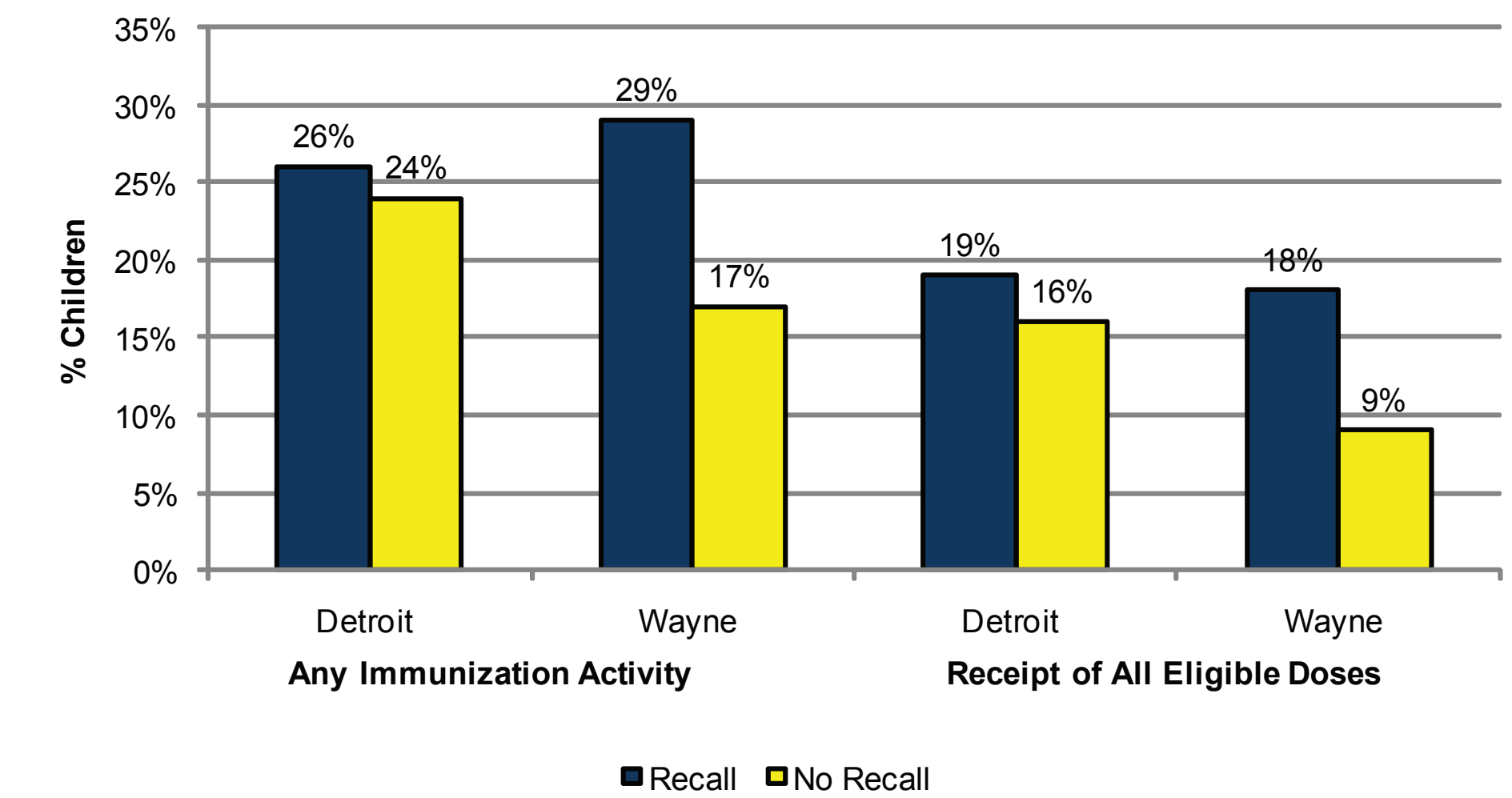
- Recalled children were more likely to have some form of immunization activity (28%) than their counterparts that were not recalled (20%).
- Recalled children were more likely than the no recall group to have (Figure 1):
  - ≥1 new dose administered;
  - ≥1 historical dose recorded;
  - received all eligible doses within 60 days of notification



## Results (cont.)

- Recall effectiveness varied by health department jurisdiction (Figure 2).

Figure 2. Percent Children with Immunization Outcomes, by Notification Assignment Group and Health Department Jurisdiction (n=3,388).



## Conclusion

- Recall notices were associated with increased immunization activity and immunization series completeness.
- Recall effectiveness differed across jurisdictions and may reflect differences in resident populations and health department organization.
- Future efforts to apply population-based recall in large urban settings should consider strategies to improve address completeness and accuracy.

Funded by the Centers for Disease Control and Prevention (U01IP000088).