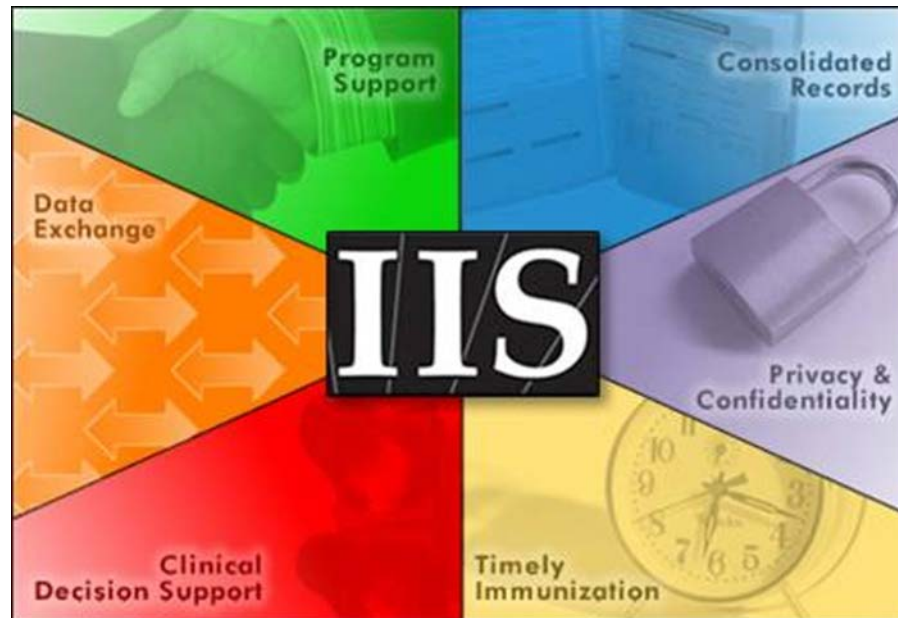


Impact of PPHF Funding on HL7 Message Quality in VT



*Bridget Ahrens MPH, Nicholas Pain MS,
Lindsay Denny*
April 2015

Game Plan

Background

Architecture of HL7 Exchange

Description of Optimization

Impact on Rates

Impact on Quality (timeliness,
accuracy, and completeness)

Lessons Learned



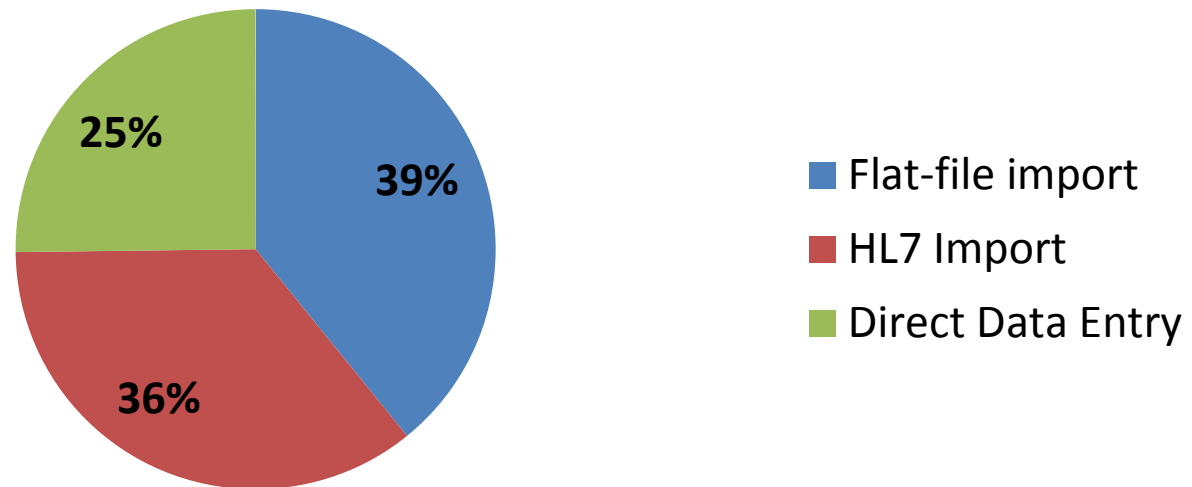
Vermont Immunization Registry Background

- IMR is birth to death IIS, universal state
- In-house developed IIS, live since 2004
- PPHF HL7 Optimization funding awarded September 2011
- HL7 live February 2013, version 2.5.1
- Single HIE

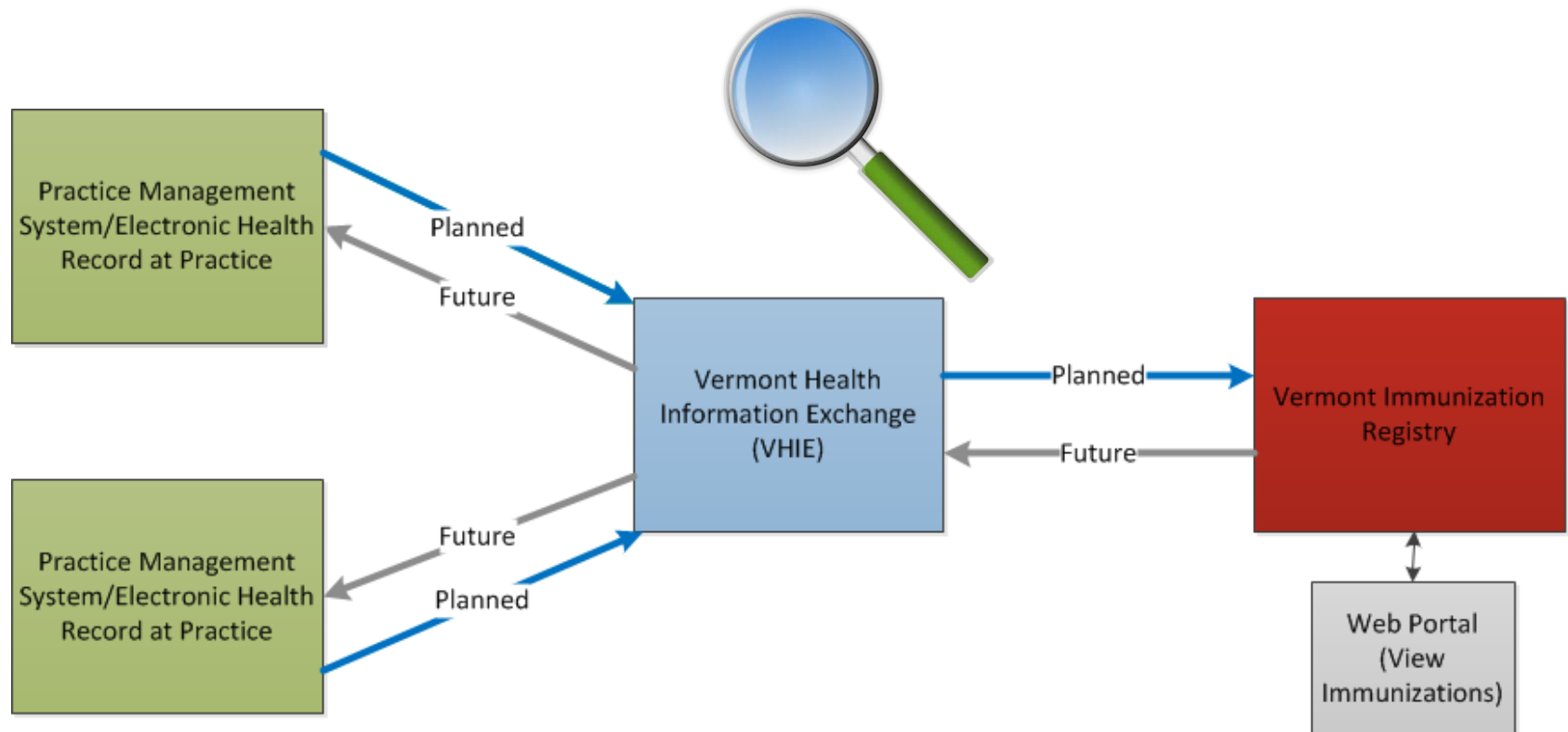


Vermont Immunization Registry Traffic Report

**461,795 Immunization Records
Loaded in 2014**



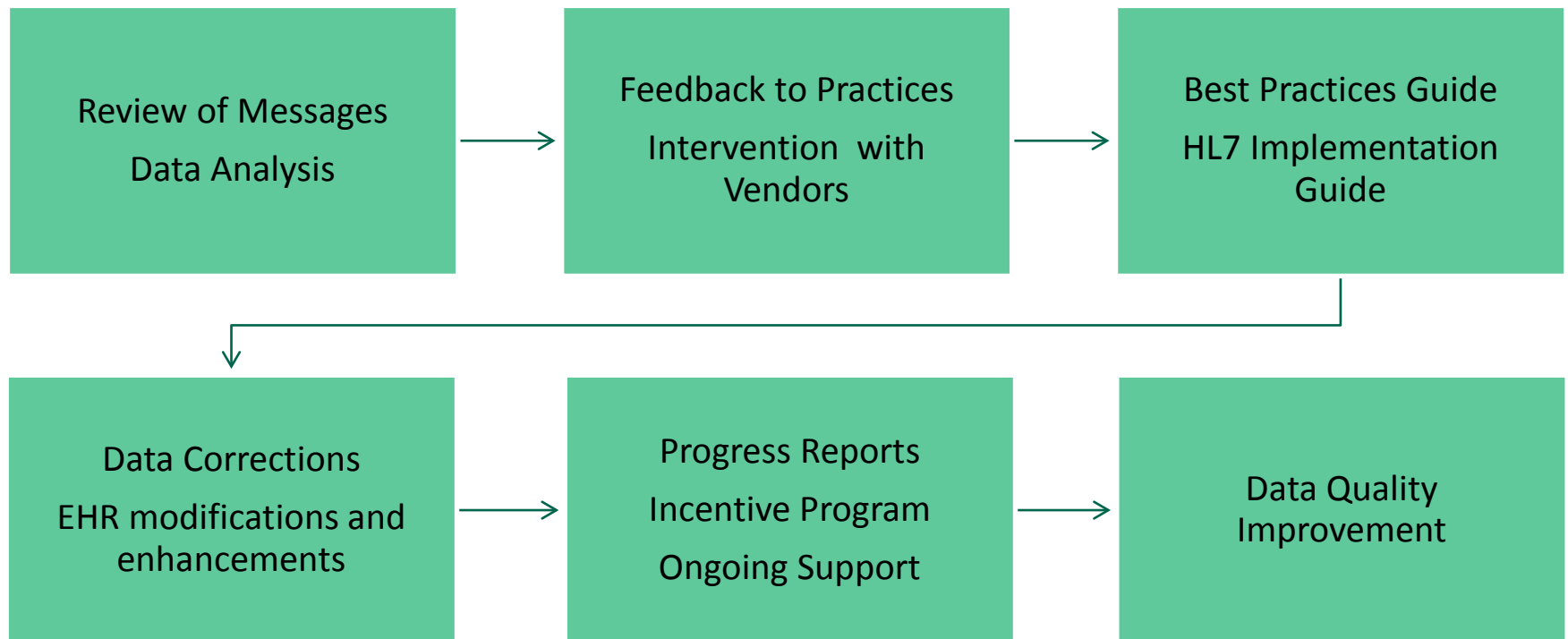
Architecture of HL7 Data Exchange



Optimization Implementation

- Required coordination of all players
- Subcontract with vendor
- **Incentive** program to provide practice support for improving their messages
- **Best Practices Guide**
- Development of Reports from IMR
- Data Assessment through IMR

Optimization Implementation



What is Optimization?

Step One – actual import

Message loads

Step Two – message is of good quality

Timeliness

Completeness

Accuracy

Practice Details

21 practices

6 vendors represented

8 pediatric practices

13 family practices

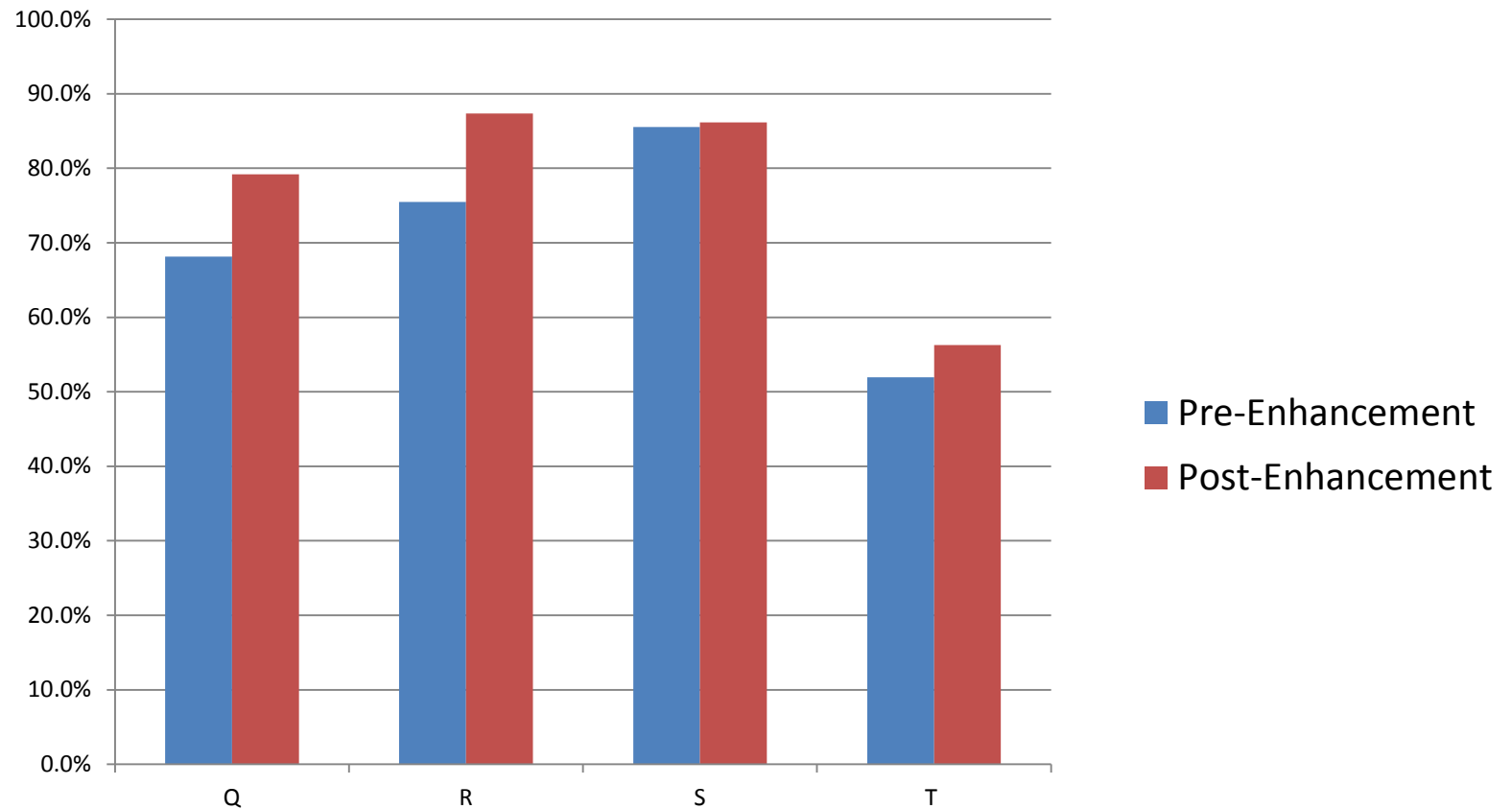
11 were sending batch data pre-HL7

7 were entering data directly pre-HL7

3 were not using the system at all pre-HL7

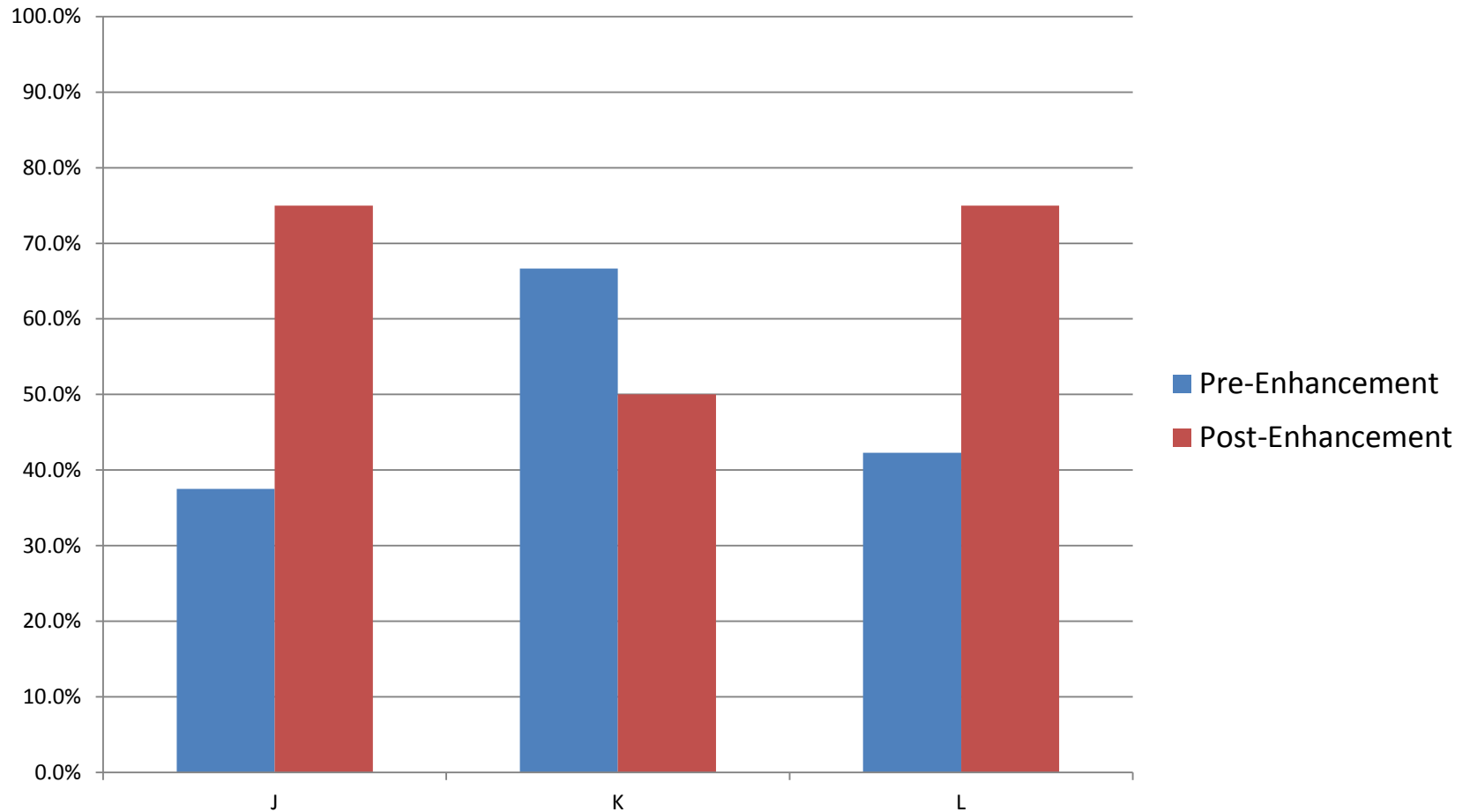
IMPACT ON IMMUNIZATION RATES

4314314 Series Coverage for Vendor D Practices



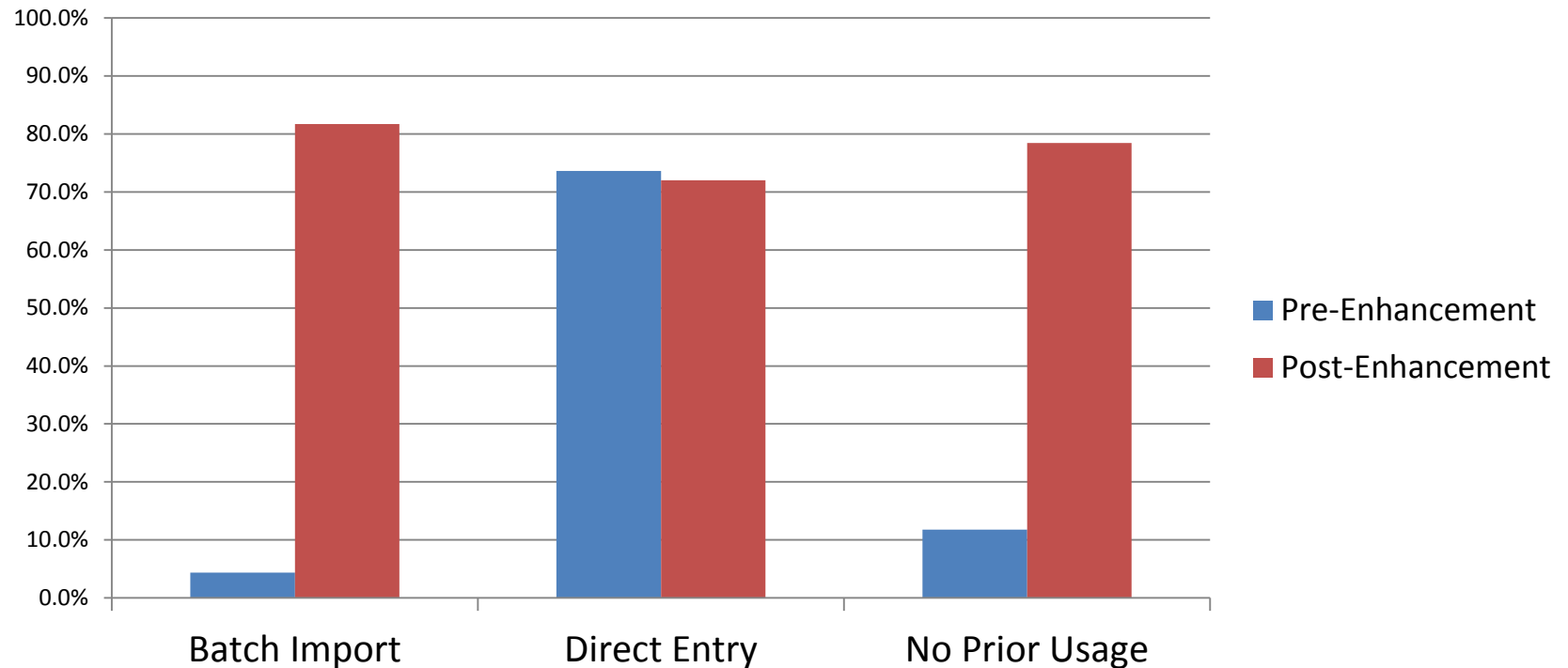
IMPACT ON IMMUNIZATION RATES

4314314 Series Coverage for Vendor C Practices



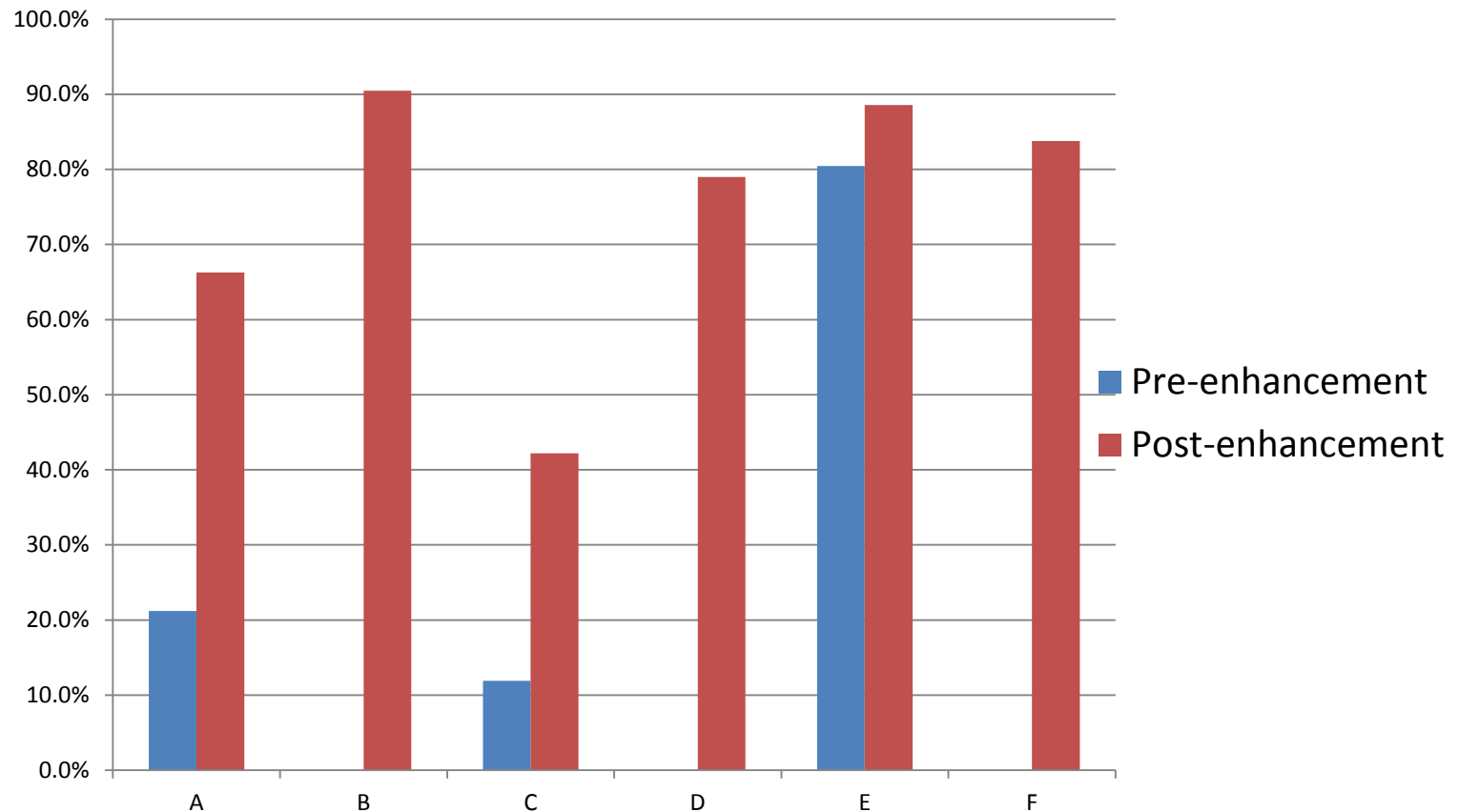
TIMELINESS

Percent of Immunizations Received within One Week



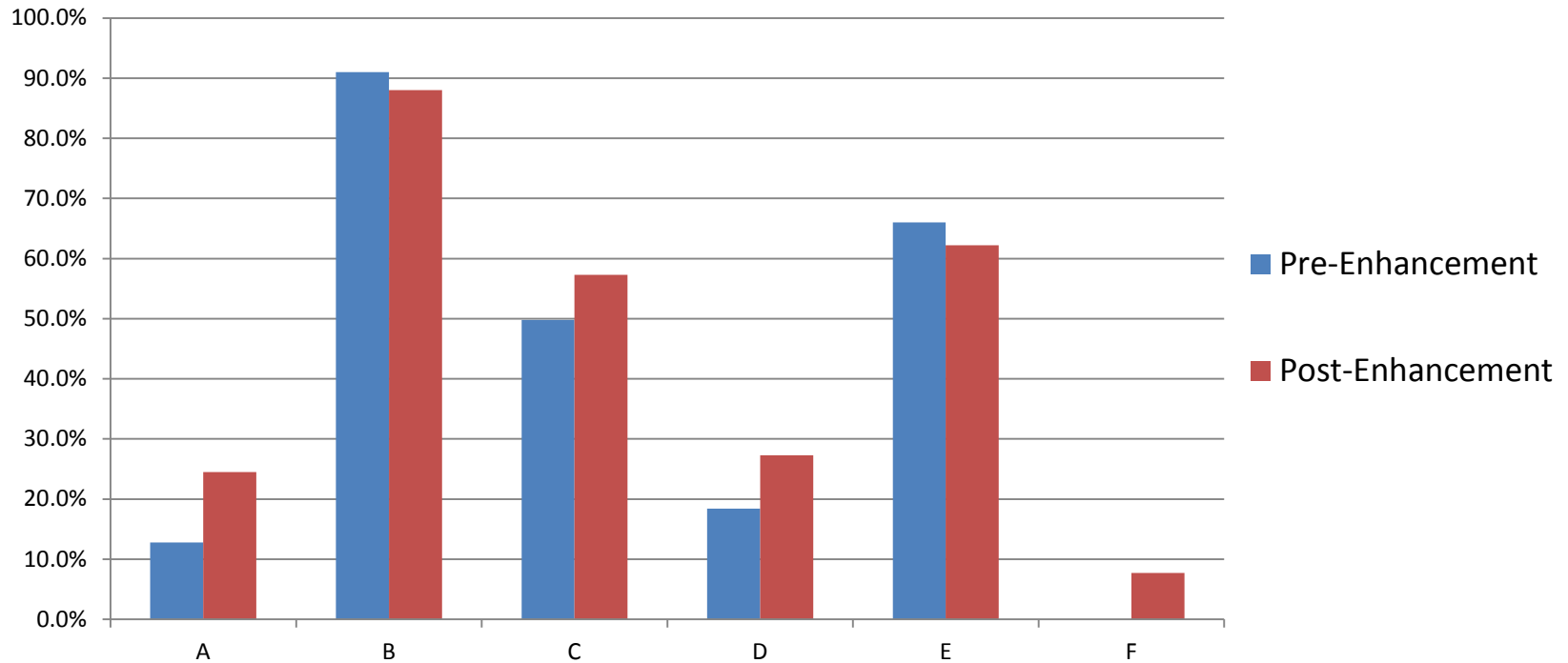
COMPLETENESS

Percent With Lot Number



COMPLETENESS

Percent of Records including Race, by Vendor



ACCURACY

Vaccine Distribution

- Unspecified codes in recently administered vaccine events

- Use of old codes (PCV7, H1N1) for recent vaccine events

- Missing codes – no HepA, newer influenza

- Unexpected vaccines

- Hib formulations, Dtap 5 Pertussis Antigens (106)

Quality Assessment

- Dtap in persons over age 7

- Tdap in persons under age 7

- Dtap-HepB-IPV in adults

- Any immunizations except HepB before 1 month of age

Lessons Learned

- Quality requires engagement
- Practices do want to improve
- Vendors matter – responsiveness is key
- Incentives help

Contact Information

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