



Using Address Checking Services to Facilitate Reminder and Recall in Minnesota

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Agenda

- Introduction
- Methods
- Results
- Conclusions
- Lessons Learned
- Future Considerations

Introduction

What is MIIC?

- Minnesota Immunization Information Connection (MIIC)
- Lifespan IIS
- MIIC Snapshot
 - 7.4 million clients
 - 71 million immunizations
 - 72% Client participation
 - 4,611 organizations enrolled
- MIIC Reports
 - Immunization Assessment Reports
 - Client Follow-up- Reminder/Recall functionality



Reminder/Recall in Minnesota

- Provider-based
 - Electronic Health Record (EHR)
 - MIIC
- Centralized IIS-based
 - Regional
 - MN Department of Health (MDH)

2013 PHF HPV Grant

- Received 2013 Prevention & Public Health Fund (PPHF) to increase adolescent HPV rates
- Reminder/Recall activity required
- MN Activities include:
 - Statewide Postcard
 - Regional Mailings
- Utilized Company A's address checking services



Methods

Statewide Postcard Cohort

- Clients 11-12 years old as of January 1, 2014
- Criteria
 - Birthdate range: 1/2/2001 and 1/1/2003
 - MN address
- Total Clients: 141,183

Company A

- Utilized Company A's address checking services to update:
 - Address
 - Phone Number
- Chose Company A
 - Pricing
 - Ease in contracting
- Data Security clause in contract
- Data Sources
 - Utility hook-ups
 - Credit Reports
 - National Change of Address (NCOA)

Address Checking- Process

Input Data

- Client ID
- Date of Birth
- Name
- Current Address
- Phone
- Parent Information

Output Data

- Parent Information
- Match Indicator
- Current Address
- Current Phone
- Last Reported Date

Batch file process to get address updates

Updating MIIC Data

- Multiple addresses can be returned for a client
- Used match indicator to prioritize information

Priority	Mother	Father
First	True	True
Second	True	False
Third	False	True

- Last Reported Date
- Highest prioritized data was loaded into MIIC

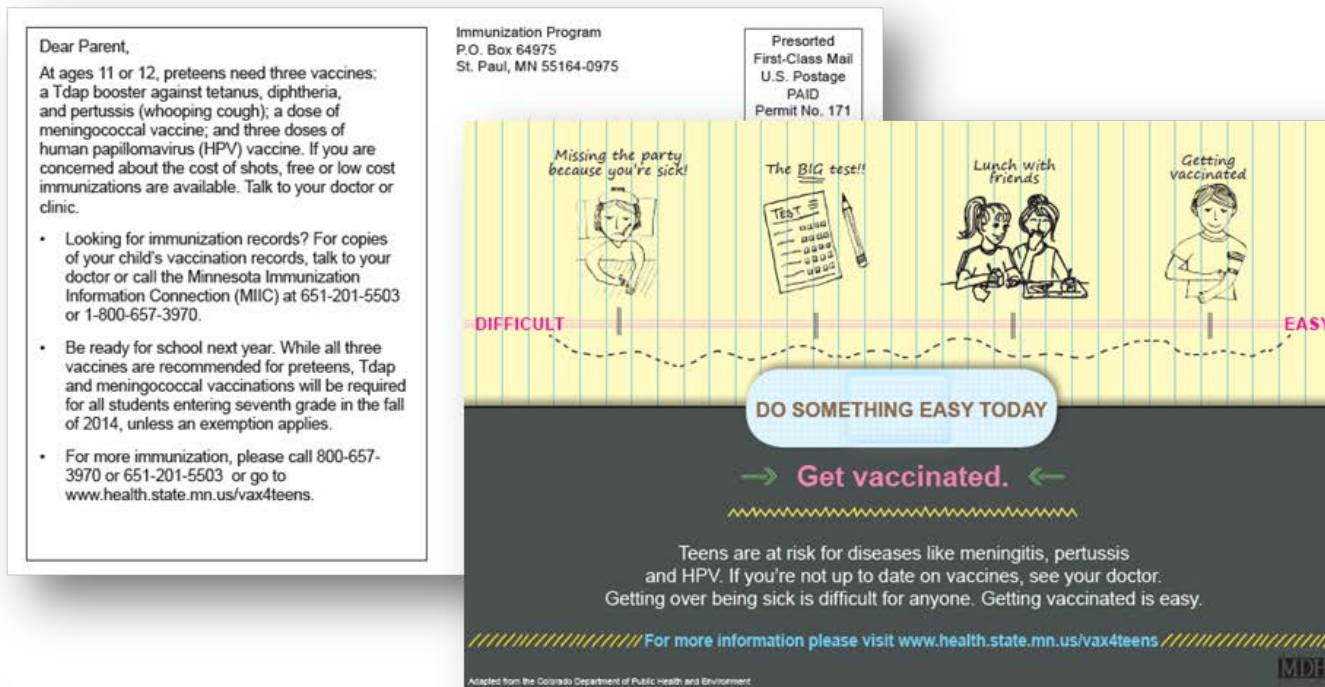
Address Information Changes

- Compared address updates to MIIC to categorize each client:

Category	Description
Not found	No information in return file from Company A
Found	Information in return file from Company A
<i>Confirmed</i>	No change in address information
<i>Updated</i>	Change in address information

Statewide Postcard

- Postcard sent to 11-12 year olds in Minnesota
- Sent late February through early March 2014
- 121,718 postcards distributed
- Reminder about recommended adolescent vaccines



Analysis

- SAS Enterprise Guide version 5.1
- Descriptive Statistics
- Chi-square Test
- Gamma Statistic
- Logistic Regression

Results

Address Updating

Category	N	Percent
Found	99,105	70.2%
<i>Confirmed</i>	56,602	40.1%
<i>Updated</i>	42,503	30.1%
Not Found	42,708	30.1%
Total	141,183	

Postcard Return Rate

Category	Return Rate
Found	8.7%
<i>Confirmed</i>	1.2%
<i>Updated</i>	10.3%
Not Found	12.1%
Overall	9.2%

Return Rate & Poverty Level

- Analysis at Zip Code Tabulation Area (ZCTA) level
- Poverty rate: percentage of Census residents in ZCTA below federal poverty level
 - < 3.5%
 - 3.5% to 6%
 - 6% to 9.5%
 - > 9.5%
- Slight positive association between ZCTA poverty level and reminder postcard return rate ($P < 0.0001$)

Updated Information

Category	Odds Ratio	95% CI
Not Found	--	
Found	0.25	(0.24,0.26)

Address Changes

Category	Odds Ratio	95% CI
Not Found	--	
Confirmed	0.09	(0.08, 0.1)
Updated	0.48	(0.46,0.50)

Summary

- Postcards sent to clients who were found by Company A were approximately 75% less likely to be undeliverable than clients not found by Company A.
- Compared to clients who were not found by Company A:
 - Postcards sent to clients who had confirmed address information from Company A were approximately 91% less likely to be undeliverable.
 - Postcards sent to clients who had updated address information from Company A were approximately 52% less likely to be undeliverable.
- Postcard return rates show a slight positive association with poverty rate at the zip code level.

Conclusions

- Company A's address services provided new information for 70% of cohort.
- Use of address checking services shows promise in reducing undeliverable reminder notifications to an adolescent population.
- Areas with higher poverty rates may have distinct differences that result in higher return rates.
- Alternate sources may be a useful source for address information to improve reminder/recall activities.

Lessons Learned

Strengths

- Access to a mature IIS
- First statewide adolescent IIS-based reminder/recall in MN
- Use of Company A's services required minimal work from MDH

Limitations

- Company A sent multiple addresses per client
- Priority system made assumptions about best address
- No control group to compare use of Company A's services
- Less likely to find information for certain individuals
- No information for why postcard was undeliverable

Future Considerations

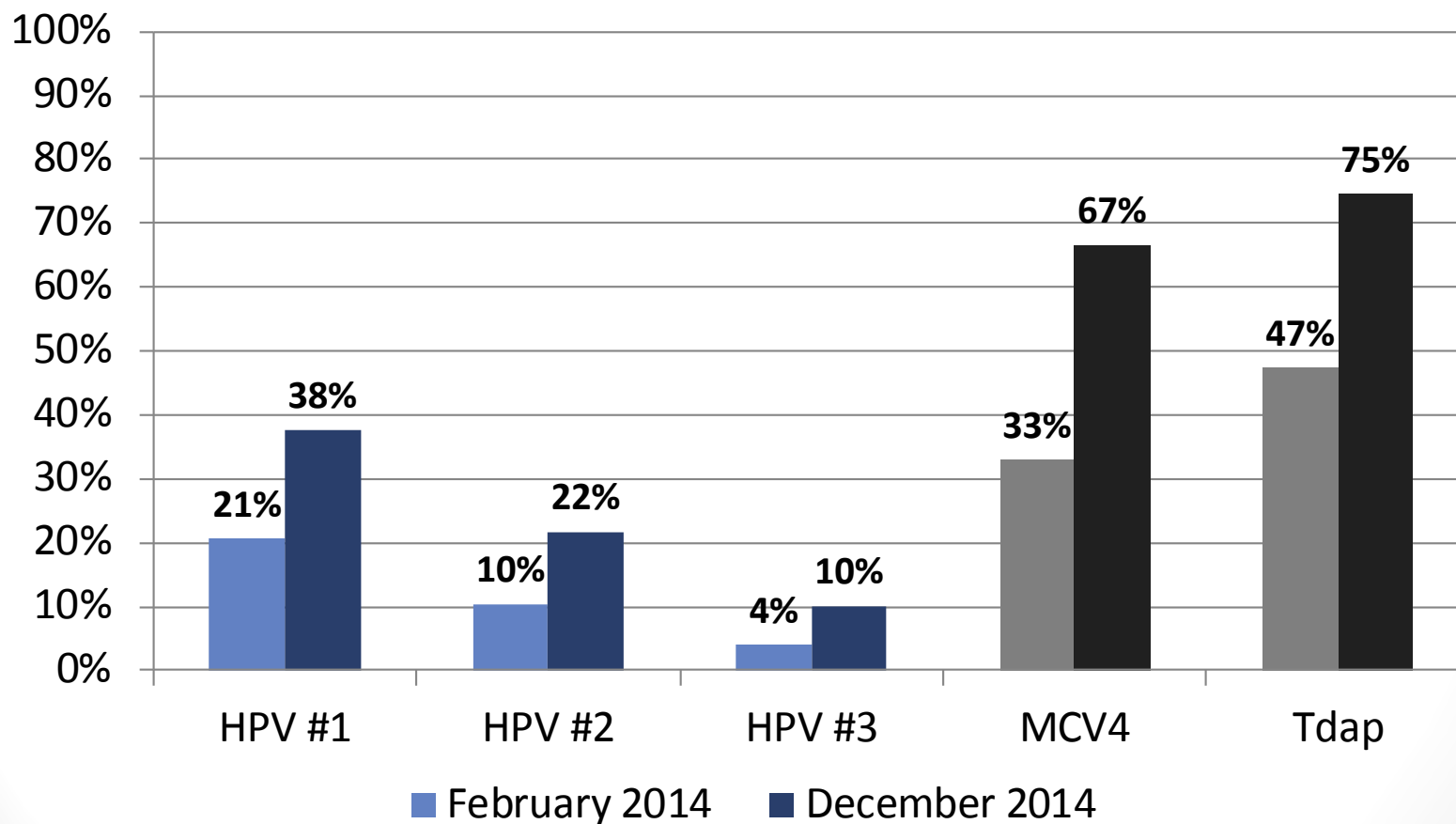
- Analyze updated addresses at difference levels

Category	Description
Major	Two differences among street address, city, and zip code
Minor 1	Direction Change (NW to SW) or Street label change (Rd to Ave)
Minor 2	PO Box or Apartment Number added
Minor 3	PO Box or Apartment Number removed
Minor 4	All other changes

- Cost-effectiveness of using address checking services
- New contract with different address checking company for 2015

Reminder Postcard Results

Adolescents 11-12 years old in MN





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