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Trends in how the 64 State, Local and Territorial Immunization Programs View Vaccine Hesitancy and Address Vaccine Confidence

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Research and Development Director

National Immunization Conference
May 15, 2018
Timeline of Factors Impacting Vaccine Hesitancy at the National Level

1990's
- Thimerosal controversy
- Wakefield study linking vaccine to autism

2007
- Anti vaccine activism - Jenny McCarthy

2016
- Dr. Robert Sears published The Vaccine Book: Making the Right Decision for Your Child
- Vaxxed: From Cover-Up to Catastrophe documentary
- Vaccine hesitancy addressed during presidential debate

2017
- Robert F. Kennedy Jr. ‘vaccine safety’ commission
- DC anti vaccine rally and Robert F. Kennedy Jr. hill visits
Role of the 64 State, Local & Territorial Immunization Programs (IP)

<table>
<thead>
<tr>
<th>Category</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccine Hesitancy</td>
<td>• Counter Anti-Vax efforts and Vaccine Choice (ICAN) efforts on social media and organized activism</td>
</tr>
<tr>
<td>Vaccine Confidence</td>
<td>• Educate the public about vaccine safety &amp; provide providers with tools on how to talk to parents</td>
</tr>
<tr>
<td>Alternative Schedules</td>
<td>• Identify and educate providers who support delayed/alternative schedules</td>
</tr>
<tr>
<td>Legislation</td>
<td>• Testify, provide education and implement policies related to legislative bills relaxing or strengthening exemption requirements</td>
</tr>
<tr>
<td>Outbreaks</td>
<td>• Respond to outbreaks in vaccine hesitant population</td>
</tr>
</tbody>
</table>
Objectives

- Describe IP Vaccine Confidence (VC) activities and how they are funded

- Understand if IP conduct research to identify Vaccine Hesitant (VH) population and if they evaluate VC interventions

- Ascertain how IPs prioritize VC activities and understand if IP view VH as a burden on their program and

- Determine if there is a change over time

- Provide state specific examples on impact of VH
Methods: AIM Annual Survey

Purpose: assess and characterize immunization program policy, infrastructure, program activities and priorities and the impact of funding changes (both federal and state) on IP

- Survey designed by AIM committees
  - CDC and partner feedback
- Sent to 64 IP and administered online:
  - 2014 January - March N=60
  - 2015 April - June N=63
  - 2016 June - August N=62
  - 2017 June - October N=55
- Survey responses sent to each IP for verification
- Data Analysis:
  - Frequency Distributions
  - Change over time: Polynomial trendlines & percent change calculations
Percentage of IP Who DID NOT Conduct Any Activities to Address Vaccine Hesitancy/Confidence 2015 vs. 2017

- 2015: 11% (n = 63)
- 2017: 11% (n = 53)
Percentage of IP Promoting Vaccine Confidence
2015 vs. 2017

- Collaboration with immunization coalition
- Collaboration with AAP
- Coverage and exemption rate reports for public view
- IIS use to identify vaccine refusal and target intervention

Comparison:
- Collaboration with AAP: 2015 (n = 53), 2017 (n = 62), increase by 36%
Percentage of IP Promoting Vaccine Confidence
2015 vs. 2017

Provider Focused Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>2017 Percentage</th>
<th>2015 Percentage</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addressed during AFIX or VFC site visit</td>
<td>73%</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>Addressed at in person training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sent messages via website and/or social media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouraged document refusals/exemptions in IIS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disseminated toolkit/resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sponsored or promoted web based training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conducted focus groups/surveys</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

n = 63

n = 53
Percentage of IP Promoting Vaccine Confidence 2015 vs. 2017

Parent Focused Activities

- Sent messages via mass media (website, print, TV, radio, etc.): 36% increase
- Sent messages via social media (Facebook, Twitter, etc.): 29% increase
- Conducted focus groups/surveys

n = 53  n = 62
Percentage of IP Promoting Vaccine Confidence 2015 vs. 2017

School/Daycare Focused Activities

- Disseminated toolkit/resources: 20% increase
- Identified schools with high exemption rates and targeted intervention: 123% increase
- Conducted focus groups/surveys: 360% increase

n = 53  n = 63
Percentage of IP Conducting Research to Identify Vaccine Hesitant Population & Conducting Evaluation of Vaccine Confidence Efforts (2017)

- Research: 11%
- Evaluation: 9%

n = 53
Percentage of IP Funding Vaccine Confidence Efforts via Federal and State Funding Streams 2015 vs. 2017

- Section 317: 65% (2015) vs. 60% (2017)
- Categorical PPHF: 73% (2015) vs. 21% (2017)
- VFC Operations: 33% (2015) vs. 35% (2017)
- VFC AFIX: 38% (2015) vs. 34% (2017)
- State/local: 29% (2015) vs. 25% (2017)

Sample sizes: n = 63 (2015) vs. n = 53 (2017)
Priorities

Factors that Influence IP Prioritization

- Need
- Federal, State and Local Requirements
- Staff & Resources
- Health System Structure
- Stakeholder Involvement
Immunization Program Priorities (2017)

- Increase HPV rates: 4.4
- Increase providers using digital data loggers: 4.3
- Implement Meaningful Use/Interoperability: 4.3
- Identify and address low coverage rates: 4.3
- Improve vaccine storage and handling: 4.3
- Improve VFC accountability: 4.2
- Implement PPHF grants: 4.0
- Increase the number of VFC providers using IIS: 4.0
- Work with coalitions: 4.0
- Increase coverage rates older adolescents (16-18 yrs): 3.9
- Increase the number of adult providers using IIS: 3.8
- Increase coverage rates for pregnant women: 3.8
- Increase adult rates: 3.6
- Improve pandemic preparedness: 3.5
- Increase implementation of adult IZ standards: 3.4
- Increase the number of pharmacists using IIS: 3.4
- Address vaccine safety/hesitancy: 3.2
- Support upcoming legislative activities: 3.1
- Partner with community vaccinators: 2.9
- Implement/enhance billing at local health departments: 2.6
- Increase school located vaccination: 2.5
- Work to expand reimbursement for alt. providers: 2.2
- Enroll pharmacists as VFC providers: 2.0
- Change vaccine financing policy: 1.7

No Priority | Low Priority | Moderate Priority | High Priority | Essential Priority
# Immunization Program Priorities for Addressing Vaccine Hesitancy

Mean (2014-2017)

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a Priority</td>
<td>n=57</td>
<td>n=60</td>
<td>n=61</td>
<td>n=53</td>
</tr>
</tbody>
</table>
Percentage of Immunization Programs Reporting the Priority Level of Addressing Vaccine Hesitancy (2014-2017)

- Not a priority
- Low Priority
- Moderate Priority
- High Priority
- Essential Priority

R² values:
- Not a priority: 0.9107
- Low Priority: 1
- Moderate Priority: 0.9917
- High Priority: 0.9436
- Essential Priority: 1
Number of Immunization Programs Reporting the Burden of Addressing Vaccine Hesitancy
Last 12 months (2017) n=52

- Not a burden: 18
- Slight burden: 20
- Substantial burden: 14
Number of Immunization Programs Reporting the Burden by Priority Level for Addressing Vaccine Hesitancy (2017)

- No Priority
- Low Priority
- Moderate Priority
- High Priority
- Essential Priority

- Not a Burden
- Slight Burden
- Substantial Burden

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>No Priority</th>
<th>Low Priority</th>
<th>Moderate Priority</th>
<th>High Priority</th>
<th>Essential Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Priority</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Low Priority</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Moderate</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>High Priority</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Essential</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
State Example: Alternative Schedules

- Public health offices see increasing requests by parents/guardians
- Internal discussions about how to respond and address the issue, may include:
  - Developing policy/direction on how to manage requests for non-standard schedules
  - Developing signed acknowledgment form for parents
  - Educating parents
  - Getting legal advise if public health can refuse to give alternative schedules
State Example: Pro-safety/Pro-parental choice organizations

Impact of Pro-safety/Pro-parental choice activism on the Colorado Immunization Program:

- Anti-vaccine advocacy to legislators and board of health members
- Involved in policy change - exemption forms now not required
- Anti-vaccine comments on state website
- Threats of law suits
- Multiple request for information through the open records act - staff time spent on request but did pay/not to obtain records
State Example: Community Engagement

The Immunization Partnership (TIP) leads Grassroots Community Engagement in Texas:

- Social Media
- Traditional Media
- Legislative presence

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3,700 E-mails to legislators sent out</td>
<td>655% INCREASE from 2015</td>
</tr>
<tr>
<td></td>
<td>240 Legislative visits by Immunize Texas</td>
<td>195% INCREASE from 2015</td>
</tr>
<tr>
<td></td>
<td>69 Statewide and national media hits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 Testimonies during bill hearings</td>
<td>160% INCREASE from 2015</td>
</tr>
<tr>
<td></td>
<td>13 Action related alerts via e-mail and social media</td>
<td>216% INCREASE from 2015</td>
</tr>
</tbody>
</table>
What Assistance Does IP Need to Promote Vaccine Confidence?
Common themes from 2017 Annual Survey

- National Strategy - Alignment with state efforts
- Strong national association/organization recommendations
- Funding and staff
- Evidenced based solutions and tested interventions
- Culturally diverse resources for different audiences: print (fact sheets), social media, and media (local stories, PSA)
- Community engagement
- Sample materials from other states - what has worked?
- Provider training at state conference and regional meeting
  - CME certified training & speaker lists
Limitations

- Turnover in IP Managers
  - 23 (36%) IP managers were in position in 2014 and 2017
  - Subjective survey and data reliability across years

- Variance in survey and question response by year

- No significance testing

- Limited insight into what factors contribute to IP VH burden
Conclusions

- More IP focus efforts towards providers and working with collaborators
- From 2015 vs. 2017, increase in activities but greatest percent increase for school/daycare
- More IPs conduct activities but few evaluate efforts
- IP use multiple funding streams to support efforts - important stable funding
- From 2014 to 2017, VH remains a moderate priority for IP
- Burden of VH on IPs varies across the country but no consistent apparent correlation between burden and priority level
- Additional research needed to understand factors that contribute to the burden of vaccine hesitancy on IP and public health system
- IP would benefit from additional support, resources and funding
Special Thank You
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Rekha Lakshmanan (TX TIP)
Erica Martinez (NM)

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