Making Progress Towards Improving Adult Immunizations

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Outline

• Where are we now
  • Vaccination coverage
  • Implementation of the standards
  • Use of immunization information systems
• Celebrating the work of the National Adult and Influenza Immunizations Summit
• Where do we go from here
Proportion of adults reporting vaccination for selected vaccines, by age group and high risk status, National Health Interview Survey (NHIS), United States, 2010-2014

Adult Influenza Vaccination Coverage, by Age, United States, NHIS 2012-14

HP2020 Targets: 70% ≥19 years, 90% HCP ≥19 years
Adult Immunization Coverage, Selected Vaccines by Age and High-risk Status, United States

HP2020 Targets: 90% PPV ≥65 yrs, 60% PPV HR 19-64 yrs, 30% zoster ≥60 yrs
Data Source: 2012, 2013 and 2014 NHIS

Adult Vaccination Coverage, Selected Vaccines, 2011 to 2014

Data Source: NHIS 2011-2014
Hepatitis B Vaccination Coverage by Age and High-risk Status, United States, 2014

- HepB (≥3 doses), Endemic Area Travel: 31% (2.6%)
- HepB (≥3 doses), Chronic Liver Disease: 30%
- HepB (≥3 doses), HCP ≥19 yrs: 61%
- HepB (≥3 doses), Diabetes 19-59 yrs: 24%
- HepB (≥3 doses), Diabetes ≥60 yrs: 14%

HP2020 Target: 90% HepB Healthcare Personnel (HCP)
Data Source: 2014 NHIS

Racial/Ethnic Vaccination Disparities in Adult Immunizations, NHIS 2014

<table>
<thead>
<tr>
<th>Vaccination Group</th>
<th>% Vaccinated Whites</th>
<th>Disparity, Blacks</th>
<th>Disparity, Hispanics</th>
<th>Disparity, Asians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumo., HR 19-64 yrs</td>
<td>21</td>
<td>-1</td>
<td>-5</td>
<td>-7</td>
</tr>
<tr>
<td>Pneumo., ≥65 yrs</td>
<td>65</td>
<td>-15</td>
<td>-20</td>
<td>-17</td>
</tr>
<tr>
<td>Tetanus, 19-49 yrs</td>
<td>69</td>
<td>-16</td>
<td>-17</td>
<td>-17</td>
</tr>
<tr>
<td>Tetanus, 50-64 yrs</td>
<td>70</td>
<td>-20</td>
<td>-15</td>
<td>-20</td>
</tr>
<tr>
<td>Tetanus, ≥65 yrs</td>
<td>61</td>
<td>-18</td>
<td>-12</td>
<td>-14</td>
</tr>
<tr>
<td>Tdap, ≥19 yrs</td>
<td>24</td>
<td>-12</td>
<td>-11</td>
<td>-8</td>
</tr>
<tr>
<td>Tdap, 19-64 yrs</td>
<td>26</td>
<td>-13</td>
<td>-13</td>
<td>-11</td>
</tr>
<tr>
<td>Tdap, ≥65 yrs</td>
<td>16</td>
<td>-11</td>
<td>-9</td>
<td>-1</td>
</tr>
<tr>
<td><strong>HepA, 19-49 yrs</strong></td>
<td>13</td>
<td>-2</td>
<td>-3</td>
<td>+3</td>
</tr>
<tr>
<td>HepB, 19-49 yrs</td>
<td>36</td>
<td>-6</td>
<td>-16</td>
<td>-1</td>
</tr>
<tr>
<td>Herpes Zoster, ≥60 yrs</td>
<td>32</td>
<td>-20</td>
<td>-17</td>
<td>-16</td>
</tr>
<tr>
<td>HPV, Females 19-26 yrs</td>
<td>46</td>
<td>-9</td>
<td>-18</td>
<td>-24</td>
</tr>
<tr>
<td><strong>Tdap, HCP ≥19 yrs</strong></td>
<td>46</td>
<td>-22</td>
<td>-11</td>
<td>-5</td>
</tr>
<tr>
<td>HepB, HCP ≥19 yrs</td>
<td>63</td>
<td>-12</td>
<td>-12</td>
<td>+5</td>
</tr>
</tbody>
</table>
Adult Immunization Practice Standards

- **Assess** immunization status of all patients in every clinical encounter.
- **Strongly recommend** vaccines that patients need.
- **Administer** needed vaccines **or Refer** to a provider who can immunize.
- **Document** vaccines received by patients, including entering immunizations into immunization registries where available.

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Percentage of most recent visit(s) to healthcare location or pharmacy* in past 12 months during which adults reported receiving vaccination assessment, Internet Panel Survey, February–March 2015, United States (N=2,349)

- **Primary Care** (n=1859): 31%
- **Internal Medicine** (n=866): 32%
- **Family Medicine** (n=907): 31%
- **Ob/Gyn** (n=499): 14%
- **Other Specialties** (n=142): 8%
- **Pharmacy** (n=1604): 5%

*Visited pharmacy to fill prescription for themselves.

CDC 2015 Preliminary Data – unpublished
Percentage of most recent visit(s) to healthcare location or pharmacy* in past 12 months during which adults reported receiving vaccination assessment, Internet Panel Survey, February–March 2015 and 2016, United States (N=2,349 for 2015 data; N=1,595 for 2016 data)

*Visited pharmacy to fill prescription for themselves.

CDC 2015 Data – unpublished, CDC 2016 Preliminary Data – unpublished

Percentage of adult patients who reported receiving a vaccination assessment during their most recent visit(s) to healthcare location or pharmacy* in past 12 months vs. percentage of healthcare providers who reported that they routinely assess vaccination status of their patients, Internet Panel Survey, February–March 2016, United States (N=1,595 for patient data; N=1,918 for healthcare provider data)

*Visited pharmacy to fill prescription for themselves.

CDC 2016 Preliminary Data – unpublished
Use of Immunization Information Systems (IIS) for Adult Vaccination

- Use of IIS is an important component of the Adult Standards
- Six US sentinel IIS sites funded by CDC to improve enrollment of adult providers as part of pandemic influenza vaccine preparedness
- We juxtaposed National Immunization Survey (NIS) flu data and Behavioral Risk Factor Surveillance System data with IIS data from these six sites for influenza vaccinations
  - No statistical comparisons made
- NIS influenza vaccination and BRFSS estimations based on patient recall only
  - Over-estimate vaccination
- All 6 IIS sentinel sites are life-time registries with only NYS requiring adult patient consent for vaccines to be included in IIS.

Michigan Coverage by Age Groups

*Child data source is NIS-flu; adult data source is BRFSS.
Minnesota Vaccination Coverage by Age Groups

- Child data source is NIS-flu; adult data source is BRFSS.

New York City Vaccination Coverage by Age Groups

- Child data source is NIS-flu; adult data source is BRFSS.
- †BRFSS data not available.
North Dakota Vaccination Coverage by Age Groups

Oregon Vaccination Coverage by Age Groups

*Child data source is NIS-flu; adult data source is BRFSS.
Wisconsin Vaccination Coverage by Age Groups

![Graph showing influenza vaccination coverage by age group.]

*Child data source is NIS-flu; adult data source is BRFSS.

Sentinel Site IIS Conclusions

• Variability among states in vaccination data capture
• Substantial number of pediatric and adult influenza vaccinations included in IIS
• In NYC where consent is required for adults (opt-in) but not for children (opt-out)
  • High numbers of influenza vaccinations recorded for children relative to NIS flu data
  • Substantially lower inclusion of adult influenza vaccinations relative to survey data and relative to other states
Family Physician Use of IIS 2013 vs. 2016

<table>
<thead>
<tr>
<th>Influenza</th>
<th>2016: n=293; 2013: n=226</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIS is used to <strong>record</strong> vaccination(s) received in your practice</td>
<td>2016: 46%</td>
</tr>
<tr>
<td>IIS is used to <strong>assess</strong> vaccination status</td>
<td>2016: 44%</td>
</tr>
</tbody>
</table>

Other Recommended Vaccines

| IIS is used to **record** vaccination(s) received in your practice | 2016: 40% | 2013: 29% |
| IIS is used to **assess** vaccination status | 2016: 32% | 2013: 24% |


General Internal Medicine Use of IIS 2013 vs. 2016

<table>
<thead>
<tr>
<th>Influenza</th>
<th>(2016: n=324; 2013: n=308)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIS is used to <strong>record</strong> vaccination(s) received in your practice</td>
<td>2016: 27%</td>
</tr>
<tr>
<td>IIS is used to <strong>assess</strong> vaccination status</td>
<td>2016: 25%</td>
</tr>
</tbody>
</table>

Other Recommended Vaccines

| IIS is used to **record** vaccination(s) received in your practice | 2016: 25% | 2013: 15% |
| IIS is used to **assess** vaccination status | 2016: 20% | 2013: 15% |

Accomplishments of NAIIS

- Actively engaged stakeholders across all sectors who
  - Identified and communicated key issues among members
  - Problem solved and took action
  - Shared successes
  - Disseminated key information and messages to constituents
  - Developed new partnerships
  - Provide energy and thoughtful input on policy

- Amazing dedicated leadership from all sectors!

NAIIS Working Groups

- **Patient education**
  - Co-leads: Jeff Goad (California Immunization Coalition), Alexandra Shevach (CDC), Najma Roberts (APCO)

- **Provider education**
  - Co-leads: Susan Farrall (CDC), Laura Lee Hall (ACP), Debra Hawks (ACOG), and LJ Tan (IAC)

- **Access and collaboration**
  - Co-leads: Carolyn Bridges (CDC), Kim Martin (ASTHO), Mitch Rothholz (APhA), and LJ Tan (IAC)

- **Quality Measures**
  - Angela Shen (NVPO), Amy Groom (CDC and I.H.S.), and Sharon Sprenger (Joint Commission)

- **Influenza**
  - Amy Behrman (U Penn) and Kelly McKenna (EverThrive Illinois)
Just **SOME** of the Accomplishments of NAIIS

- **MADE PROGRESS ON IMPLEMENTATION OF STANDARDS FOR ADULT VACCINATION PRACTICE!**

- **Continue to provide forum for sharing influenza vaccine supply, distribution, and administration issues**

- **Improved communications with partners, providers and patients**
  - Catalogued library of website business and other tools
  - Collected and published information on state-level projects to improve collaborations and awareness
  - Developed primer on key messages
  - Shared messages and plans for National Immunization Awareness Month
  - Developed and updated slide sets on adult immunizations Standards
  - Promoting adult and adolescent vaccination quiz

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Just **SOME** of the Accomplishments of NAIIS

- **Quality measures**
  - Conducted quality measures WG landscape analysis
  - Development of quality measures in progress with Summit and in collaboration with PQA:
    - Tdap and influenza vaccination of pregnant women
    - Composite measure of immunizations for persons with ESRD
    - Adult vaccine composite measure feasibility
    - Proportion of vaccinations recorded in IIS
  - Quality improvement resources page on CDC QI training website

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Just **SOME** of the Accomplishments of NAIIS

- **Use of IIS**
  - Assessed and made available state level readiness for adult providers to use IIS
  - Developed pamphlet to promote benefits of IIS for providers and patients
  - **IMPROVED USE OF IIS** but also acknowledge where work needed

- **Work with providers**
  - Increased awareness of adult immunization practice standards!
  - Assessed, and articulated need for better economics data on adult vaccinations on costs and studies now underway
  - Checklist to improve vaccination procedures in non-clinical care settings
  - Developed fact sheet on disparities
  - Promoted need and examples of improving provider education from trainees through MOC
  - Identified many best practices at provider and health systems levels

- **Celebrated successes through Summit Awards, What Works! posters**

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**Where do we need to go?**

- **Identify specific actions needed in changing health care system / payment landscape to ensure vaccinations a priority**
- **Consider policies and practices that impede and also improve providers’ ability to implement the Standards, e.g.**
  - Fill data gaps to make the case for prioritizing vaccinations
  - Continue progress on quality measures and use of IIS
  - Assess policy barriers at all levels, including financial barriers
  - Improve public’s awareness
  - Improve vaccine access and safe delivery
  - Ensure providers receive training and education on immunizations
OUR CHARGE

Determine:
1. What We Can Do as the NAIIS, and
2. What We Can Do as Individual Organizations

to identify data gaps and fill them, and
to identify barriers and address them, in order to *reduce illness and suffering* through *improving vaccination*.

Thank you for all of your work and partnership throughout the year!!