Understanding the Where, How, and How Much of Physician-Led Adult Immunization

Acknowledgements

- Past and current supporters including the CDC, Merck, Pfizer, and Sanofi
- SHC/NMQF colleagues
- ACP colleagues
- NAIIS and Working Group colleagues and friends
Introduction to SHC

Sustainable Healthy Communities, LLC

- Wholly-owned subsidiary of National Minority Quality Forum
- Vision statement: Sustainable healthy communities in every zip code.
- SHC’s mission is to promote sustainable healthy communities, especially those with diverse and underserved populations, through the provision of actionable data, research, and engagement of clinicians and community leaders.
SHC Products

Data Analytics: Based on patient-, provider-, and geographically linked data for education, research, risk management, and advocacy

Health Indices: Customized and interactive maps of disease by prevalence, cost, outcomes, co-morbidities, socioeconomic status, Rx drug use, payer, environmental/social factors.

Clinician and Community Network: Provide training and support for clinicians, patients, and community leaders in promoting better outcomes and research participation in regions with diverse and underserved populations

Clinical Trial Support: Guiding recruitment of non-white participants; direct recruitment of practices and patients

Quality Improvement and Adult Immunization: A History
ACP QI and Adult Immunization Programs Leading Up to this Project

- Multiple Programs over five years
  - Small Close-the Gap program for MOC part IV
  - Practice Advisor Module
  - 3 CDC-funded cooperatives in a row
  - *I Raise the Rates* industry funded program
  - Steps Forward Modules
- Multi-support, including federal and pharmaceutical manufacturers

QI Programs: Common Strategies

- Focus on flu, pneumo, Tdap, and zoster vaccines (especially first two, some times interest expressed in HPV and Hep B)
- In addition to the platforms, educational programs (in person and online)
- Use of PDSAs, with expert coaching calls core to implementation
- Champion-based – trained physician and health team leads on QI plus – financial and moral support
- Tap into local groups (e.g., ACP chapters, residency programs, departments of health, FQHCs)
- Tailored and flexible
- 15 states included: AL, AZ, AR, DC, DE, FL, GA, ID, IL, LA, ME, NJ, NM, NY, TX
- Progressive expansion of program in terms of number of clinicians; goal = broad dissemination with impact
I Raise the Rates Preliminary Results

- States = Arkansas and Louisiana (data not in from Florida and New Jersey)
- Number of Clinicians: 4,792
- Number of Patients: 335,862
- Pre = June 2015
- Post = December 2016

![Bar chart showing vaccination rates for various vaccines.]

CDC Funded Program: Georgia and Illinois Preliminary Results

- Large FQHC in rural Southwest Georgia
  - 10 clinics in total
- QI focus: increasing rates of pneumococcal vaccine for all patients over 65
- Interventions:
  - Champion training
  - EHR-based performance dashboard (monthly reports)
  - Provider education
  - Standing Orders
- Time period: April 1, 2016 – January 31, 2017
- Number of eligible patients: 4,082

- Academic Medical Center, 3 clinics
- Focus on influenza vaccine
- Interventions:
  - MAs trained to identify patients and recommend flu shot
  - Visual display of run chart in public area
  - Email reports to residents and individual clinicians with their immunization rates
- Baseline: 37.4% (9/2015-2/2017; 5592 patients)
- Follow-up: 53% (9/2016-2/2017; 7688 patients)
Topics of Interest to Participants

• Standing orders and team-based care
• ACIP recommendations
• Business aspects
• Making the recommendation

Making Adult Immunization Standard in Internal Medicine: A National Practice Transformation Initiative: Georgia

• Champion training
• Action Plan:
  • Prior to visit, check of immunization status (IIS, EMR)
  • All patients 65 years of age and older receive health literacy/language appropriate information sheet when they check-in
  • Standing Orders implemented
  • Providers educated on standardized talking points with patients (CDC pocket cards)
  • Administration of pneumonia vaccine to all eligible patients prior to physician encounter
Albany Area Primary Health Care

- FQHC
- 18 Service Delivery Sites in Southwest Georgia
- In 2016 provided care to 37,944 patients
- Services were provided by 81 providers (33 physicians, 34 mid-level providers, 5 dentists, and 9 mental health professionals)
- Significantly underserved population with Health Professional shortage area (HPSA) and medically underserved area/population (MUA/MUP) designations
- Large low income population, disproportionate black population, significant uninsured population, low educational attainment, and poor health status indicators

Pneumonia Vaccination Status for Older Adults > (Pneumonia vaccine at any time) | 2017 February

65.7% Increase from April 2016 to February 2017
• 72% average increase from April 2016 to February 2017 - IF CLINICAL CHAMPION
• 23% average increase from April 2016 to February 2017 - IF NO CLINICAL CHAMPION

43% average increase per clinic from April 2016 to February 2017
NMQF, ACP, and QHC Advisory Group partner to increase adult immunization rates among underserved populations

Washington, D.C., September 6, 2016 -- The National Minority Quality Forum (The Forum), American College of Physicians (ACP), and QHC Advisory Group (QHC) are partnering to create a network of physicians who provide care to minority and underserved populations.

The immediate purpose of the collaboration is to support health equity by reducing adult immunization disparities. The collaboration also seeks to support minority-serving practices in meeting the requirements of value-based payment reforms.
Review

Improving adult immunization equity: Where do the published research literature and existing resources lead?

Wendy Prins a, Emily Butcher b, Laura Lee Hall c, Gary Puckrein d, Bernard Rosof e
Organizational Websites Included in Environmental Scan of Adult Immunization Disparities Resources

- AARP
- Adult Vaccine Access Coalition
- Advisory Committee on Immunization Practices
- Agency for Health Research and Quality
- AHRQ Innovations Exchange
- American Academy of Family Practitioners
- American Association of Nurse Practitioners
- American College of Physicians
- American College of Preventive Medicine
- American College of Obstetricians and Gynecologists
- American Medical Association
- American Nurses Association
- American Society for Health-System Pharmacists
- AMGA Foundation
- Association of Immunization Managers
- Association of State and Territorial Health Officials
- Blue Cross Blue Shield Association
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- Centers for Medicare & Medicaid Innovation
- Consumer Reports/Consumers Union
- CVS Pharmacy
- Department of Health and Human Services
- Emory University Interfaith Health Program
- Health Resources and Services Agency
- Glass Smith Kilroe
- Immunization Action Coalition
- Immunizations for Public Health

Infectious Diseases Society of America
Institute for Vaccine Safety
Merck & Co., Inc.
National Adult & Influenza Immunization Summit
National Black Nurses Association
National Business Coalition on Health
National Business Group on Health
National Foundation for Infectious Diseases
National Guideline Clearinghouse
National Hispanic Medical Association
National Medical Association, Cobb Institute
National Minority Quality Forum
National Public Health Information Coalition
National Quality Measures Clearinghouse
National Vaccine Program Office
Office of Minority Health
Pfizer Inc.
Pharmacy Quality Alliance
Sanofi
Safiris
South Carolina Department of Health and Environmental Control
Take a Stand!
Vaccinate Your Family (Every Child by Two)
Walgreens
Wisconsin Health Literacy

*Organizational resources included in environmental scan

Research Review

- Update of 2015 CDC-performed PubMed search for English-language studies that addressed disparities in AI
- 114 studies identified, with most focused on documenting AI disparities
- 44 studies pertained to causes or interventions, mostly on flu and AA/Hispanic (17)
Review Conclusions

- AI disparities well-documented; insufficient evidence for specific approaches to improving AI in minority populations
- Limitations of current patient resources
  - Health literacy and language issues
  - Limitations beyond flu
  - Cultural issues largely not explored
- Additional research is needed to identify effective ways to reduce AI disparities
  - Approaches should include identifying best practices of high performers
  - Enhanced support to primary care practices serving minority populations
  - Educating and partnering with community members

Potential Role of Claims Data
Capabilities

• NMQF routinely accrues Medicare (and other) claims data
• Data are linkable at the patient, provider, and geographic unit over time
• Integration with other data underway (e.g., clinical registries)
• Maps document geographic distribution of clinical conditions by demographic characteristics, as well as treatment patterns, provider distribution, insurer, costs

Early Use Experience

• I Raise the Rates attempted to use commercial payer data (Medicare Advantage plans) but despite strong champions, data access faced strong barriers
Could Medicare Claims Data Help

• Identify clinicians serving non-white patients?
• Identify regions of the country with low rates among non-white populations?
• Identify clinician immunization rates/patterns?
• Provide a proxy for performance measure?
• Support research (e.g., out of pocket costs for part D vaccines and correlates with rates; morbidity/mortality/costs associated with lower rates of immunization)?

Primary Care Providers Billing Medicare for Adult Immunizations, 2014

<table>
<thead>
<tr>
<th>Immunization</th>
<th>National %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>39%</td>
</tr>
<tr>
<td>Any pneumo</td>
<td>29.8%</td>
</tr>
<tr>
<td>Zoster</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

Total of 296,500 PCP for adult providers, including general internists, family practice, osteopaths, PAs, NPs; estimated for patients over 65 years of age with a visit in 2014
## Adult Influenza Immunization and Medicare, 2014

<table>
<thead>
<tr>
<th>Patient Group</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>39%</td>
</tr>
<tr>
<td>White, nonhispanic</td>
<td>41%</td>
</tr>
<tr>
<td>Black</td>
<td>23%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>20%</td>
</tr>
<tr>
<td>Asian</td>
<td>37%</td>
</tr>
<tr>
<td>Native American</td>
<td>29%</td>
</tr>
</tbody>
</table>

Rate = National average of: # of patients for whom a shot was billed in Medicare in 2014 (numerator)/total number of patients receiving Medicare services in that year (denominator) X 100

### Percent of Medicare Patients Receiving Flu Shot from Their PCP by State, 2014

National average is 39% of patients
ACP Minority-Serving General Internists

- 2014 Medicare Reimbursement Data
- 8361 ACP minority-serving members (>50% of patients are non-white) with email addresses
- “Super-immunizer” definitions
  - Members with the highest rates of flu/pneumo immunizations (immunizations billed for that year) among all patients 65+ seen that year

ACP Minority-Serving “Super-Pneumo-Immunizers” – 15% with the Highest Rates of Immunization*

346 Clinicians:
### Real Physician Profit Profile

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Average Cost</th>
<th>Average Reimbursement</th>
<th>Average Admin Reimbursement</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumovax-23</td>
<td>$84.11</td>
<td>$89.95</td>
<td>$20</td>
<td>$25.84</td>
</tr>
<tr>
<td>Prevnar-13</td>
<td>$158.83</td>
<td>$181.06</td>
<td>$20</td>
<td>$42.23</td>
</tr>
<tr>
<td>Influenza Quadrivalent</td>
<td>$16.37</td>
<td>$19.03</td>
<td>$20</td>
<td>$22.66</td>
</tr>
<tr>
<td>Influenza High Dose</td>
<td>$41.22</td>
<td>$42.72</td>
<td>$20</td>
<td>$21.50</td>
</tr>
<tr>
<td>Zostavax</td>
<td>$202.46</td>
<td>$214.20</td>
<td>$20</td>
<td>$31.64</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>$57.36</td>
<td>$63.88</td>
<td>$20</td>
<td>$26.52</td>
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<tr>
<td>Hepatitis B</td>
<td>$40.43</td>
<td>$61.48</td>
<td>$20</td>
<td>$41.05</td>
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<tr>
<td>Menactra</td>
<td>$101.51</td>
<td>$126.83</td>
<td>$20</td>
<td>$45.32</td>
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<tr>
<td>Bexsero</td>
<td>$152.86</td>
<td>$180.01</td>
<td>$20</td>
<td>$47.41</td>
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<tr>
<td>Gardasil-9</td>
<td>$187.09</td>
<td>$216.87</td>
<td>$20</td>
<td>$49.58</td>
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<tr>
<td>Tdap</td>
<td>$30.65</td>
<td>$47.00</td>
<td>$20</td>
<td>$36.35</td>
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<tr>
<td>Yellow Fever</td>
<td>$140.66</td>
<td>$148.31</td>
<td>$20</td>
<td>$27.65</td>
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<tr>
<td>Typhim</td>
<td>$92.76</td>
<td>$99.21</td>
<td>$20</td>
<td>$26.45</td>
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</tbody>
</table>

Used with permission, Jason M. Goldman MD FACP

### But...the Complexity Seems to Give Many Physicians Pause

- Direct costs of immunizing is but one step
- Implementing a workflow
- Complexity of rules for payment
- Difficulty imposing out-of-pocket cost on patients
- Perceived risk of loss
- Reducing complexity may increase physician immunization
Active Hypotheses/Conclusions

• Physician office-based immunizations can be successfully increased
• Complexity of reimbursement probably a significant barrier
• Reducing racial/ethnic disparities feasible; will be necessary to reach desired population rates
Thank you!

• Questions?
• Contact me if you are interested in joining the minority-serving provider network
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