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*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


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# 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.

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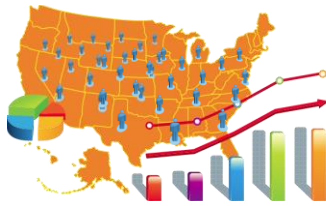
## SHC Products



**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

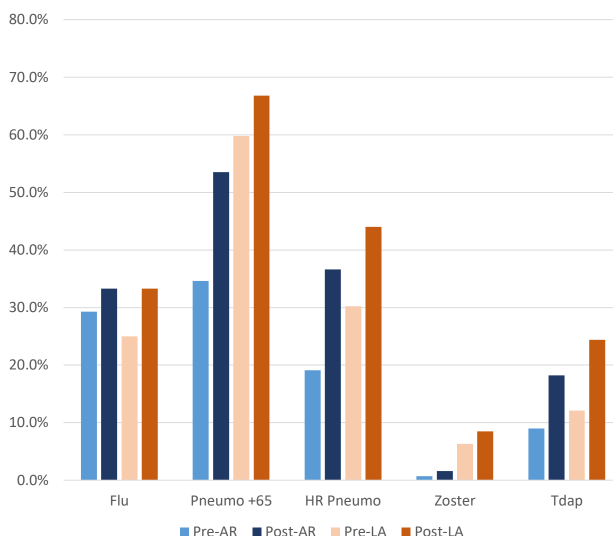
- Multiple Programs over five years
  - Small Close-the Gap program for MOC part IV
  - Practice Advisor Module
  - 3 CDC-funded cooperatives in a row
  - *I Raise the Rates* industry funded program
  - Steps Forward Modules
- Multi-support, including federal and pharmaceutical manufacturers

## 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

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## 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)

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## Topics of Interest to Participants

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

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## *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

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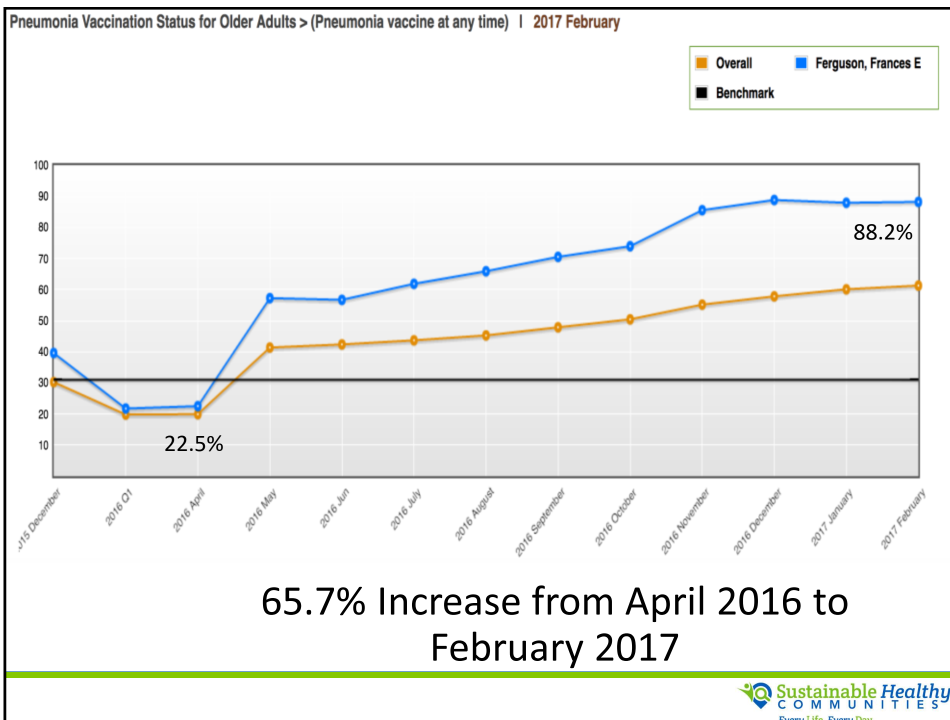
## Albany Area Primary Health Care

- 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




65.7% Increase from April 2016 to February 2017

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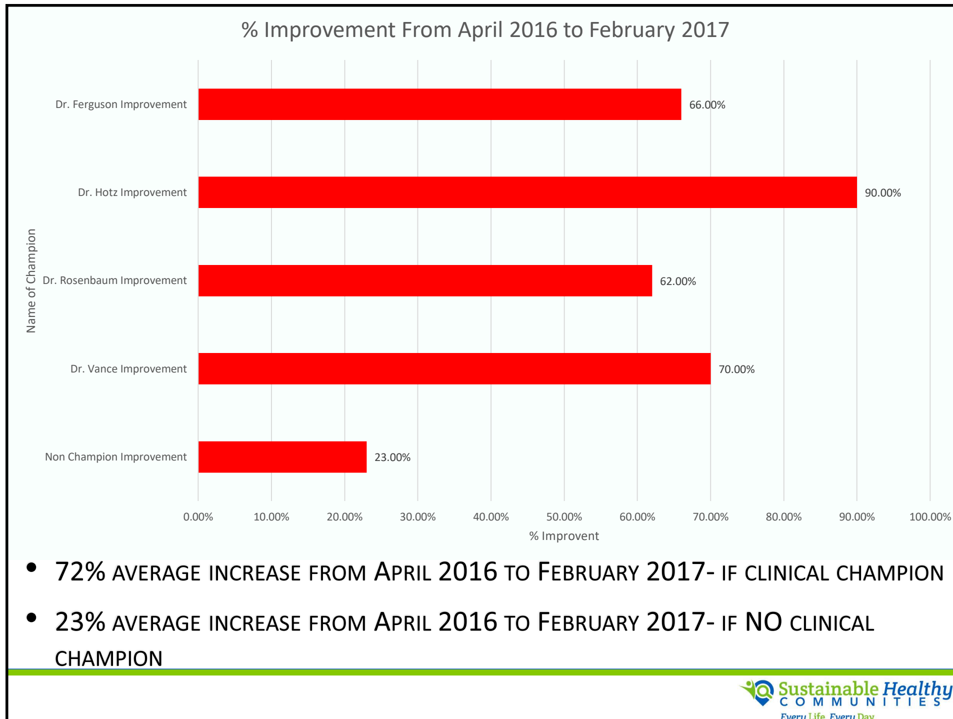
% Improvement From April 2016 to February 2017
Name of Champion
Dr. Ferguson Improvement
66.00%
Dr. Hotz Improvement
90.00%
Dr. Rosenbaum Improvement
62.00%
Dr. Vance Improvement
70.00%
Non Champion Improvement
23.00%
0.00%
10.00%
20.00%
30.00%
40.00%
50.00%
60.00%
70.00%
80.00%
90.00%
100.00%
% Improvent
• 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
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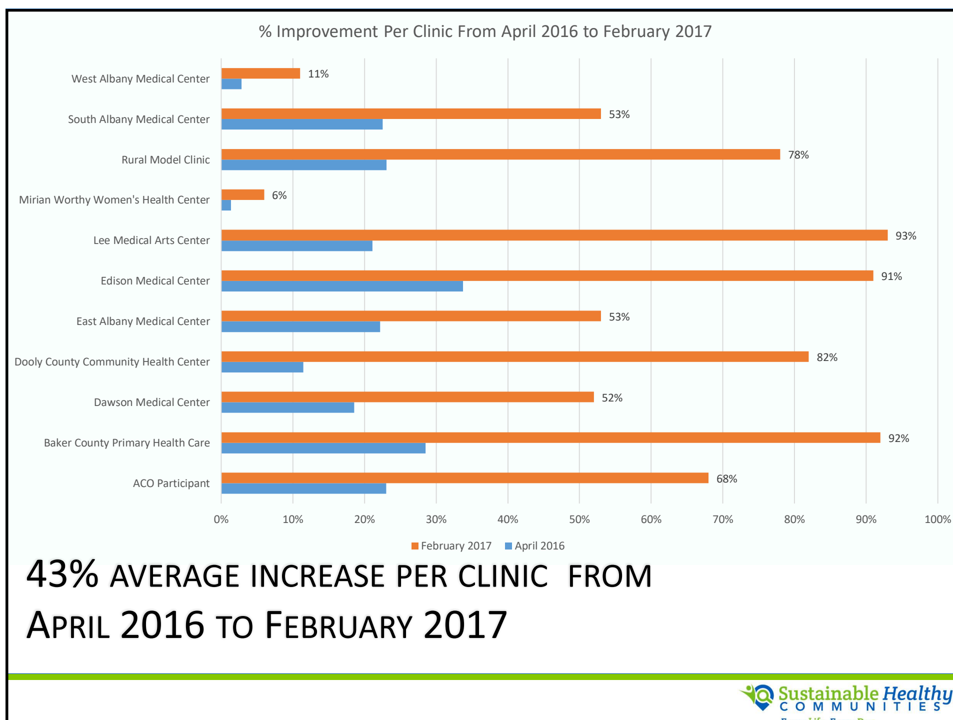
% Improvement Per Clinic From April 2016 to February 2017
West Albany Medical Center
11%
South Albany Medical Center
53%
Rural Model Clinic
78%
Mirian Worthy Women's Health Center
6%
Lee Medical Arts Center
93%
Edison Medical Center
91%
East Albany Medical Center
53%
Dooly County Community Health Center
82%
Dawson Medical Center
52%
Baker County Primary Health Care
92%
ACO Participant
68%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
February 2017
April 2016
43% AVERAGE INCREASE PER CLINIC FROM APRIL 2016 TO FEBRUARY 2017
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# 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.

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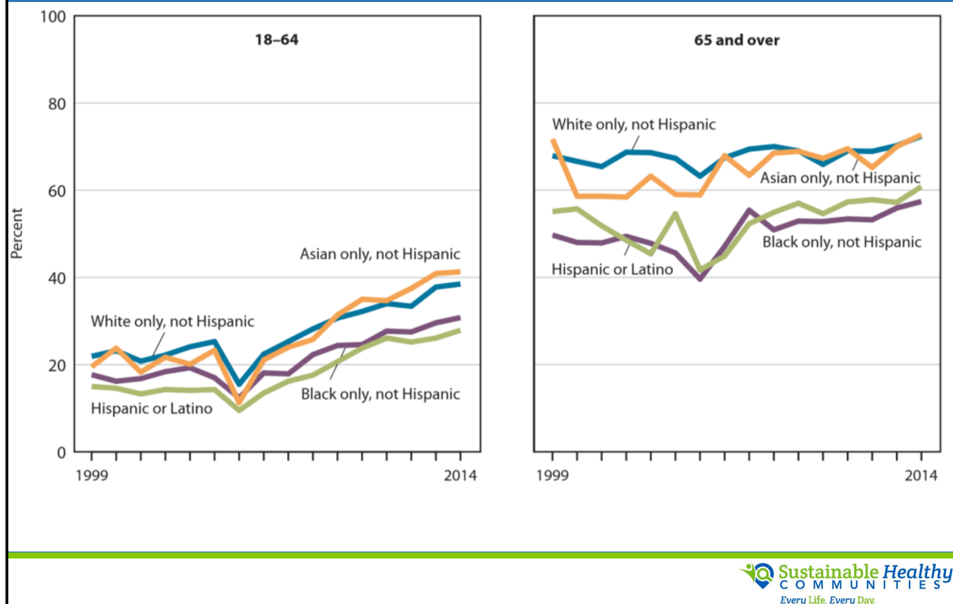
## Adult Influenza Immunization, NHIS

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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,1], Gary Puckrein [d], Bernard Rosof [e]

## Organizational Websites Included in Environmental Scan of Adult Immunization Disparities Resources

| | |
|---|---|
| AARP | Infectious Diseases Society of America |
| Adult Vaccine Access Coalition | Institute for Vaccine Safety |
| Advisory Committee on Immunization Practices | Merck & Co., Inc. |
| Agency for Health Research and Quality | National Adult & Influenza Immunization Summit* |
| AHRQ Innovations Exchange | National Black Nurses Association |
| American Academy of Family Practitioners | National Business Coalition on Health |
| American Association of Nurse Practitioners | National Business Group on Health |
| American College of Physicians | National Foundation for Infectious Diseases* |
| American College of Preventive Medicine | National Guideline Clearinghouse |
| American College of Obstetricians and Gynecologists* | National Hispanic Medical Association* |
| American Medical Association | National Medical Association/Cobb Institute* |
| American Nurses Association | National Minority Quality Forum* |
| American Society for Health-System Pharmacists | National Public Health Information Coalition* |
| AMGA Foundation | National Quality Measures Clearinghouse |
| Association of Immunization Managers | National Vaccine Program Office |
| Association of State and Territorial Health Officials | Office of Minority Health* |
| Blue Cross Blue Shield Association | PATH |
| Centers for Disease Control and Prevention* | Pfizer Inc. |
| Centers for Medicare & Medicaid Services* | Pharmacy Quality Alliance |
| Centers for Medicare & Medicaid Innovation | Sanofi |
| Consumer Reports/Consumers Union | Seqiris |
| CVS Pharmacy | South Carolina Department of Health and Environmental Control |
| Department of Health and Human Services* | Take a Stand! |
| Emory University Interfaith Health Program* | Target |
| Health Resources and Services Agency* | Vaccinate Your Family (Every Child by Two) |
| Glaxo Smith Kline | Walgreens |
| Immunization Action Coalition* | Wisconsin Health Literacy |
| Immunizations for Public Health | |
| | *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

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## 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

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## 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

| Immunization | National % |
| --- | --- |
| Influenza | 39% |
| Any pneumo | 29.8% |
| Zoster | 18.2% |

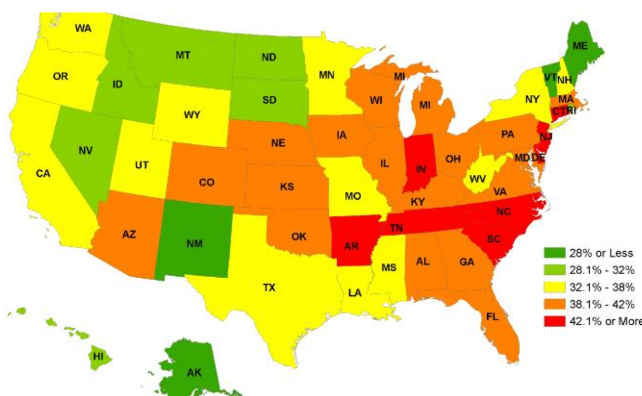
Total of 296,500 PCP for adult providers, including general internists, family practice, osteopaths, PAs, NPs; estimated for patients over 65 years of age with a visit in 2014

## Adult Influenza Immunization and Medicare, 2014

| Patient Group | National Average |
|---|---|
| All | 39% |
| White, nonhispanic | 41% |
| Black | 23% |
| Hispanic | 20% |
| Asian | 37% |
| Native American | 29% |

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

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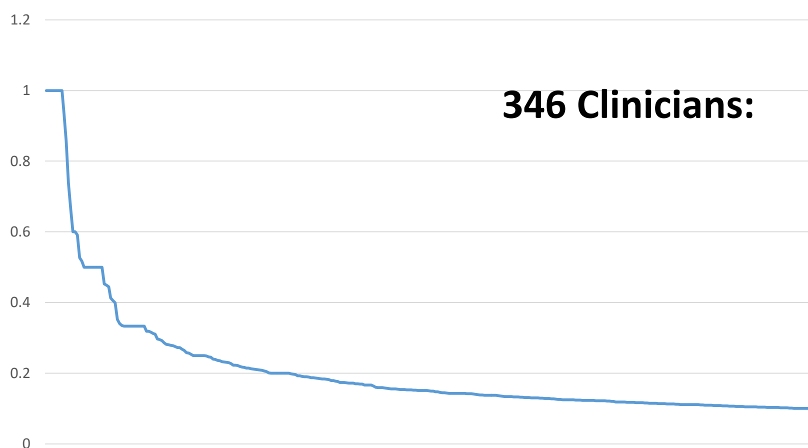
## ACP Minority-Serving "Super-Pneumo-Immunizers" – 15% with the Highest Rates of Immunization*

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## Real Physician Profit Profile

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

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

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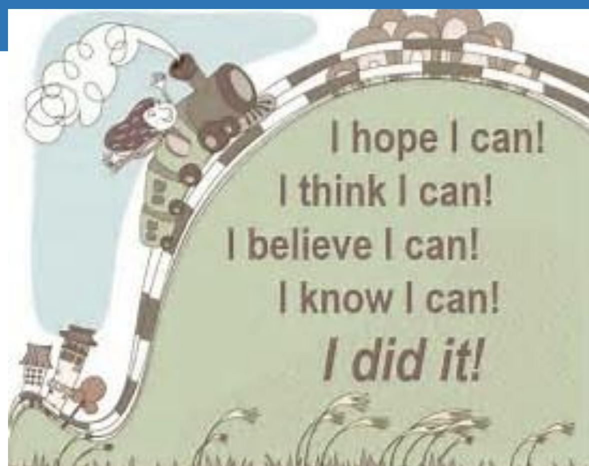


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## Thank you!

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

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