

## **The Importance of Promoting Influenza Immunization in Underserved Communities amidst Disparities and the COVID-19 Pandemic**

### ***Action Planning Group Discussion Summary***

#### Introduction

National Minority Quality Forum's (NMQF's) Center for Sustainable Health Care Quality and Equity (SHC) convened a broad range of stake-holders and experts in vaccine science, disparities, the social sciences, communications, and policy, along with clinical, community, and industry leaders to re-assess influenza immunization rates by race and ethnicity, in light of activities following the first such group meeting and current circumstances due to the COVID-19 pandemic (Appendix I).<sup>i</sup>

Many of the group first met in 2017 and pressed for pilot efforts to better understand flu vaccine disparities and to promote flu vaccination through evidence-based innovation. Research probing Medicare Fee-for-Service (FFS) flu vaccination reimbursement claims in the 2016-17 season revealed stark ethnic and racial disparities, largely unexplainable by patient demographic, economic, geographic, or clinical factors. Pilot quality improvement (QI) programs met early success with increases in flu vaccination rates in 3 health systems from December 2017 to March in 2018. Building on these pilots, further expansion of the QI program and training in the same systems continued to have a positive impact on flu vaccination rates, even as the COVID-19 pandemic began to stress the communities and practices. The current action planning group concluded that expansion of efforts is essential, with even broader engagement of practices and communities needed.

The implications for the 2020-21 flu season are more pressing in the shadow of the COVID-19 pandemic. Dr. Gregory Poland, international vaccine expert and advocate, documented for the group the shared risk factors for poor outcomes in flu and COVID-19 and the enhanced importance of widespread flu vaccination, so as to avoid increased patient vulnerability to respiratory illness, patient misdiagnosis, exposure to COVID-19 in emergency rooms, and health care system overload.<sup>ii,iii</sup>

This report summarizes the planning group's deliberations and recommendations to promote increased flu vaccination in communities of color. Trust and community engagement were prominent themes throughout the deliberations. With persisting and even worsening health disparities; mistrust in the health care system grounded in past experience; apparent growing vaccine safety concerns and myths; concerns about inclusion of people of color in COVID-19 vaccine development and equitable allocation; the disproportionate toll of the COVID-19 pandemic on people of color; the need for safe strategies for providing the flu vaccine; economic vulnerability; fear of deportation, and eruption of protests in the face of social injustices (e.g., deadly police incidents)– flu vaccine promotion in 2020-21 faces unique and significant barriers, when it is more important than ever before to receive a flu vaccine. Only with great trust and engagement of communities of color will significant protection from the flu through vaccination likely be achieved, and, hopefully set the stage for ongoing community-based health promotion in the weeks, months, and years ahead.

## Disparities in Flu Vaccination: A Research Portrait

The flu vaccine equity program dubbed DRIVE – Demonstrating Rising Influenza Vaccine Equity - included several research projects aimed at better understanding race- and ethnicity-based disparities and factors that can lead to improvements.

The epidemiologic analyses painted a dire picture. Even in publicly funded programs for populations at higher risk of poor flu outcomes, people of color far less often receive a flu vaccine, a finding magnified when evaluating high dose, one of the vaccines shown to be more protective among for older adults.<sup>iv</sup> These studies note that:

- Blacks and Hispanics in Medicare Fee-for-Service (FFS) have fewer flu vaccine claims (figure 1),
- Among the population vaccinated, all people of color were significantly less likely to receive the high dose influenza vaccine,
- Patient factors such as age, gender, geographic region, diagnosed illnesses, service utilization, or economic status largely could not explain these flu vaccine disparities,
- Flu vaccination rates varied geographically, even at the ZIP code level.

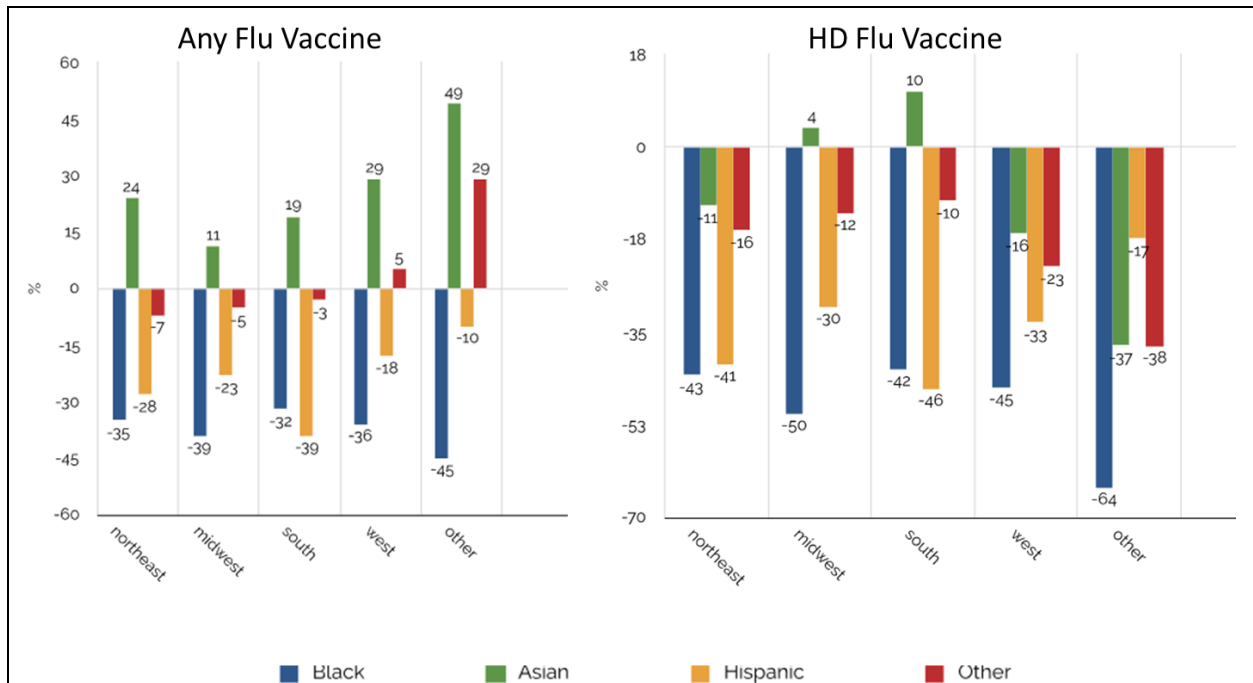


Figure 1 – Percent Difference Uptake of Flu Vaccination in Medicare FFS, 2016-17 by Beneficiaries of Color. When adjusted for demographic and clinical factors, blacks and Hispanics were 30% and 34% less likely to get any flu vaccine compared to whites, respectively, in the Medicare program.

Nursing home residents also suffer disparities in flu vaccination, a trend that has only worsened in the 2000s. This vaccine gap is larger in some states and seems to reflect the segregated nature of nursing home care (figure 2).<sup>v</sup>

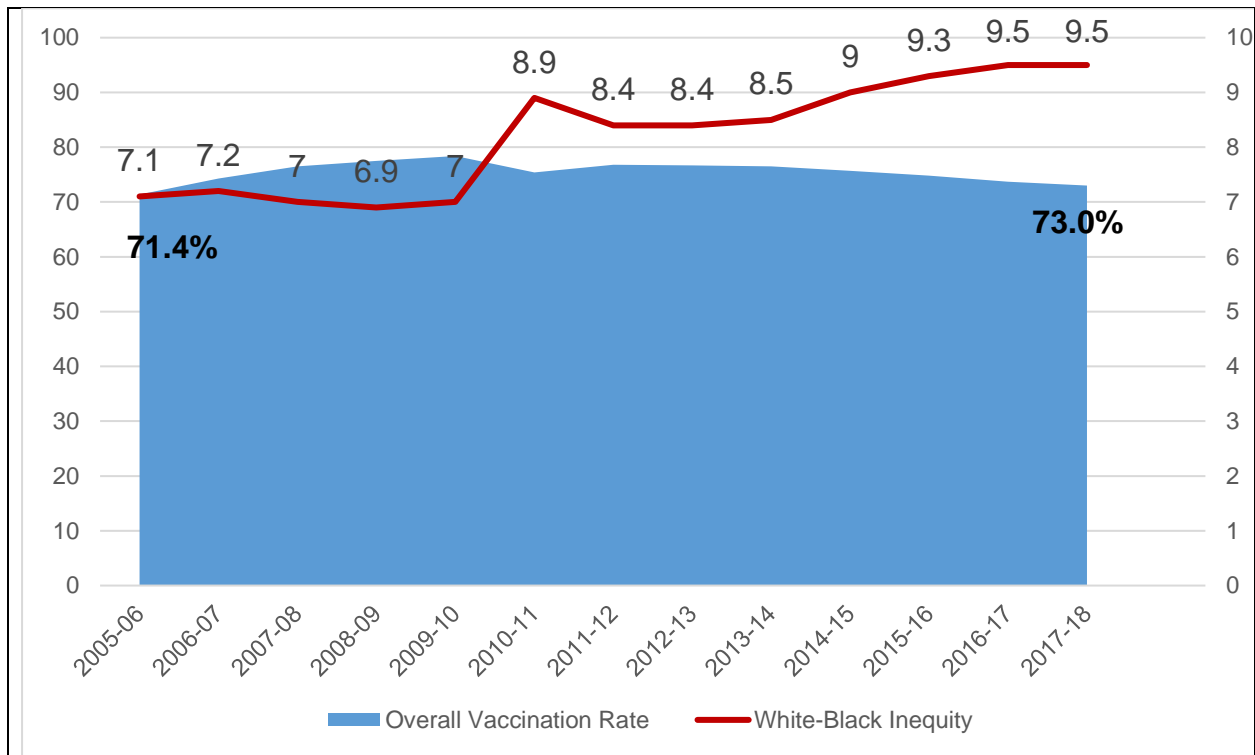


Figure 2 – Overall Vaccination Rates and White-Black Inequity in Nursing Homes. While overall flu vaccine rates remained the same, white-black inequity grew from 7% to 9.5% from 2005 to 2018 and is largely attributable to difference between black-majority vs white-majority nursing homes in specific states, especially upper Midwest and Mid-Atlantic region.

Flu vaccine and vaccination disparities render people of color more susceptible to the greater risks of illness, hospitalization, functional loss, and even death, outcomes exacerbated by chronic illnesses like diabetes and cardiovascular disease, which are increased in black, Hispanic, and native American populations. The disproportionate impact of COVID-19 on black, Hispanic and native American communities, along with common risk factors for flu and COVID-19, point to a flu season in which people of color may be overwhelmed with respiratory illness even as their health care providers may be swamped.<sup>vi,vii</sup> These risks are built on race- and ethnic-based flu vaccination disparities. *Flu vaccine and vaccination equity has never been more important.*

### Health Systems and Providers: A Need for Expansion

The first advisory group, in 2017, called for the testing of evidence-based strategies for increasing flu vaccination, beginning with pilot projects and then expanding. DRIVE – Demonstrating Rising Influenza Vaccine Equity (DRIVE) – was built on such an evidence-based approach to increase immunization rates, including engagement of system leadership; system-based changes (e.g., standing orders and reminder-recall programs); increased community and patient outreach; team-based approaches to immunization; and data feedback reports and QI, as reflected in the Community Preventive Services Task Force (CPSTF) Community Guide and Standards for Adult Immunization Practice.<sup>viii,ix</sup>

Implementation commenced in the waning months of the 2017-18 flu season and resumed in 2018-19 in three health system settings: a large Southern health system; an internal medicine resident practice in an urban setting in the mid-Atlantic; and a federally qualified health center (FQHC) in New York City. The program locations were selected based on racial disparities in vaccination as well as serving as prototypes for future expansion of research efforts. These three systems implemented late season QI programs aimed at better understanding their patients’ perspective, understanding and improving their documentation of flu vaccination, and training members of the team, especially at the medical assistant and nurse level, to make an assertive flu vaccine recommendation. Each location expanded the reach of the initiative in the second year (table 1), starting at the beginning of flu season and engaging more clinicians. While each achieved increased vaccination rates, COVID-19 erupted before the end of the 2019 flu season, creating challenges for the practices and communities, beginning in New York, which suffered the earliest and hardest hits from COVID-19.

**Table 1 – DRIVE Year 1 and 2 Reach and Rates**

	<b>MidAtlantic Urban Resident Clinic</b>	<b>Southern Health System</b>	<b>New York City FQHC</b>
	7 direct providers (including 3 physicians, 1 MA, 2 RNs, and 1 PM – one clinical treatment pod)	2 clinics - 7 providers (including 2 physicians, 1 NP, 2 RNs, and 2 MAs), 2 PMs	7 providers (including 1 physician, 1 PA, 2 RNs, 2 MA, and 1 patient navigator)
<b>% Increase (additional vaccines)</b>	9% increase in flu vaccination from December to March 2019 (592 additional vaccines)	22.4% increase from October to January (2,408 additional vaccines)	31% increase in general population; 24% increase among patients with diabetes (290 additional vaccines)
<b>Year 2 Participants</b>	Clinicians – 71 (60 Residents, 9 Attending physicians, 2 Nurse practitioners, Nurses – 2, Medical assistants – 12; all 4 clinical treatment pods)	30 clinics, including 72 clinicians (28 physicians, 2 NPs, 30 MAs/RNs, 12 PMs)	29 providers (including 4 physicians, 3 PAs, 8 RNs, 12 MAs, 2 patient navigators)
<b>% Increase (additional vaccines)</b>	18.5% increase over previous year by the end of February 2020 (2,370 additional vaccines)	19.0% increase over previous year (21,481 additional vaccines)	6 percent increase over previous year (1,665 additional vaccines)

Another program that was implemented involved Walmart pharmacies nationwide during the 2019/20 flu season. This large- scale study provided all pharmacists and pharmacy technicians access to an online, interactive training program focused on how to make a strong recommendation vaccination recommendation. In a randomized set of pharmacies, a peer comparison “nudge” was provided as well, including weekly software-delivered communications ranking the pharmacy’s flu vaccination performance relative to comparable, neighboring pharmacies. This simple nudge realized a statistically significant increase in flu vaccination by 4 percent across nearly 2,000 pharmacies, representing approximately 40,000 additional flu doses delivered across the national pharmacy network.<sup>x</sup>

The above efforts revealed the importance of leadership at the system and practice level. Many participants also shared their deep commitment to their patients and community, and how they have worked to build that trust. That was perhaps nowhere more evident than at the FQHC in New York, which was founded to bring primary care to the largely Hispanic/Latino community. With COVID-19 taking an enormous toll on not only their patients but their staff, ongoing care delivery including flu vaccine promotion was evidenced. At the large health system, senior leadership commitment, combined with support for and communication with practice staff, led to some of the biggest increases in the program across 30 practices in year two, reaching a final average of 87 percent flu vaccination rates for the season.

It is no secret that COVID-19 is challenging providers and health care systems, perhaps as never before. A survey of SHC QI network participants revealed significant concern about being able to stay in practice, staff reductions, and reductions in vaccinations, cancer screenings, and chronic disease monitoring such as for diabetes and cardiovascular disease.<sup>xi</sup> Beyond a shift to telemedicine, this group of clinicians, often in underserved communities, called for help in educating their patients about the COVID-19 pandemic and implementing strategies that will keep them and their patients safe. The discussion by the action planning group echoed and built upon these views, noting that achieving increased flu vaccine protection in communities of color will require an “all-hands-on-deck” approach, with diversification and expansion of providers and strategies for immunizing (figure 3).

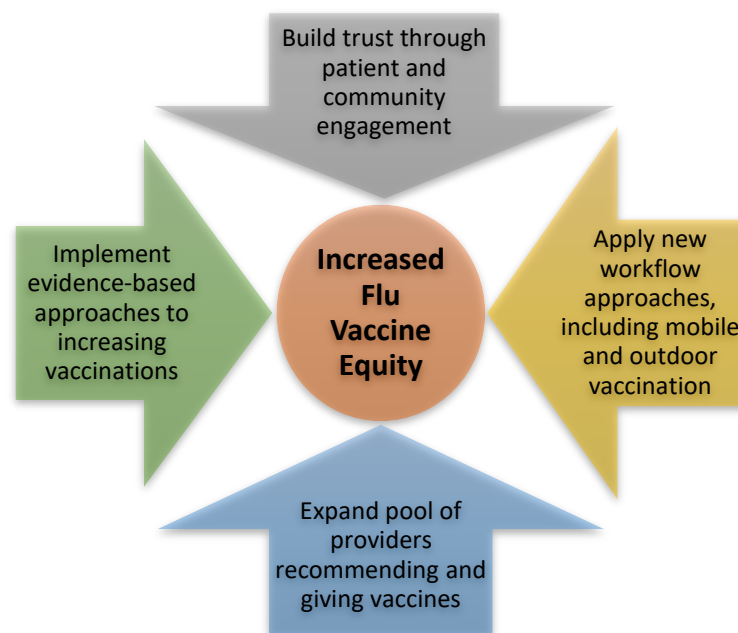


Figure 3 - Strategies for Health Care Providers to Increase Flu Vaccine Equity

In terms of providers, the group called for expansion beyond traditional primary care providers in recommending and providing flu vaccines. Pharmacists, community health workers, home health care providers were recommended as vaccine providers, easing access when the pandemic may continue restrictions on movement. In addition, providing flu vaccination in different ways and places

could be very helpful, including drive through service stations, in conjunction with COVID-19 tests, in pop-up tents on clinic grounds or elsewhere in the community such as schools, community centers, dental and podiatric offices, churches or other locations where people live and/or may normally frequent. One evidence-based platform for primary care practices is the 4-practice transformation program ([www.4pillarstoolkit.pitt.edu](http://www.4pillarstoolkit.pitt.edu)" [www.4pillarstoolkit.pitt.edu](http://www.4pillarstoolkit.pitt.edu)).

Trust and effective patient communication were emphasized in the discussion about health care provision. Understanding and acting upon the needs and priorities of patients – such as protecting their family members or enabling them to continue to work or do the things they value – and providing information that is at the appropriate level of health literacy and culturally relevant was considered extremely important and noted as generally lacking. The importance of the health care provider as a trusted resource was emphasized as well.

Subspecialists such as cardiologists and endocrinologists, whose patients are especially at risk of untoward flu outcomes and COVID-19, were identified as key influencers and advocates for their patients. The group called on these clinicians to make a strong recommendation, even providing a “prescription” for getting the flu shot with directions to accessible locations for doing so. There is also an important role for non-medical providers, but trusted members of the community. Enabling a dialogue through these venues can help ensure appropriate conversations and be deemed a safe place for expressing concerns while hearing about why vaccines are so important.

### Communication as a Key

Communication was considered central to effectively promoting flu vaccine in communities of color, building on evidence-based strategies and on trusted relationships and voices.<sup>xii</sup> Whether at the patient level or involving the community at large, messages should take into account patient and community concerns and motivators which are discerned through shared decision-making approaches, patient surveys or focus groups, or human centered-design strategies with community members.<sup>xiii,xiv,xv</sup> The messenger must be a trusted voice; the message and its framing; and the media, be it person to person, social media, print or e-based materials, radio, or television and video all are important considerations in communicating effectively with patients and community members.

Behavioral economics, which integrate insights from psychology and the neurosciences, can effectively inform communication messages and strategies as well, by understanding and utilizing research underlying how human decision-making is typically done based on mental shortcuts and framing of issues according to the way in which people understand and respond to events. The study of brief peer comparison messages or nudges to pharmacists, described above, provides an example of the application of behavioral economics to provider immunizing behaviors. Training in making a strong and assertive recommendation to patients, assuming it will occur and announcing it as such, similarly employs behavioral principles to help guide patient decision-making.

There is no shortage of confusion about influenza; how serious a disease it can be, the flu vaccine itself as a vector of the flu or having limited effectiveness; and COVID-19 – in terms of susceptibility, prevention and vaccine development and safety. Our survey of primary care providers revealed the

need for tools to clearly communicate about COVID-19 risk and prevention and its relationship to influenza. Another example was provided by the FQHC in New York, in which patient communication tools were developed to accurately and accessibly describe the importance of the flu vaccine. This same practice built their QI strategy on survey and focus groups of patients around their flu vaccine concerns.

Human-centered design builds on participatory research or involvement in developing local strategies for enhancing flu vaccination.<sup>xvi</sup> Given the current environment of fear and mistrust in many communities of color, engaging trusted leaders and stake-holders to understand local perspectives and concerns, and collaboratively developing an effective strategy for promoting flu vaccination is essential for community engagement not only for flu vaccination, but for building trusted relationships for health and social care.<sup>xvii</sup>

Trust was a word repeated throughout the action panel’s deliberations. Who do members of the community trust? Religious leaders, barbers, and hair-dressers are often recommended in black communities. But others may fall into this category as well, including local businesses, educational institutions, not-for-profit organizations, social clubs such as fraternities and sororities, veterans’ groups, beloved sports figures, and media organizations. Human-centered design helps identify the trusted leaders in a given community. Health care providers, from the primary care practices to community health workers and non-traditional care providers also are often trusted resources.

In addition to trust, scientific and health leaders are advised to adopt a humble posture, being transparent about the knowns (e.g. rates of side effects) as well as the unknowns, engaging the local community in the pursuit of solutions, from early engagement in clinical trials to strategies for promoting flu vaccine. Well-known distrust of research and health care among blacks and other communities of color is a real phenomenon, founded on real experience. But so too is the desire to promote the health of family members and others in the community.<sup>xviii</sup> Only a real partnership in the community can lead to a viable plan that is sustainable.

Sustainability was another topic raised concerning community engagement. A one-time, short-lived activity to promote flu vaccination may lead to skepticism among community leaders. Ideally, ongoing engagement could translate into more lasting health dialogues, including through the evolution of the COVID-19 pandemic and beyond.

Building trust requires building of relationships. Resources beyond a one-time campaign ultimately are required, with the possibility of providing at least some local jobs during these economically trying times and places.

**Primary care teams, specialists, pharmacists, other health care providers, community leaders, and patient advocates can close the gap**

- Train your health care team to make a strong recommendation
- Increase flu shot access in your community, including more care providers and locations
- Engage your community to build trust and awareness about the importance of flu vaccines



National organizations, including those that are not specific to health issues, can play a role, equipping their members in local communities with resources to engage at-risk populations and

promote and provide vaccines. In addition, professional societies representing clinicians of color can play a critical role in advancing flu vaccine protection in populations that they serve.

### Policy Change & Advocacy

Policy change was also discussed as a necessity to improve flu vaccination in communities of color. Advocacy efforts focusing on equity will help enable evidence-based practices and QI activities that will result in fewer flu vaccine coverage gaps and disparities.

Recommended policy efforts include the need for expanded access to health insurance coverage, strengthening immunization infrastructure, specifically immunization information system capabilities; and improved quality measurement tools to track immunization progress addressing flu vaccine gap areas across communities. This also includes engaging providers to ensure that they recognize the importance of reporting and how data are used to affect change.

Vaccines and vaccination should be equally accessible across communities of color. Policy solutions are needed to address insurance coverage and associated financial and/or awareness barriers that prevent flu vaccination. In doing so, there is a need to address real or perceived challenges/disincentives/barriers around adequate reimbursement and support the incorporation of workflow strategies, such as the National Vaccine Advisory Committee (NVAC) Standards for Adult Immunization Practice, to assess, recommend, administer or refer and document the vaccines the patient may (or may not) have received during the encounter with the healthcare provider, whether that be in a medical office, pharmacy or other setting.

Barriers to access through public programs, such as variations in immunization coverage under state Medicaid programs, impede provider efforts to improve rates among at-risk populations who are low-income. Beneficiary cost sharing and low provider reimbursement in Medicaid can hinder patient access to flu vaccines. At the state level, assuring consistent pharmacy and Medicaid coverage of flu vaccination and community and public health worker education and outreach efforts are potential policy changes that will improve vaccination rates. State and local health departments also need adequate funding to ensure messages are targeted appropriately to its most vulnerable citizens rather than generic messaging that may not speak to the needs and motivations of communities of color.

At the same time, adequate provider reimbursement for vaccine administration will help bring greater consistency in access, encourage the availability of flu and other recommended vaccines, and reduce the financial burden on providers who wish to offer these services to patients. Policy changes may also be necessary to allow for the provision of flu vaccination in new and different ways and places, including in drive-through, home and alternative settings.

Policy changes that support and strengthen our nation's immunization infrastructure have the potential to improve flu vaccine coverage rates in real time at a population level, inform community and patient outreach, and provide the data essential to QI activities. Widespread implementation and utilization of immunization information systems would help support federal, state and local activities to improve flu vaccination among communities of color in several important ways. Immunization data at the local level can help support community and public health workers to promote flu



vaccination and conduct contact tracing and other needed efforts to protect communities from COVID-19.

Data from immunization information systems can help inform flu quality measurement tools that will be key to quality improvement, vaccine adherence and consistent access. Stratification of data by race, ethnicity, geographic area, sex, disability, and residence (e.g., nursing homes) will help further inform federal and state efforts around flu vaccine health equity – reporting standards should also be improved to ensure that data are comparable.

Communications to effectively promote flu vaccine in communities of color must include federal funding to support the development of sustainable communication tools and community adoption and engagement. Policy change and advocacy around communication and engagement should be strategic, focused on geographic and residences in need, and emphasize being evidence-based, culturally appropriate and reflect the health literacy, language proficiency, and functional and access needs of communities of color.

### In Conclusion

The importance of equity in flu vaccination has only increased in the era of the COVID-19 pandemic. Despite a strong evidence-base for action and pilot efforts that produced positive change and actionable knowledge, communities of color face ongoing and even increasing disparities in flu vaccination, even as they face significantly greater morbidity and mortality at the hands of the COVID-19 epidemic. Increasing flu vaccination has never been more important to communities of color; doing so in partnership with trusted community leaders will be key.

In order to achieve our goal of expanding effective efforts and developing new knowledge to further improve flu vaccination equity, we have pledged to move forward by:

- Developing provider educational and QI tools and supporting their expanded use in health systems serving communities of color;
- Developing patient-facing and community engagement resources for use in racially and ethnically diverse communities, directly supporting efforts in several communities;
- Providing funding or incentives to ensure that community engagement exercises are implemented and measured to ensure that disparities are reduced;
- Engaging health system leaders in a discussion about their important role in prioritizing flu vaccination throughout their system and promoting a large-scale research program that tests the QI elements that significantly increase flu vaccination;
- Further study of factors that contribute to and can increase flu vaccination, especially at the provider and community level;
- Identifying and supporting policy needs, educating leaders from diverse communities on the issues and solutions.

All of the above efforts are informed by and utilize the science of innovation, building on and expanding the successful pilot programs over the last 18 months, but ultimately this effort seeks to



effect a network of underserved communities and communities of color and their

health care providers to sustainably promoting health and health equity, starting with flu vaccination. Educational, practice, communication, and community tools are available in an online Implementation Toolkit – DRIVE - that will be free to any provider or community leader across the nation, along with telephonic support and peer-to-peer communication ([shcdrive.org](http://shcdrive.org)).

Appendix I:

**Action Planning Group Members**

**Chair** – Gregory Poland, MD, MACP, FIDSA, FRCP  
Professor of Internal Medicine and Infectious Diseases, Mayo Clinic  
Director, Mayo Vaccine Research Group  
Distinguished Investigator of the Mayo Clinic

Pamela Allweiss, MD, MSPH  
Former Medical Officer  
Centers for Disease Control and Prevention  
Division of Diabetes Translation  
Practicing Endocrinologist

Helen Arteaga, MPH  
Assistant Vice President, Queens Network & Executive Initiatives  
Urban Health Plan  
Co-founder and Director, Plaza del Sol Family Health Center

Courtney Baldrige  
Corporate Relations & Business Development  
National Association of Area Agencies on Aging (n4a)

Abby Bownas, MA  
Senior Advisor  
Adult Vaccine Coalition

Emily K. Brunson, MPH, PhD  
Associate Chair  
Department of Anthropology, Texas State University

Tamera Coyne-Beasley, MD, MPH, FAAP, FSAHM  
Professor, Pediatrics and Internal Medicine with Tenure  
Derrol Dawkins, MD Endowed Chair in Adolescent Medicine  
Division Director, Adolescent Medicine  
Vice-Chair, Pediatrics for Community Engagement  
University of Alabama at Birmingham

Jaime A. Davidson, MD  
Clinical Professor of Medicine  
Touchstone Diabetes Center, University of Texas Southwestern Medical Center

Keith C. Ferdinand, MD, FACC, FAHA, FASPC, FNLA  
Gerald S. Berenson Endowed Chair in Preventive Cardiology  
Professor of Medicine,  
Tulane University School of Medicine  
Healthy Heart Community Prevention Program

Marilyn Fraser, MD  
Chief Executive Officer  
Arthur Ashe Institute for Urban Health  
Co-Director, Brooklyn Health Disparities Center  
Associate Research Professor, Department of Medicine & School of Public Health, SUNY Downstate

Shirley Girouard, PhD, RN, FAAN  
Co-Director, GWEP Project  
Professor, College of Nursing  
SUNY Downstate Health Sciences University

Jorge Gomez  
Assistant Director  
Plaza Del Sol Clinic, Urban Health Plan

Jean-Venable "Kelly" R. Goode, Pharm.D., BCPS, FAPhA, FCCP  
Professor and Director, PGY1 Community-Based Pharmacy Residency Program  
Virginia Commonwealth University

Claire Hannan, MPH  
Executive Director  
Association of Immunization Managers (AIM)

Robert H. Hopkins, Jr., MD, MACP, FAAP  
Professor of Internal Medicine and Pediatrics  
Director, Division of General Internal Medicine, UAMS College of Medicine  
Chair, National Vaccine Advisory Committee, US Department of Health and Human Services

Terris King, Sc.D.  
CEO  
King Enterprise Group, LLC

Matt Loiacono, MSc  
Vaccine Epidemiology and Modeling (VEM) Lead, North America  
Sanofi Pasteur

Salah Mahmud, MD, PhD, FRCPC  
Canada Research Chair in Pharmacoepidemiology & Vaccine Evaluation and Fellow of the Royal Society of Canada  
Professor of Community Health Sciences and Pharmacy, University of Manitoba  
Director, University of Manitoba Vaccine and Drug Evaluation Centre  
Clinician Researcher, Population & Public Health, Manitoba Health

Serese Marotta  
Chief Operating Officer  
Families Fighting Flu

Julie M. Miller, PhD, MSPH  
Senior Behavioral Researcher  
Duke University

John O'Neill, Jr, D.O., MACP  
Internal Medicine Physician  
Christiana Health

John Parrish-Sprowl, PhD  
Director, Global Health Communication Center  
Professor, Communication Studies  
Adjunct Professor, Women's Studies  
Faculty member, Russian & Eastern European Institute  
Faculty member, University College  
Communication Studies, Indiana University Purdue University Indianapolis

Caroline Poland, LMHC, LCAC  
Founder and President  
Poland and Associates Consulting

Lois Privor-Dumm, MBA  
Director, Policy, Advocacy & Communications, International Vaccine Access Center (IVAC)  
Faculty, Department of International Health, Johns Hopkins Bloomberg School of Public Health

Sandra Crouse Quinn, PhD  
Professor and Chair, Department of Family Science  
Senior Associate Director, Maryland Center for Health Equity  
School of Public Health, University of Maryland

Candice Simmons, PharmD  
Senior Manager, Quality Assurance  
Walmart

Saria Carter Saccocio, MD, FAAFP, MHA  
Ambulatory Chief Medical Officer, Department Chair of Family Medicine  
Prisma Health

Litjen (L.J) Tan, MS, PhD  
Chief Strategy Officer  
Immunization Action Coalition

Stephen Thomas, PhD  
Professor, Health Services Administration  
Director, Maryland Center of Health Equity  
University of Maryland, School of Public Health

Peter Vigliarolo  
Vice President  
Padilla

Yinong Young-Xu  
Director  
Clinical Epidemiology Program  
VA Medical Center, White River Junction

Richard Zimmerman, MD, MPH, MA, MS  
Professor  
University of Pittsburgh  
Clinician, East Liberty Family Health Care Center, Pittsburgh

Andrew Zullo, PharmD, PhD  
Assistant Professor, Health Services, Policy, and Practice  
Brown University School of Public Health

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