Ensuring Healthy Populations through a New Era of Global Immunization

Rapporteur’s Report

Nellie Bristol

With new leadership for immunizations at the World Health Organization (WHO), revised global strategies spearheaded by the WHO, UNICEF, and Gavi, the Vaccine Alliance, and a focus on vaccination as a cornerstone of universal health coverage and global health security, the world is entering a new era of global immunization. While there have been remarkable achievements in improving coverage in many parts of the world, global immunization rates have stagnated for the last decade. Innovative approaches are needed to address both long-standing and emerging challenges to ensuring universal access to life-saving vaccines. Weak health systems, lack of resources and leadership, increases in transient populations, and distrust sown by anti-vaccination elements are all obstacles that hinder progress. As immunization remains one of the most effective and cost-efficient global health interventions, leaders from the community to the global level are set to redouble their efforts to ensure vaccines reach all children everywhere.

On September 27, 2019, the Global Health Policy Center at the Center for Strategic and International Studies (CSIS) convened a day-long conference to discuss the way forward. In his introductory remarks, CSIS Senior Vice President and Global Health Policy Center Director J. Stephen Morrison provided an overview of the day. He asked whether this decade is truly a turning point and what it will take to push coverage rates higher. Morrison noted that Gavi, which provides immunizations to the world’s poorest countries, is heading into its next replenishment in 2020 and said sustained high-level leadership and funding are fundamental to success in immunization. He also noted that equitable access to vaccines is critical to achieving universal health coverage, a major priority of the UN General Assembly and the WHO. In looking at vaccine-related issues, Morrison noted that a decline in trust and a “weaponization” of social media to
promote anti-vaccine messages poses a major challenge for health professionals. Many of these themes have been addressed by the CSIS Commission on Strengthening America’s Health Security, which released its report and recommendations, Ending the Cycle of Crisis and Complacency in U.S. Global Health Security, in November 2019.

**Opening Plenary: The New Era of Global Immunization**

The day’s first session, moderated by CSIS senior associate Nellie Bristol, featured two of the principal leaders in global immunization: Kate O’Brien, recently appointed director of Immunization, Vaccines, and Biologicals at the WHO, and Seth Berkley, chief executive officer of Gavi. Each described new organizational strategies for addressing the immunization needs of the next decade.

O’Brien noted that while 9 out of 10 children are reached with immunizations, that leaves 20 million who are not. She said unimmunized populations are concentrated in a small number of countries that have weak health systems or are affected by conflict. This inequity is likely to become exacerbated as the world faces climate change-induced disruptions over the next 10 to 20 years. In addition, urban slum areas, where service delivery is already difficult, are expected to grow from a population of about 1.4 billion people to 2 billion people by 2030.

These future scenarios are being considered as the WHO leads a collaborative effort to devise Immunization Agenda 2030 (IA2030). The plan is intended to serve as an overarching strategy encompassing existing regional and country plans, disease specific goals, and partner approaches. IA2030 complements Gavi's new five-year strategy for 2021-2025, known as Gavi 5.0, but covers a wider range of issues. O’Brien noted that Gavi 5.0 focuses on providing vaccines to the set of low-income countries eligible for Gavi funding and emphasizes market shaping, vaccine delivery, and demand creation. By contrast, in articulating a new worldwide vision that aligns with existing strategies, IA2030 encompasses all countries and all vaccines, as well as all immunization interventions, for the upcoming decade.

IA2030 is the successor to the Global Vaccine Action Plan (GVAP), developed in 2011. O’Brien said IA2030 improves on its predecessor by drawing on the perspectives of immunization partners at all levels and tailoring implementation to country contexts. Further, she said, it is more adaptable to changing needs and targeted to address inequities. The plan has a focus on health systems and targets the provision of immunizations throughout the life course. Lastly, the strategy focuses on building partnerships beyond the health sector, accelerating innovation, and making better use of existing resources.

IA2030 will be launched in a multi-step process, starting with the anticipated May 2020 approval of the document by the World Health Assembly. A monitoring and evaluation framework with finalized goals, targets, and indicators will be released in 2021. Operational plans will be developed in 2021-2022, while implementation will begin in 2021 and last through 2030.

Seth Berkley noted in his comments that analyses developed for IA2030 and Gavi 5.0 have fed into each other. He described the successes of Gavi, which has brought new and powerful vaccines to places where they have not previously been introduced, largely as a result of market failures. Berkley noted that soon after Gavi’s launch in 2000, vaccine coverage levels in Gavi-eligible countries, currently those in which the annual gross national income (GNI) per capita is less than $1,580, began to rise dramatically.

While Gavi 5.0 will continue to support eligible countries in introducing new vaccines, Berkley said it also will emphasize efforts to help countries sustain their own immunization programs. He noted that many countries that have developed economically and transitioned from Gavi support have nevertheless re-
quired continued assistance to sustain effective vaccine delivery. Gavi took this information as an indication that it needed to pay greater attention to programmatic transition, according to Berkley. The Gavi Board has opted to put sustained focus on programmatic transition and perhaps extend support to countries not currently eligible for Gavi assistance, such as middle-income countries with large populations of un- or under-immunized children. While the Gavi secretariat develops plans to meet that goal, it will be exploring the possibility of providing technical assistance to some of these higher-income countries during the next strategic period and has put money aside to support this analysis.

Another Gavi priority has been lowering vaccine prices, so it is also pursuing development of a healthy marketplace with multiple suppliers that can help cushion the market against supply shocks, Berkley said. Gavi also looks for ways to support innovations in the development of new vaccines and in vaccine delivery, for example, in cold chain and immunization techniques.

Berkley emphasized that the biggest change in Gavi 5.0 relates to its focus on equity. Vaccine coverage globally has flattened out. Data show that the poorest countries are reaching evermore children with vaccines, but high fertility rates and continued population growth leave a growing gap in vaccine coverage. Gavi 5.0 will emphasize identifying pockets of low coverage, where populations are likely to lack access to other health services as well. In this way, improved vaccine systems will support the primary care services needed to achieve universal health coverage.

The renewed focus on equity requires Gavi to work differently, Berkley said. Immunization rates have been calculated on a national basis, which masks extreme variations in coverage at the local level. Gavi will be focusing on developing real-time data and other tools to ensure vaccines are reaching children in urban slums, those displaced by climate change, and isolated rural communities. In creating demand for vaccine services, Gavi will explore increasing involvement of women decisionmakers and in enhancing political will.

In recent successes, Berkley cited programs in Liberia and Pakistan which improved program reach through mobile phones. Additionally, Pakistan introduced management improvements that resulted in a 17 percent increase in coverage. He also called for the polio eradication initiative to collaborate better with routine immunization services.

**Panel 1: A Renewed Focus on Vaccine Equity**

The second conference session focused on vaccine equity. Moderator Amanda Glassman, executive vice president and senior fellow at the Center for Global Development, noted that while countries and international organizations have improved their ability to provide vaccines to people in a range of isolated locales, overall vaccination rates still remain low. She noted that in Ethiopia, for example, vaccination rates reach 90 percent in Addis Ababa but can be lower than 16 percent in more rural districts.

Edna Yolani Batres, presidential advisor of health and former minister of health for Honduras, talked about the Salud Mesoamérica Initiative, a public-private partnership aimed at reducing health equity gaps in Mexico and Central America. The initiative provides cash incentives to local governments to provide a range of health services, including immunizations. In her country, Salud Mesoamérica works with the 20 percent of Hondurans who live in urban slums and rural communities. The program develops agreements with local governments and monitors progress every three months. In areas working under the model, vaccine coverage has reached 90 percent, and programs have been started to address anemia and malnutrition as well. Further, localities have a greater sense of ownership under the program and are more invested in its success, Batres said. Moving funding decisions closer to the community and ensuring services are provided in a way that people understand is critical to expanding health equity, she added.
Speaking next, Muhammad Ali Pate, global director for Health, Nutrition, and Population at the World Bank and director of the Global Financing Facility for Women, Children, and Adolescents (GFF), said the World Bank Group contributes to vaccine equity by providing sustainable financing. He noted the importance of ensuring vaccines are reaching all parts of a country. When he was health minister of Nigeria, Pate recalled, border settlements were being missed, as were many children in fragile settings. He called for a rethinking of primary care delivery to ensure those implementing programs are trusted by the community. He also said that infrastructure now being used for polio vaccinations should also be used for other essential childhood immunizations. He added that while government capacity is weak in some areas, bypassing government structures is the wrong approach. To achieve equitable and sustainable health services, country systems need to be empowered and strengthened. International organizations should put the onus on governments and work with them, not undermine them.

Kerry Pelzman, deputy assistant administrator in the Bureau for Global Health at the U.S. Agency for International Development (USAID), discussed her agency’s role in improving vaccine equity. She noted that 75 percent of the world’s unvaccinated children live in USAID priority countries. The agency supports a range of international immunization organizations, including the WHO, UNICEF, and Gavi. It also makes significant bilateral investments which help to strengthen immunization systems in low-income countries and ensure vaccines reach disadvantaged communities. USAID’s approach has four components: decreasing missed opportunities for vaccination; strengthening health care delivery systems; improving disease surveillance; and increasing communication. She urged greater focus on trust, data quality, and better understanding supply and demand in different contexts.

U.S. Centers for Disease Control and Prevention (CDC) Deputy Director Anne Schuchat provided the final comments. She noted that achieving vaccine equity is complicated and expensive since it involves getting health services to individuals and communities that are hard to reach. The CDC prioritizes three areas: stopping epidemics, eliminating diseases, and strengthening preparedness and global health security. The CDC’s primary strengths, she added, are providing high quality data and building solid relationships and trust with ministries of health in more than 50 countries, along with multilateral organizations. The agency also prioritizes creating partnerships with civil society groups and promoting innovation. Schuchat added that the CDC workforce is passionate about equity and is invested in the issue for the long haul.

Video Message from UNICEF’s Henrietta Fore

The CSIS conference featured a video message from UNICEF Executive Director Henrietta Fore. She noted that immunization is “by far the best buy in public health” and can dramatically reduce disease and accompanying human and economic costs. Fore emphasized that through a concerted global push over the last several decades, many barriers to vaccination have been resolved and that global coverage now sits at 85 percent. But unfortunately, she noted, progress has stalled and even reversed in some areas. In 2018, she said, 1 in 10 infants globally were not fully immunized because of poverty, conflict, distance, complacency, and increasing skepticism. She urged “another big push” to reach every child with essential vaccines. She said UNICEF’s Immunization Roadmap 2030 provides renewed commitment to vaccinations and calls for new approaches to reach children now missing out. She also urged using networks and systems for vaccine delivery to scale up other services such as nutrition screening, maternal and newborn care, and adolescent health.

Panel II: Restoring Trust in Vaccines

In introducing the second panel, Morrison, the moderator, noted that vaccines are a vital global health tool not only in their own right but also as a path to scale up other health initiatives. Barriers to increasing cov-
average include geography, urban poverty, violent conflict, and lack of political will and cultural acceptance. He said social media now drives the spread of misinformation about vaccines across the globe, influencing those who are uncertain about the safety of and need for childhood immunizations. Morrison urged the involvement of a range of actors, including experts in technology, social media, behavior patterns, cybersecurity, and group behavior, to help combat the problem.

Congressman Adam B. Schiff, for whom vaccine hesitancy has been a priority issue, said in an opening video message that “vaccines are a victim of their own success.” Hesitancy is driven not only by misinformation but by the fact that many of the diseases for which vaccines are available are rarely seen in the United States and thus not considered to be a threat. Schiff said public health professionals need to engage with social media organizations such as Facebook, Google, and Amazon to limit vaccine misinformation available on the internet. He wrote letters to those organizations earlier this year asking them to take steps in that direction. At the same time, he said a balance must be struck between public health necessity and the protection of free speech. Schiff has introduced legislation to combat vaccine misinformation. Last summer, the House passed his amendment to fund an educational campaign focused on the importance of vaccination and the advent of rampant misinformation.

The first speaker was Emilie Karafillakis, a research fellow at the Vaccine Confidence Project at the London School of Hygiene and Tropical Medicine. Started 10 years ago by Heidi Larson, professor of anthropology also at the London School of Hygiene and Tropical Medicine, the Vaccine Confidence Project focuses on developing better tools to measure and monitor vaccine confidence at the global level. Confidence is very complex, Karafillakis said, and its study requires experts from a range of fields. The project looks at a variety of data from qualitative to media messages to detect changes in vaccine confidence throughout the world. One finding is that when trust erodes for one vaccine in a region, mistrust tends to spill over to all vaccines in the area. Overall, the project is discovering that vaccine confidence is emotion-based and can erode very quickly. Further, emotions are not an individual factor but can be contagious and spread among individuals in a group. Decisions about vaccination are not made in a linear fashion, and decisionmaking is volatile, Karafillakis said. This is important, she added, because social media has changed the dynamics between science and the general public. The public now is more engaged and is looking for information, but removing negative information may not be the answer. She suggested improved methods for engaging patients, listening to their concerns, warning them against the dangers of social media, and teaching them how to distinguish between information sources. She said it is important to begin teaching children at an early age how to be internet savvy and to teach health care professionals to communicate with patients to reduce vaccine hesitancy.

Rina Dey, communication director for the CORE Group Polio Project in India, shared her experience in the area of vaccine confidence. The CORE Group is credited with helping to eliminate polio from India. When the Indian polio eradication program started house-to-house vaccination in 1999, Dey said, the program met stiff resistance from many communities. Community members were convinced that different vaccines were used in different communities, and they were worried about their effects. Dey said the program learned that mass awareness campaigns were ineffective and that the program had to look at attitudes and needs at the community level. The CORE Group established a social mobilization network in concert with UNICEF in 2003. Successful approaches included hiring vaccinators from within local communities and developing a better understanding of the religious and social norms in each community. CORE Group communicators invested time in listening to community concerns and addressing them. They involved local influencers and allowed vaccinators the opportunity to try new approaches. CORE Group is now working on social mobilization for routine immunization services across India, where Dey said sharing the approaches
and lessons from the polio program will help to build India’s system. Dey added that engaging local politicians in building immunization coverage as a positive accomplishment has been successful in India.

David Broniatowski is an associate professor at George Washington University who studies vaccine messaging on social media. During the discussion, he emphasized that messages can convey a range of hidden agendas. He said that while Americans generally view vaccination positively, there nonetheless is growing concern about vaccine confidence and misinformation. In studying the content of tweets, Broniatowski said his group discovered that many vaccine-related messages, both pro- and anti-vaccine, were coming from Russian internet trolls. The purpose of the tweets was to make people angry, encourage the dissemination of conspiracy theories, and foment social divisions. Vaccine messages are also being used to encourage people to click on specific sites to drive up ad revenues. “So, the key take-home message again here is that we’re not only talking about vaccines when we are talking about vaccines online. There are people who are using these messages as a way of accessing a vulnerable population, as a way of trying to promote discord,” Broniatowski said. The Russian messages in particular, he said, are aimed at delegitimizing trusted institutions. Broniatowski urged additional research on which messages are amplified through retweeting and other methods and on ensuring those messages do not drown out more positive messages. He added that he and his colleagues found in a recent study that just two buyers are responsible for the majority of anti-vaccine Facebook ads. In distinguishing between types of social media, Bronistowski said that while Twitter is prone to disseminating automatic content because of its structure, Facebook is more hierarchical and allows for the spread of misinformation within groups. Administrators should perhaps be held more accountable for the content they allow, he suggested.

Panel III: Global Health Security and Vaccination in Disordered Settings

The final session of the day focused on global health security and ensuring vaccine delivery in disordered settings. Moderator Katherine Bliss, a senior fellow with the CSIS Global Health Policy Center, noted that 40 percent of the 20 million children who did not receive immunizations in 2018 were living in fragile contexts. In some of these settings, health care is completely unavailable, while in other areas, conflict makes it difficult for parents to get children to health facilities to receive vaccines. Given the lack of health care services, outbreaks in disordered environments are harder to contain and more likely to cross borders. While there have been advances in reaching children in these settings, significant challenges remain, Bliss noted. Among them is uncertainty about how many children are in an area and the potential lack of medical records to indicate which vaccines a child has received. In this sense, aid may not be getting to the people who need it the most, she said.

Senator Roger Wicker led off the session with a video message. He heralded the global effort to eradicate polio, which he said has resulted in 17 million fewer polio infections since the program’s inception in 1988. American leadership and investment in the initiative is critical to its success, and he urged continued congressional support.

The first panel speaker was Nahid Bhadelia, medical director for the Special Pathogens Unit at the Boston University School of Medicine. She stressed the importance of: research in better understanding and treating emerging infectious diseases; strong health systems to support widespread vaccinations; and collecting data. She added that gaining trust from populations with which one hopes to interact is critical to all of those endeavors. She discussed the logistical difficulties of providing care in conflict settings, including the lack of health worker access to the people who need care and the challenges in finding the contacts of those who have been infected. She also stressed the importance of surveillance systems to not only find disease but also collect information on potential adverse effects of any new vaccines. Data collection
systems could also support research into the effects of fractional vaccine doses and answer other critical questions. She said those types of questions signal the importance of long-standing research partnerships with countries that are most affected by infectious diseases. Bhadelia talked about the success of the Stop Transmission of Polio Program (STOP) at the CDC, which trains international and local staff to oversee surveillance and program implementation at the local level. She also argued for quicker and more flexible funding to outbreak areas, saying funding delays frequently slow response times. In addition, she added, flexibility is required so that the response can follow the disease as it shifts from area to area.

Bhadelia was followed by Rebecca Martin, director of the Center for Global Health at the CDC. Martin highlighted recommendations from a report by the WHO/World Bank-convened Global Preparedness Monitoring Board, released in September. She emphasized the recommendation that all parts of a society need to be part of outbreak and disaster preparedness, from national governments to communities. Community engagement is important to health security and polio eradication work as well, she added. Martin discussed the importance of understanding and involving people at the community level to understand what they need and want. She also noted the importance of training people from the community to respond to diseases, since they are the people who will be living there long term and can go into areas where outsiders cannot. Preparedness also is key to disease containment; this includes ensuring vaccinations are delivered and having surveillance systems in place to detect disease outbreaks. She concurred with Bhadelia on the importance of data, noting that mapping and satellite imagery have been critical for finding where remote populations are located. Setting up permanent vaccination teams along borders, markets, and transportation hubs provides a method for immunizing people in transit and those who live in areas that are inaccessible to health workers. In discussing resources, Martin agreed with Bhadelia that it is important that governments have flexibility with funding to try creative approaches and to match programs with local communities.

Violaine Mitchell, interim director for vaccine delivery at the Bill & Melinda Gates Foundation, discussed the importance of international partners in improving global vaccine coverage. Gavi, she noted, was able to replace glass syringes worldwide with auto-disabled versions that cannot be reused, thus decreasing the chance for passing pathogens from patient to patient. Strengthening and sustaining global partnerships and ensuring government ownership of immunization systems are essential for increasing vaccine coverage, she added. Mitchell cited Nigeria as an example, noting that after 25 years of concerted effort by the government, WHO, Gavi, CDC, Gates Foundation, and other partners, immunization coverage is starting to improve. She said that people at the Foundation call themselves “impatient optimists” because the global health community “needs to move with a sense of urgency, particularly in fragile contexts.” Mitchell emphasized the importance of ensuring continued funding for the Global Polio Eradication Initiative, which works in the most difficult, challenging places in the world, and for Gavi, through its 2020 replenishment.

In wrapping up the day, CSIS’s Bristol thanked participants and noted that immunization is a vital health intervention that should be accessible to and trusted by all. She noted the role in this endeavor of all the organizations speaking, those present in the audience, and of the U.S. government. With new energy devoted to updated global immunization strategies and to primary health care as part of the universal health coverage agenda, Bristol said the world is entering a dynamic new period in global immunization with opportunities to ensure equitable access to life-saving vaccines for all.
Appendix A: Conference Agenda

SECURING HEALTHY POPULATIONS IN A NEW ERA OF GLOBAL IMMUNIZATION
Center for Strategic and International Studies | 2nd Floor Conference Center
Friday, September 27, 2019 | 8:30am – 2:45pm

8:30-9AM
BREAKFAST AND REGISTRATION

9-9:10AM
WELCOMING REMARKS: J. Stephen Morrison, Senior Vice President and Director, CSIS Global Health Policy Center

9:10-10:10AM
OPENING PLENARY SESSION: THE NEW ERA OF GLOBAL IMMUNIZATION

Moderator: Nellie Bristol, Senior Associate, CSIS Global Health Policy Center
Keynote Speakers: Kate O’Brien, Director, Immunization, Vaccines, and Biologicals, World Health Organization
Seth Berkley, Chief Executive Officer, Gavi, the Vaccine Alliance

10:15-11:30AM
PANEL I: A RENEWED FOCUS ON VACCINE EQUITY

Moderator: Amanda Glassman, Executive Vice President and Senior Fellow, Center for Global Development
Panelists: Edna Yolani Batres, Presidential Adviser of Health, Former Minister of Health, Honduras
Muhammad Ali Pate, Global Director, Health, Nutrition, and Population, World Bank, and Director of the Global Financing Facility for Women, Children, and Adolescents (GFF)
Kerry Pelzman, Deputy Assistant Administrator, Bureau for Global Health, U.S. Agency for International Development
Anne Schuchat (RADM, USPHS, RET), Principal Deputy Director, U.S. Centers for Disease Control and Prevention

11:30-11:50AM
LUNCH

Building Global Health Capacity through Polio Eradication website on interactive display in lobby

11:50AM-12PM
VIDEO KEYNOTE: Henrietta Fore, Executive Director, UNICEF
12-1:15PM

PANEL II: RESTORING TRUST IN VACCINES

Moderator: J. Stephen Morrison, Senior Vice President and Director, CSIS Global Health Policy Center

Video message: Congressman Adam B. Schiff (D-CA-28)

Panelists: Emilie Karafillakis, Research Fellow, Vaccine Confidence Project, London School of Hygiene and Tropical Medicine
Rina Dey, Communication Director, CORE Group Polio Project, India
David Broniatowski, Associate Professor, the George Washington University

1:20-2:35PM

PANEL III: GLOBAL HEALTH SECURITY AND VACCINATION IN DISORDERED SETTINGS

Moderator: Katherine Bliss, Senior Fellow, CSIS Global Health Policy Center

Video message: Senator Roger Wicker (R-MS)

Panelists: Nahid Bhadelia, Medical Director of the Special Pathogens Unit, Boston University School of Medicine
Rebecca Martin, Director, Center for Global Health, U.S. Centers for Disease Control and Prevention
Violaine Mitchell, Interim Director, Vaccine Delivery, Bill & Melinda Gates Foundation

2:35PM

CLOSING REMARKS: Nellie Bristol, Senior Associate, CSIS Global Health Policy Center

Read our CSIS brief launched at the conference: Enhancing U.S. Leadership in the New Era of Global Immunization.

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