On September 17-19, 2019 The Task Force for Global Health and the Centers for Disease Control and Prevention (CDC) convened the 3rd Annual CDC and Partnership for Influenza Vaccine Introduction (PIVI) Partners’ Meeting in Istanbul, Turkey. The meeting focused on seasonal influenza vaccination program development and evaluation, brought together technical partners, critical stakeholders and the PIVI secretariat. The 74 attendees hailed from 28 countries and represented The Task Force for Global Health (PIVI), CDC, Ministries of Health, World Health Organization (WHO), vaccine manufacturers, academia, and non-governmental health organizations.

The Partners’ meeting provided a focused time for PIVI partners, and seasonal and pandemic influenza experts to come together to share experiences in influenza vaccine program development and implementation. The meeting was structured into three parts, and allowed for small-group discussions outside of the formal agenda to review work-plans, challenges, and opportunities with each PIVI country partner.

The objectives of the meeting included:

- Share experiences and lessons learned during the past year’s work
- Understand and address challenges to achieving sustainable, impactful influenza vaccination programs
- Strengthen the partnership by finding ways to better share data and expertise, develop and use tools for evaluation and planning, and communicate successes
- Identify and address parts of the program that need improvement
• Determine best ways to grow the partnership towards achieving the long-term goal of having 30 countries with stable seasonal influenza vaccine programs by 2030
• Facilitate WHO-led workshop on pandemic preparedness to help countries develop or update national deployment and vaccination plans (NDVP) for pandemic influenza vaccine

Day 1: *Share and Learn* – presentations and discussions with all participants focused on improving methods of reaching priority targets (with a major focus on health workers), best practices in program evaluation including the expanded use of evaluation tools, creating the evidence base for program improvement, and break-out sessions to discuss lessons learned at the country-level.

Day 2: *Expanding the Partnership* – presentations and discussions focused on growing the partnership with our current stakeholders and participants, including WHO Headquarters, WHO Regional offices, Gavi, US Department of State, Global Health Development, Vaccines for All, and Department of Health and Human Services. There was also discussion of how to expand the partnership to include additional types of organizations, how to best communicate the success of our work to engage new partners, and how to address sustainability challenges for growth.

Day 3: *Strengthening Readiness to Access and Deploy Pandemic Influenza Vaccine* – a half-day WHO-led workshop for PIVI country partners on improving pandemic vaccine deployment.

**HIGH LEVEL TAKE-AWAYS**

- Country partners expressed a high level of interest in continued participation in PIVI and CDC-supported activities, excitement about their national goals and the progress toward reaching program success. Interaction between country participants, participants from technical organizations, critical stakeholders (e.g. WHO), and industry partners continued to be robust and positive.
- Eight PIVI partner countries have multi-year sustainability plans. We are generating more data – as such we are able to better communicate our success and findings. Participants were pleased that several peer-reviewed publications from the PIVI experience have been published in the last year.
- Organizations and stakeholders working in influenza vaccine development and implementation, as well as the development of new vaccine and vaccination programs, are becoming increasingly aware of the partnership’s activities, objectives and successes allowing for potential future partnership and collaboration. Examples include:
  - *WHO’s Global Influenza Strategy* – several components of the strategy align with PIVI’s goals, including a focus on expanding the use of vaccine to low and middle-income countries, and the increased focus on the vaccination of health workers. Continued collaboration between WHO HQ, regional staff and PIVI will help support this work.
  - *Gavi Learning Agenda* – while the scope is still being defined, PIVI countries and technical partners will be a valuable source of data and evidence to support Gavi in this work. PIVI and CDC leadership will maintain contact with Gavi to identify opportunities for supporting this Learning Agenda and other priorities where appropriate.
  - *Alliance for Influenza Preparedness* – this new entity’s goals and activities align with the strategies of both CDC and PIVI, as well as with the WHO Global Influenza Strategy. PIVI and CDC have committed to participate in the Alliance.
- Continued focus to ensure current PIVI partner country success is needed. Country presentations showed clear progress towards program sustainability and program impact in preventing illness and improving pandemic preparedness, but threats to achieving sustainability remain. Countries requested continued support with the provision of vaccines, supplies and technical assistance in
program evaluation and planning, based on their multiyear plans. Several countries required annual modifications to their sustainability plans, justifying the need for annual discussions between partners to ensure that sustainability plans remain relevant and on-track. Continued effort is needed to ensure that every country has an articulated multiyear plan, whether vaccine recipients or recipients of only technical support.

- PIVI and CDC play an important collaborative role with country partners and WHO to support use of WHO tools for program implementation and evaluation, such as for health worker implementation guides, post-introduction evaluations and tools for economic assessment.
- Experience with SECID and WHO Regional Offices provide evidence that increasing support of regional initiatives may accelerate vaccine program development and increase efficiency of the Partnership’s investments.
- Participants found value in working with WHO to review tools and guidance on developing pandemic vaccine deployment plans, and will follow up this initial work over the next few months to finalize the plans.

**KEY CHALLENGES**

- Key challenges for sustainability of programs in countries were discussed extensively and included:
  - Program cost – vaccine cost remains a challenge for low and middle-income countries, especially given the higher cost of quadrivalent vaccines compared with trivalent vaccines. This expense may be more problematic as additional new higher cost formulations find their way to market. Solutions to reducing the cost of vaccines available to countries will be critical to ultimate program success.
  - Vaccine access – in many countries, too few vaccines are registered with a fixed price, creating a challenge for finding an appropriate vaccine for all target groups. Global and local solutions to increase the number of vaccines available at a manageable cost to countries will be important.
  - The evidence base – countries expressed a continued need for high-quality evidence on disease burden, cost, cost effectiveness of vaccine, as well as vaccine impact, to ensure decision-makers in the countries will invest long term.
  - The presence of vaccine champions – it is well known that new public health programs are more likely to be successful if a local champion, or champions, are present. PIVI country partners are these champions, but will often need to engage additional champions in their countries to best ensure success. Providing these champions access to resources going forward will be important.
- Participants discussed the growing concern of vaccine hesitancy in anti-vaccine messages in many of the countries. We agreed that PIVI can be a source of high-quality communications materials to address these concerns.
- The transition of the global market to higher cost quadrivalent vaccines will pose a challenge to countries developing new programs. The cost of these will likely result in increased program cost or decreased coverage during a campaign. It was agreed that there was a need to estimate the relative impact of use of TIV vs. QIV in some countries. CDC will develop a model to assist countries in making decisions on which formulation of vaccine to include in future purchases.

**KEY opportunUTIES**

- PIVI can create less work-intensive versions of some of the WHO evaluation and planning tools in order to make them easier to use by partner countries with limited resources.
• Countries continue to express an interest in access to high-quality tools for evaluating and planning their programs – including tools for assessing costs of influenza, the costs of an influenza vaccination program, and the cost-effectiveness of an influenza vaccination program. Countries noted that evidence-base must include data on the economic sustainability of the program in order to convince national governments to invest in influenza programs. Based on this discussion, we expect an increased need for economic expertise to be included the 2020 country annual plans.

• In countries facing limited budgets, the group discussed the possibility of narrowing vaccine target groups to one or two of the SAGE-recommended target groups. This would reduce budget while allowing high enough coverage of the group(s) to show impact and build trust. The two risk groups mentioned most in these discussions were health workers and pregnant women. These are attractive groups from a budgeting perspective, as they are generally the smallest of the five SAGE risk groups in the country.

• Opportunities for multi-country collaboration on vaccine purchase were discussed as well. Multi-country pooled procurement of vaccines has been successfully implemented in Latin America, the Baltic states, and the Gulf states. The Southeast European Center for Surveillance and Control of Infectious Diseases (SECID) will lead a discussion among member states towards identifying a mechanism for pooled procurement among these countries.

• Participants voiced support for PIVI to be a resource for collecting and sharing materials important for the partners – including communication materials, evaluation tools and protocols, training courses and evidence-base materials. Participants were asked to share local news stories about flu in their countries with the partnership. The members agreed that an effective way to advocate for influenza prevention is to have access to human interest stories in local press.

• As the partnership grows and each member country gains experience with influenza vaccination programs, the opportunity to share lessons learned will increase. Participants were eager to identify opportunities for peer-to-peer technical support in the coming year. This will be especially helpful in addressing language barriers that sometimes limit their national consultants’ effectiveness. PIVI Secretariat will establish a fund to support such opportunities.

• While the group liked the idea of establishing program metrics to measure ancillary benefits other than direct disease prevention, the variability of country programs and country context will make this difficult. Instead the partners agreed to look for local opportunities to measure the effects and share them with partners. In this way, PIVI might serve as a clearinghouse for examples of country outcomes.

• Participants expressed interest in determining whether influenza vaccination programs can improve JEE scores in countries. Demonstrating that influenza vaccination programs contribute to Health Security in the country can serve as a powerful argument for continued country investment. WHO has engaged in an effort to crosswalk influenza activities with JEE metrics, through its Checklist for Pandemic Influenza Risk and Impact Management. PIVI staff will discuss potential opportunities for collaboration with WHO, World Bank, Resolve to Save Lives and other groups working on this issue. Our goal is to develop guidance for countries on how we might collaborate to identify work in this area.

• The experience with Mongolia’s work with their FETP program on the maternal safety project to determine rates of adverse events following immunization with the recombinant protein vaccine was important. Among other outcomes, it helped illustrate the opportunity for countries to engage in country-led evaluations relevant to their program. PIVI Secretariat will continue to look for and share opportunities with partner countries. Possible opportunities include evaluating new vaccines, and piloting new tools for evaluating influenza vaccine programs.

• As PIVI grows, there will be an opportunity to potentially shape the vaccine market. As we think about the appropriate formulations of vaccines and presentations of vaccines in partner countries, ensuring that our industry partners are aware of that needs of low and middle-income countries will be a priority for PIVI.
NEXT STEPS

- Multiple projects were discussed which would compile experiences and data among several partner countries to produce lessons for additional countries and partners. These included:
  - *Completing the multi-country KAPP survey analysis and paper.* Data are nearly complete for this analysis and preliminary results were presented. We expect the paper to be submitted late in 2019. Meg McCarron will lead this work.
  - *Ancillary benefits paper.* Data collection for this paper is complete and we expect a draft of the paper to be shared with partners in the next one to two months. Malembe Ebama will lead this work.
  - *Pooling of health worker vaccination experience.* Participants agreed that a paper presenting a summary of the experience among the group with planning, conducting and evaluating health worker vaccination programs was important. Dominique Richardson will lead this work.
  - *Comparison of TIV versus QIV in terms of impact on reducing disease burden from influenza in resource constrained countries.* CDC will lead this project, and they will reach out to countries shortly for input.
  - *Develop a model determining the overall disease impact across partner countries in terms of direct disease reduction.* This would use existing CDC-created models and might allow for communication messaging about the value of the influenza vaccine in member countries.

- The PIVI Strategic Advisory Group’s recommendations were reviewed and were generally supported by meeting participants. These included:
  - Expand the number of countries served by the Partnership, focusing on countries with large disease burdens, low-income countries, and vulnerable populations such as refugee populations. In this way the impact of PIVI’s work will be magnified.
  - Increased focus on health workers as a target group to align with WHO and Gavi.
  - Develop regional initiatives to share expertise and provide an efficient mechanism to expand the use of influenza vaccines in pandemic preparedness.
  - Expand vaccine producing partners including emerging suppliers and other multinational manufacturers.
  - Increase and broaden partnerships with new stakeholders, including those focused on Global Health Security and pandemic preparedness.
  - Look for opportunities to measure the effects of influenza vaccination programs on outcomes other than disease prevention. These might include the effect of influenza vaccination programs on other vaccine programs, or the improvement of Health Systems in other ways.

- The creation of a business case for influenza vaccination programs in low- and middle-income countries is an important step in achieving and sustaining national investment in the program. PIVI and CDC will investigate the possibility of working with economists and modelers to develop such a business case, and how it might be tailored to an individual country’s needs.

- Each Partner Country will work to complete the Deployment Plans for pandemic vaccine during the next few months according to the timelines discussed at the workshop.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td>Welcome, opening comments, introductions</td>
<td>Joe Bresee (PIVI) Mark McKinlay (TFGH) Eduardo Azziz-Baumgartner (CDC)</td>
</tr>
<tr>
<td>9:15</td>
<td>Meeting context and goals</td>
<td>Joe Bresee (PIVI)</td>
</tr>
<tr>
<td></td>
<td>- PIVI’s strategic goals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- PIVI’s work within the global influenza partner context</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Areas of potential growth/focus in next few years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Goals and agenda of the meeting</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>Summary of PIVI’s achievements during 2018-2019</td>
<td>Katie Lafond (CDC)</td>
</tr>
<tr>
<td>9:45</td>
<td>State of the art presentation</td>
<td>Daniel Jernigan (CDC)</td>
</tr>
<tr>
<td>10:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Implementing vaccination of health workers</td>
<td>Moderator: Silvia Bino (Albania) Shoshanna Goldin / Marc Perut (WHO HQ)</td>
</tr>
<tr>
<td></td>
<td>WHO’s Health Worker Program Implementation Guide and experience with early pilots</td>
<td>Panel: Troung Nguyen (Vietnam) Daouda Coulibaly (Cote D’Ivoire) Sonam Wangchuk (Bhutan) Chankham Tengbiacheu (Lao PDR) Abdulakhad Safarov (Tajikistan) Imad Cherkaoui (Morocco)</td>
</tr>
<tr>
<td></td>
<td>Panel discussion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Panelists will be asked to discuss:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Key lessons from implementation of the WHO HW Implementation Guide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Challenges and successes in gaining vaccine acceptance among HWs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Methods for identifying and reaching HWs with the vaccination program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Methods for evaluation of vaccine coverage among HWs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sharing tools and advocacy products with other countries – can we continue to add tools to the PIVI website?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Does country leadership understand / value the link between HW vaccination and pandemic readiness? Is this a useful message in getting leadership resources to sustain the program?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- How do HWs rank compared with other target groups as a priority in the country?</td>
<td></td>
</tr>
<tr>
<td>6:00</td>
<td>Session 1: Reaching priority vaccine target groups – challenges and opportunities</td>
<td></td>
</tr>
</tbody>
</table>
- Identify best practices for directed messaging/communications with reaching HWs and reducing vaccine hesitancy among this population, and sustaining the programs
- Discuss a joint PIVI project to publish lessons learned from health worker vaccination

<table>
<thead>
<tr>
<th>11:30</th>
<th>Lessons learned in developing and sustaining programs targeting high-risk groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country experiences – successes and challenges (8 min/each)</td>
</tr>
<tr>
<td></td>
<td>- Reaching pregnant women in Mongolia</td>
</tr>
<tr>
<td></td>
<td>- Working with non-profit partners to reach persons with diabetes</td>
</tr>
<tr>
<td></td>
<td>- China’s experience with working with health workers to reach persons with chronic diseases</td>
</tr>
</tbody>
</table>

Panel Discussion

Panelists will be asked to discuss:
- What challenges and successes have you encountered in reaching your vaccine target groups, including determining how best to allocate vaccine doses among areas of the country?
- What challenges and successes have you had in achieving acceptance of vaccine among your target groups?
- Describe experiences in which partnerships outside of the Ministry of Health have helped with the program, such as medical societies?

Desired outcomes for the session:
- Identify effective ways to reach and vaccinate key target groups, focusing on innovative approaches and communication and advocacy activities for programs addressing pregnant women, children, persons with underlying diseases and older adults
- Should we create a mechanism to ensure that we share tools for successful vaccination of these groups with each other?

| 12:30 | Lunch |

Session 2: Program evaluations – creating the evidence base for program improvement
### 13:30  KAPP surveys – experience, lessons and future uses

Review of KAPP surveys, 2017-2019  
Panel discussion  

*Panelists will be asked to discuss:*
- How have studies of acceptability among key risk groups helped to shape policy recommendations?  
- How have studies of acceptability and understanding of barriers helped to plan communications campaigns and increase uptake?  
- Has an understanding of attitudes and acceptability helped to anticipate uptake among key risk groups, aided in planning vaccination campaigns (distribution, etc.)?  
- Will a follow-up study be useful to evaluate the success of communications campaigns, change in uptake?  

**Moderator:** Meg McCarron (CDC)  
**Panel:**  
Nga Ha (CDC-Vietnam)  
Iria Preza (Albania)  
Afif Ben Salah (Tunisia)  
Pernille Jorgensen (WHO-EURO)

### 14:15  Influenza Post-introduction evaluations (iPIE)

Experience and lessons learned in Armenia  

*Group discussion:*
- Experiences with vaccine program evaluations  
- Opportunities and interest in conducting iPIEs in the next 1-2 years  
- Value of iPIEs from each country’s perspectives  
- Update on WHO iPIE protocol  

**Moderator:** Susan Chu (CDC)  
**Panel:**  
Gayane Sahakyan (Armenia)

### 14:45  Economic evaluations

Overview of economic activities and tools  
Panel discussion  

*Panelist will discuss:*
- What specific economic questions are needed for national-decision makers? (CEA vs other costing questions, for which populations)  

**Moderator:** Joshua Mott (CDC-Thailand)  
**Panel:**  
Phonepaseuth Ounaphom (Lao PDR)  
Gideon Emukule (CDC-Kenya)  
Tsogt Mend (Mongolia)  
Erida Nelaj (Albania)
- Which data for these analyses are easily available locally, and which are most challenging to obtain?
- What solutions and opportunities exist for addressing these challenges? (extrapolation/modeling approaches, cross-country collaborations)

| 15:15   | Break |

**Session 3: Sustaining influenza vaccination programs – lessons learned and needs from country, industry and global perspectives**

| 15:45   | Introduction to break-out groups on challenges and solutions to program sustainability |
|         | Small group discussions |
|         | **A set of questions for the groups to discuss will be provided at the meeting.** |

| 17:00   | Wrap-up |

Eduardo Azziz-Baumgartner (CDC)

Facilitators: Malembe Ebama, Sue Chu, Shoshanna Goldin, Phillip Gould, Siddhartha Saha

Joe Bresee (PIVI) and Eduardo Azziz-Baumgartner (CDC)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Opening and review of key themes from Day 1</th>
<th>Presenter: Joe Bresee (PIVI)</th>
</tr>
</thead>
</table>
| 8:30   | Sustaining national programs – small group presentations and group discussion and summary | Moderator: Eduardo Azziz-Baumgartner (CDC)  
Group leaders |
| 8:45   |                                                       |                             |

**Session 4: Expanding partnerships**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter/Group</th>
</tr>
</thead>
</table>
| 10:00  | **Stakeholder perspectives and updates**                               | Moderator: Marie-Paule Kienny (PIVI Strategic Advisory Group)  
Ann Moen (WHO/HQ)  
Other WHO HQ programs  
WHO Regional Offices  
Industry partners  
Non-governmental stakeholders |
| 10:50  | **Break**                                                              |                             |
| 11:10  | **Progress on working with NITAGs to create national influenza vaccination policies** | Moderators: Steve Hadler (TFGH), Art Reingold (PIVI Strategic Advisory Group)  
Steve Hadler (TFGH)  
Panel:  
Gayane Sahakyan (Armenia)  
Daouda Coulibaly and Alfred Douba (Cote D'Ivoire)  
Gideon Emukule (Kenya) |
| 11:40  | **Creating Partnerships**                                             | Moderator: Lisa Koonin (Health Preparedness Partners, PIVI Strategic Advisory Group)  
Panel:  
Silvia Bino (Albania, SECID)  
Abdinasir Abubakar (WHO/EMRO)  
Siddartha Saha (India)  
Ezzeddine Mohsni (GHD)  
Amine Amiche (Sanofi) |
administration, such as other governmental ministries, private businesses, transportation partners, hospitals and other healthcare facilities, pharmacies, NGOs, faith-based organizations, other public health programs (e.g. hepatitis B vaccination).
- Experiences in developing partnerships with groups outside of the MoH to support or improve pandemic preparedness efforts, such as other governmental ministries, private businesses, NGOs, hospitals, faith-based organizations, other public health programs (e.g. hepatitis B vaccination).
- Experiences and opportunities for regional collaborations to support vaccine programs
- What role can PIVI play to support the creation of new partnerships?

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:20</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 13:20 | Session 5: Strengthening the Partnership | Understanding the benefits of influenza vaccine programs beyond disease prevention
Update on ongoing projects (5 min presentation [1-3 slides] each with 5 min discussion):
- Link between seasonal and pandemic vaccine preparedness
- Defining ancillary benefits of influenza vaccination – adding program metrics?
- Influenza vaccine and global health security / JEE
Group discussion –
- Should all countries create and monitor metrics related to non-direct vaccine program benefits, such as health systems improvement, improvements in vaccine delivery for other vaccines, or preparedness
- Can influenza vaccine programs be used to increase JEE scores? |
|       |         |             |
| 14:00 | Initiatives for expanding impact | Alliance for Influenza Preparedness
Regional initiatives |

Mod: Niteen Wairagkar (PIVI Strategic Advisory Group), Siddhartha Saha (CDC-India)
Shoshanna Goldin (WHO)
Malembe Ebama (PIVI)
Amanda Bolster (PIVI)
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30</td>
<td><strong>PIVI secretariat updates</strong></td>
<td>Dominique Richardson (PIVI)</td>
</tr>
<tr>
<td></td>
<td>PIVI reporting tools update and discussion about harmonizing partner reports</td>
<td>Amanda Bolster (PIVI)</td>
</tr>
<tr>
<td></td>
<td>- <em>proposal to combine ART-1 and ART-2</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PIVI communications summary – 2018-19, and discussion of ways to improve information sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>are the resources on the Partners section of the PIVI website being used? Can this area be improved?</em></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td><strong>Creating a shared vision for 2020-2030</strong></td>
<td>Mod: Katie Lafond (CDC), Mark McKinlay (TFGH)</td>
</tr>
<tr>
<td></td>
<td>Review vision and growth opportunities</td>
<td>Joe Bresee (PIVI)</td>
</tr>
<tr>
<td></td>
<td>Group discussion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>Review and comment on priorities for program growth and changes that have been raised during the meeting</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>Review and comment on ways PIVI can link with or complement work of other organizations</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- <em>Review and comment on metrics for country and PIVI program progress</em></td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td><strong>Wrap up and review of decisions and priorities determined for the coming year</strong></td>
<td>Joe Bresee (PIVI), Eduardo Azziz-Baumgartner (CDC)</td>
</tr>
<tr>
<td>17:00</td>
<td><strong>Adjourn</strong></td>
<td>Mark McKinlay (TFGH)</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>9:00 – 13:30</td>
<td>STRENGTHENING READINESS TO ACCESS AND DEPLOY PANDEMIC INFLuenza VACCINE: A WORKSHOP FOR PIVI COUNTRY PARTNERS (See Agenda below)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This special WHO-led workshop is intended for representatives from each partner country. Other meeting attendees may attend if interested, but are not required to do so. Lunch will be served.</td>
<td></td>
</tr>
<tr>
<td>14:00 – 17:00</td>
<td>Small Group meetings with individual partners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This time is reserved for focused 30-minute meetings between country representatives and PIVI/CDC/WHO collaborators to discuss work plans for the coming year. Each of the country partners will be given an opportunity to reserve a time slot for these discussions (a sign-up form will be shared before the meeting).</td>
<td></td>
</tr>
</tbody>
</table>
**STRENGTHENING READINESS TO ACCESS AND DEPLOY PANDEMIC INFLUENZA VACCINE: A WORKSHOP FOR PIVI COUNTRY PARTNERS**

**ISTANBUL, SEPTEMBER 19, 2019**

**WORKSHOP PROGRAMME**

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda topic</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:15</td>
<td>Welcome remarks &amp; Objectives of the workshop</td>
<td>CDC/TFGH/WHO</td>
</tr>
<tr>
<td>09:15-09:45</td>
<td>SESSION 1: Deployment of Pandemic Vaccine</td>
<td>Tim Nguyen</td>
</tr>
<tr>
<td>09:45-10:45</td>
<td>SESSION 2: Vaccine Deployment Exercise</td>
<td>Tim Nguyen</td>
</tr>
<tr>
<td>10:45-11:15</td>
<td>Tea Break</td>
<td></td>
</tr>
<tr>
<td>11:15-11:45</td>
<td>SESSION 3: Discussion - Vaccine Deployment Exercise</td>
<td>Tim Nguyen</td>
</tr>
<tr>
<td>11:45-12:15</td>
<td>SESSION 4: Regulatory Pathways for Vaccine Introduction</td>
<td>Mariana R. Santos</td>
</tr>
<tr>
<td>12:15-12:45</td>
<td>SESSION 5: Legal and Ethical Considerations</td>
<td>Sasha Kontic</td>
</tr>
<tr>
<td>13:15-13:30</td>
<td>Wrap-up / Evaluation /Next Steps</td>
<td></td>
</tr>
</tbody>
</table>
Abdinasir Abubakar, MD, MPH  
Acting Programme Area Manager/Team Lead  
Infectious Hazard Management (IHM) Unit,  
WHO Health Emergencies Department  
World Health Organization – Eastern Mediterranean Regional Office  
Egypt  
abubakara@who.int

Ledia Agolli  
Executive Director  
Southeast European Center for Surveillance and Control of Infectious Diseases  
Institute of Public Health  
Albania  
ledia.agolli@gmail.com

Uzakbaeva Ainura  
Member of the scientific expert group on immunization  
Republican Infectious Diseases Hospital  
Kyrgyzstan  
aynura_uzakbaeva@mail.ru

Burmaa Alyeksandr, MD, PhD  
Epidemiologist  
Head, National Influenza Surveillance Division  
National Influenza Center  
National Center for Communicable Diseases  
Ministry of Health  
Mongolia  
aburma69@yahoo.com

Amine Amiche, PhD  
Regional Lead, Vaccine Epidemiology and Health Economics - Africa, Middle East Eurasia, South Asia (AMEE)  
Sanofi Pasteur  
United Arab Emirates  
amine.amiche@sanofi.com

Phionah Atuhebwe, MD, MPH  
Medical Officer  
World Health Organization – Regional Office for Africa  
Democratic Republic of the Congo  
atuhebwep@who.int

Pradip Awate, PhD  
State Surveillance Officer and In-charge of the Influenza Vaccination Program  
India  
dr.pradip.awate@gmail.com

Eduardo Azziz-Baumgartner, MD, MPH  
Team Lead, International Epidemiology and Response Team  
US Centers for Disease Control and Prevention  
USA  
eha9@cdc.gov

Afif Ben Salah, PhD  
Professor of Epidemiology  
Institut Pasteur de Tunis  
Tunisia  
Afif.Bensalah@pasteur.tn

Silvia Bino, MD, PhD  
Associate Professor of Infectious Diseases  
Head, Control of Infectious Diseases  
Department, Institute of Public Health  
Albania  
silviabino@gmail.com
Amanda Bolster  
Associate Director, Development and Partnerships  
The Task Force for Global Health, Inc.  
USA  
abolster@taskforce.org

Marilynne Bonner  
Senior Conference Program Manager  
U.S. Department of State  
USA  
BonnerMI@state.gov

Nissaf Bouafif ép Ben Alaya, Prof.  
General Director  
ONMNE, Institut Pasteur de Tunis  
Tunisia  
nissafba@yahoo.fr

Aicha Boukthir  
Project Coordinator  
Institut Pasteur de Tunis  
Tunisia  
aicha.boukthir@pasteur.tn

Joe Bresee, MD, PhD  
Director  
Partnership for Influenza Vaccine Introduction  
Task Force for Global Health, Inc.  
Associate Director for Global Health Influenza Division  
US Centers for Disease Control and Prevention  
USA  
jsb6@cdc.gov

Imad Cherkaoui, MD  
National Focal Point of Influenza Surveillance Epidemiology and Disease Control  
Ministry of Health  
Morocco  
cherkaoui_imad@yahoo.fr

Sue Chu, PhD, MSPH  
Senior Epidemiologist  
Global Immunization Division,  
US Centers for Disease Control and Prevention  
USA  
syc1@cdc.gov

Daouda Coulibaly, MD  
Head, Epidemiological Surveillance Unit  
National Institute of Public Hygiene  
Cote d' Ivoire  
daocoul@yahoo.fr

Alfred Douba, PhD  
Professor  
National Institute of Public Hygiene  
Cote d' Ivoire  
alfreddouba1@gmail.com

Alina Druc  
Epidemiologist  
Epidemiological Surveillance of Influenza and Acute Viral Respiratory Infections  
National Agency for Public Health  
Republic of Moldova  
alina.druc@ansp.md
Malembe Ebama, DrPH
Epidemiologist
Partnership for Influenza Vaccine Introduction
The Task Force for Global Health, Inc.
USA
mebama@taskforce.org

Gideon Emukule, PhD
Statistician
US Centers for Disease Control and Prevention,
Influenza Program
Kenya
uyr9@cdc.gov

Hind Ezzine, MD
Epidemiology and Disease Control
Ministry of Health
Morocco
ezzinehind@gmail.com

Julia Fitzner, PhD
Global Influenza Programme
World Health Organization
Switzerland
fitznerj@who.int

Stepan Gheorghita, MD
Head of Department
Head of Surveillance of Respiratory Infections
National Center for Public Health
Republic of Moldova
stefan.gheorghita@ansp.md

Shoshanna Goldin
Technical Officer
World Health Organization
Switzerland
goldins@who.int

Mireille Gomes
Senior Research Coordinator
GAVI, The Vaccine Alliance
Switzerland
mgomes@gavi.org

Philip Gould, MD
Influenza and Animal – Human Interface
US Centers for Disease for Control
Vietnam
gouldp@who.int

Nga Ha
Program Management Specialist
Influenza/AHI Program
US Centers for Disease Control and Prevention
US Embassy, Hanoi, Vietnam
Vietnam
Ljv7@cdc.gov

Steve Hadler, MD
Consultant
Partnership for Influenza Vaccine Introduction
The Task Force for Global Health, Inc.
USA
shadler@taskforce.org
Daniel Jernigan, MD, MPH  
Director, Influenza Division  
National Center for Immunization and Respiratory Diseases (NCIRD)  
US Centers for Disease Control and Prevention  
PIVI Strategic Advisory Group Member  
USA  
Dbj0@cdc.gov

Pernille Jorgensen  
Epidemiologist  
WHO - Regional Office for Europe  
Denmark  
jorgensenp@who.int

Kaliya Kasymbekova Prof., PhD, MD  
WHO Country Office  
World Health Organization  
Kyrgyzstan  
kasymbekova@who.int

Naira Khachatryan  
Epidemiologist  
Immunization and Vaccine Preventable Disease Epidemiology Department of NCDC  
Armenia  
n_khachatryan@list.ru

Marie-Paule Kieny, PhD  
Director of Research  
INSERM  
PIVI Strategic Advisory Group Member  
France  
marie-paule.kieny@inserm.fr

Sasha Kontic  
Technical Officer - Legal  
World Health Organization  
Switzerland  
Kontica@who.int

Lisa Koonin, DrPH, MN, MPH  
Founder & Principal  
Health Preparedness Partners  
PIVI Strategic Advisory Group Member  
USA  
Lkoonin1@gmail.com

Katie Lafond, MPH  
Epidemiologist  
Epidemiology and Prevention Branch  
Influenza Division  
US Centers for Disease Control and Prevention  
USA  
Gmj3@cdc.gov

Laurette Mangouka, MD  
Lieutenant Colonel  
Internal Medicine and Infectious Diseases Army Training Hospital BONGO ONDIMBA  
Gabon  
Mangouka_lurette@yahoo.fr

Nwando Mba  
Director Laboratory Services, National Reference Laboratory Durumi III Gaduwa, Nigeria Centre for Disease Control, Gaduwa Abuja  
Nigeria  
Nwando.mba@ncdc.gov
Meg McCarron  
Epidemiologist  
Extramural Program, Influenza Division  
US Centers for Disease Control and Prevention  
USA  
dme8@cdc.gov

Mark McKinlay, PhD  
Director  
Center for Vaccine Equity  
The Task Force for Global Health, Inc.  
USA  
mmckinlay@taskforce.org

Tsogt Mend  
Epidemiologist  
National Influenza Center, National Center for Communicable Diseases, Ministry of Health  
Mongolia  
Tsogt22@gmail.com

Vladimir Mikik, MD  
Sector for Prevention and Control of Communicable Diseases  
Institute of Public Health  
Republic of North Macedonia  
mikik.vladimir@gmail.com

Alexander Millman  
Influenza Program Director  
US CDC China Office  
irm6@cdc.gov

Ann Moen  
Chief, Influenza Preparedness and Response  
Infectious Hazards Management  
WHO Health Emergency Program  
Geneva  
moena@who.int

Ezzeddine Mohsni  
Senior Technical Advisor/Executive Officer  
Global Health Development  
Jordan  
emohsni@Globalhealthdev.org

Josh Mott MA, EMT-P, PhD  
Branch Chief of Epidemiology Workforce  
Branch, Division of Scientific Education and Professional Development  
US Centers for Disease Control and Prevention  
Thailand  
jmott@cdc.gov

Erida Nelaj, PhD  
National Immunization Program Manager  
Control and Prevention of Infectious Disease Department, Institute of Public Health  
Albania  
enelaj@yahoo.com

Tim Nguyen  
Team leader Stockpile Governance  
World Health Organization  
Switzerland  
nguvent@who.int
Truong Nguyen  
Specialist, Office of Vaccination and Biosafety Management  
General Department of Preventive Medicine  
Vietnam  
truongnd48@gmail.com

Dulmaa Nyamkhuu, MD  
Director General  
National Center for Communicable Diseases  
Ministry of Health  
Mongolia  
dnyamkhuu@nccd.gov.mn

Phonepaseuth Ounaphom, MD  
Deputy Director General  
Department of Hygiene and Health Promotion  
Ministry of Health  
Lao PDR  
Phonepaseuth14@gmail.com

Kongxay Phounphenghack, MD  
Head of Immunization Division  
Mother and Child Health Center  
Ministry of Health  
Lao PDR  
Kongxay123@gmail.com

Art Reingold, MD  
Professor Of Epidemiology and Head of the Division Of Epidemiology and Biostatistics  
School of Public Health  
University of California, Berkeley  
PIVI Strategic Advisory Group Member  
USA  
reingold@berkley.edu

Michael Ntiri, B.Pharm, MPH  
Clinical Research Coordinator  
Noguchi Memorial Institute for Medical Research  
University of Ghana, Legon  
Ghana  
MNtiri@noguchi.ug.edu.gh

Dinagul Otorbaeva, PhD  
Deputy Director, Department of Disease Prevention and State Sanitary and Epidemiological Surveillance  
Ministry of Health  
Kyrgyzstan  
d_otorbaeva@mail.ru

Marc Perut  
Project Officer  
Initiative for Vaccine Research (IVR)  
Immunization, Vaccines and Biologicals (IVB)  
Universal Healthcare Coverage Lifecourse (UHC Lc) Division  
World Health Organization  
Switzerland  
perutm@who.int

Iria Preza, MPH  
National Immunization Program Officer Control of Infectious Diseases  
Department  
Institute of Public Health  
Albania  
Iria.preza@gmail.com

Dominique Richardson, MPH  
Project Manager  
Partnership for Influenza Vaccine Introduction  
The Task Force for Global Health, Inc.  
USA  
drichardson@taskforce.org
Bruce Rusio, MPH, DrPH
Consultant
Alliance for Influenza Pandemic Preparedness
brucearuscio@gmail.com

Abdulakhad Safarov, PhD
National Professional Officer
Communicable Diseases and Health Security
World Health Organization
Country Office
Tajikistan
safarova@who.int

Siddartha Saha, MD
Influenza Program Director
US Centers for Disease Control and Prevention,
India Country Office
India
Wmk5@cdc.gov

Gayane Sahakyan, MD
National Immunization Program Manager
National Center for Disease Control and Prevention
Armenia
Gsahakyan63@yahoo.com

Temirbekov Sanjar
Epidemiologist
Ministry of Health
Kyrgyzstan
sanjarinio@mail.ru

Joseph Scovitch
Deputy Director of the Office of International Health and Biodefense
U.S. Department of State
USA
ScovitchJR@state.gov

Ying Song, MD
Senior Program Officer
US Centers for Disease Control and Prevention
China
songying@cn.cdc.gov

Kristina Stavridis
Epidemiologist
Institute of Public Health
Republic of North Macedonia
ketistavridis@gmail.com

Ndahwouh Talla Nzussouo, MD, MSc, MPH
Regional Epidemiology and Laboratory Advisor
Assigned to: The U.S. Centers for Disease Control and Prevention (CDC), Noguchi Memorial Institute for Medical Research (NMIMR)
University of Ghana, Legon
Ghana
Tallus5@yahoo.fr

Chankham Tengbriacheu, MD
Point of contact of Flu vaccine, Chief ofStatistic Information Division
Mother and Child Health Center
Ministry of Health
Lao PDR
Chankham.tbc179@gmail.com
Branka Velickovska  
Responsible for Immunization Program  
Division for Preventive Health Care  
Department for Preventive and Primary Health Care  
Ministry of Health Republic of North Macedonia  
North Macedonia  
Branka.velickovska@zdravstvo.gov.mk

Niteen Wairagkar, MD  
CEO  
Vaccines for All  
PIVI Strategic Advisory Group Member  
India  
niteenw@yahoo.com

Sonam Wangchuk, MSc, PhD  
Head, Royal Centre for Disease Control  
Department of Public Health  
Ministry of Health, Thimphu -Bhutan  
Bhutan  
swangchuk@health.gov.bt

Collin Weinberger  
Senior Global Health Officer  
U.S. Department of Health and Human Services,  
Office of Global Affairs  
USA  
Collin.Weinberger@hhs.gov