



Next Generation
Global Health Security
Network

REFLECTIONS FROM THE 5TH GLOBAL HEALTH SECURITY AGENDA (GHSA) MINISTERIAL MEETING

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The [5th Global Health Security Agenda \(GHSA\) Ministerial Meeting](#), hosted by the Government of Indonesia, under the theme “Advancing Global Partnerships” showcased many success stories and overall increased capacity towards realizing a world safe and secure from infectious disease threats. In a time where the Democratic Republic of Congo is facing its 10th outbreak of Ebola, cholera is spreading throughout Yemen, and the threat of pandemic influenza looms dedicated multisectoral commitments to preparedness are more important than ever.

The 3-day event included a variety of high-level updates and more intimate discussions in side events on next steps under the newly-launched GHSA 2024. Under the [GHSA 2024 Framework](#), the initiative will move toward a more structured approach with “clear governance, collaboration structures and processes, increased engagement of the broader GHSA community, tracking and measurement of progress and enhanced accountability for delivery on commitments”. With over 100 countries expected to complete an external evaluation of health security capacity under this new framework, GHSA members and relevant partners remain committed to undergo planning and resource mobilization to address gaps. However, as repeatedly discussed during the Ministerial Meeting, a key issue remains: financing health security.

During the World Bank-sponsored side event on “Financing Preparedness at the Country Level” and the session on “Health Security Financing Policy Dialogue and Action”, it was alarming to learn of the continued lack of sustainable investments in preparedness, especially given the number of recent outbreaks and the reality that the combination of emerging and reemerging diseases and climate change leaves a major portion of the world vulnerable. Don’t forget the constant reminder: diseases do not require passports. A small investment of \$1 per day would make a tremendous difference in global preparedness. Many novel funding opportunities and incentives for investing in preparedness were proposed and I anticipate as more countries move toward creating national action plans for health security to address gaps identified in the evaluation process that GHSA, alongside relevant partners, will be uniquely positioned to drive the future of financing preparedness, perhaps through a dedicated Action Package.

In keeping with the theme of the conference, “Advancing Global Partnerships”, GHSA members and partnerships, such as the FAO/OIE/WHO Tripartite, Private Sector Roundtable (PSRT), [GHSA Consortium](#) and the [Next Generation Global Health Security Network](#) (NextGen) reaffirmed commitments to GHSA. Under the GHSA 2024 framework’s new structure for task forces dedicated to stakeholder engagement, advocacy and communication, it is evident that the membership base of GHSA will grow and the efforts of partners will continue to reinforce the preparedness agenda.

Many NextGen members attended the Ministerial Meetings and reaffirmed the commitment of the next generation to GHSA 2024, the Action Packages and continuing our grassroots advocacy campaigns. On the next few pages, you will find reflections from members who attended the Ministerial Meeting. As we continue into the next phase of GHSA, we look forward to continuing to support this worthwhile initiative through open dialogue, providing innovative solutions and continuing to build a workforce primed to bridge the preparedness gaps.

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I am a Pharmacist working with the Global Health Security project at the Infectious Disease Institute, Makerere University, Kampala Uganda. My current interest is the interaction of science with policy and financing for GHSA activities. Following last year's 4th GHSA Ministerial meeting that Kampala hosted, I was particularly moved by how the competition winners were able to access high level dignitaries like the Prime minister and President and have their voice and ideas heard by such a global diverse and influential audience.

Thanks to NextGen Global Health Security Network and NTI, this year Frances, Javier and I were privileged to have our project presented at the NextGen side event and be announced as part of the annual report for Action package 3 Biosafety and Biosecurity (APP3).

The APP3 Monday meeting was great and it felt encouraging hearing new commitments from countries as well as contributing my voice to the global conversation. I was especially moved by the great enthusiasm delegates showed for our ideas, contribution, and presence.

My focus on Financing GHSA started when I saw the Delivering through Sustainable Financing materials from the 26-27 July 2017 meeting, it was therefore a great honor to attend the World Bank side event on Financing Preparedness at the Country Level.

The World Bank, together with government and development partners, hosted a discussion led by panel of senior government policy makers and development partners moderated by Honorable Paivi Sillanaukee. It was great to learn from World Bank's Mukesh Chawla on what new funding opportunities and incentives can stimulate Investment at country level in Preparedness.

My key takeaways were that finance experts and health planner should develop catalytic mechanisms for increasing domestic resource use and mobilization for preparedness by taking advantage of facilities such as International Development assistance which if used well can be converted from loan to grant. This should leverage regional partnerships and strategic networks. I also appreciated the approach of identifying donor contributions that can be aligned to preparedness, which are already part of existing donor health investment portfolio.

Finally, I learned that we should mirror exiting initiatives that have successfully promoted investment in target areas such as building on success of Global Financing Facility as well learning from successes of PEPFAR, GAVI and Global fund,

I think the GHSA platform is one that the NextGen, in their home countries, can strengthen by building bridges between classes, careers, organizations, ministries, departments, agencies and individuals.

I would like to thank IDI, NextGen, NTI, APP3, all GHSA and the government of Indonesia for the warm welcome, advice, feedback and access afforded before, during, and even now following the meeting.

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“\$1 per person per year” is what is needed, but not currently funded, to improve global health security in low income countries. This was a stark message given by Dr Mukesh Chawla, Chief Advisor for Global Health Security at the World Bank at their ‘Financing preparedness at country level’ side event at 5th GHSA Ministerial Meeting. It is one of the key messages that I’ve taken back with me from Bali. As a junior doctor from the United Kingdom (UK), it was a real privilege and a very new experience to attend the GHSA meeting as a result of being part of winning team for the 2018 Next Generation for Biosecurity Competition. Although my practice involves incidents relevant to global health security, this has been in a regional or national context, so it was an amazing opportunity to understand more about progress and collaboration on an international stage, which I’m grateful to the Nuclear Threat Initiative (NTI) and the Next Generation Global Health Security (Next Gen) Network for offering me.

At the meeting, I found there were three different types of events. The main conference room, with country delegates arrayed around the stage, showcased the strengths of the GHSA and the excellent hospitality of the Indonesian Government. The opening ceremony showcased Balinese dancers, with events here including and headline speakers and key announcements of progress for the GHSA. The side events provided more in depth and specialised content. Finally, the site visits were a chance to see Indonesia’s own health security measures

In the primary programme session regarding ‘Towards the achievement of the GHSA 2024’s overarching targets’ it was fantastic to hear Nick Adkin from the UK Department of Health and Social Care discussing the UK’s lead in the antimicrobial action package for GHSA’s 2024 targets. The UK’s emphasis of the One Health approach was demonstrated by this being the first year that alongside human health representatives, the UK delegation also brought individuals from Department for Environment, Food & Rural Affairs. Another highlight from this session was Dr. Jamechia Hoyle’s challenge to the audience to help the next generation by thinking back to what would have most helped them at the start of their career and implementing this in their own professional lives- a challenge I hope is taken up.

The side events I attended, including from the NTI, World Bank, and Next Gen Network, were some of my favourite aspects of the meeting. From the NTI interactive session that asked for audience opinions on challenges such as global governance of dual use research, to Dr Mukesh Chawla’s argument for the need for governments to understand that preparedness gives results

today as well as in the future, I'll take back learning from these thought provoking discussions for my own research.

Finally, visiting the Denpasar Disease Investigation Centre, a regional centre for the investigation of animal diseases including rabies and avian influenza was a unique opportunity. The pride and openness by which the team wanted to show the international community their facilities was inspiring. In my job I deal with inquiries about rabies from travelers bitten by animals abroad, so it was valuable to understand more about the laboratory's testing system. As the immunoglobulin and vaccination given for rabies prevention after an animal bite can be very expensive and the majority of bites are not from rabid animals, the speed and efficiency of testing animals brought in for rabies virus is an important way of reducing rabies cases, whilst being resource efficient.

The 5th GHSA Ministerial Meeting was a whirlwind of interesting talks, valuable opportunities to meet leaders in global health security, and a chance to increase my own understanding of the opportunities and challenges that lie ahead when looking towards GHSA 2024. Inspired by these experiences, I look forward to my next challenge in bringing our Next Generation for Biosecurity Proposal to fruition.

David Manheim
Israel – Next Generation Health Security Network

Implementation is moving from specified goals to accomplished ones. The Global Health Security Agenda (GHSA) has done the work of laying out the former, and the present challenge is to manage the incremental changes, re-alignments, and transformations needed to achieve these ambitious goals.

Dr. Stella Cungong started by discussing the National Action Plans for Health Security (NAPHS). The critical challenge is that while health security threats are global, health systems are largely local, or at best national. The planning that occurs is critical, and when done well involves stakeholder identification, planning, and benchmarking as steps towards an effective multisectoral implementation. The joint evaluation activities are useful for identifying shortcomings, but addressing them requires bridging the gap that exists between evaluation, which is external and objective, and implementation, which requires personal and organizational involvement from stakeholders.

Two case studies and lessons learned reinforced these messages. First, Dr. Antung Sugihantoro of Indonesia discussed the challenges of developing a NAPHS in a large, populous, geographically challenging and diverse country. Following this, Dr. Amari Jambai discussed the experience of Sierra Leone in getting resources and allocating them to address the challenges identified. The common thread between these two very different experiences was the need for intense focus on national and local conditions and policy structures, while at the same time pursuing national and international priorities.

Systemic improvement should be iterative, with prioritization along the way. The experience of both Indonesia and Sierra Leone shows how a clear vision of the process, and identifying extant shortcomings and areas to improve can allow this prioritization, and showed real progress. Dr. Sugihantoro discussed the importance of a logic model for understanding the system, while Dr. Jambai discussed the usefulness of a clear prioritization system that was sensitive to needs, resources, and political realities. Both countries also brought up the critical challenge of funding, and the constant lack of sufficient funds to do everything needed.

Both of these experiences were consistent with the high-level overview that Dr. Julie Fischer of the GHSA consortium next provided. As mentioned earlier, the One-Health approach and the GHSA agenda are similar to many other processes, and the lessons learned elsewhere are unfortunately not yet embraced as best-practices and used more universally.

These best practices begin with a vision and stakeholder involvement from the very start. This allows the next critical step, of participatory planning with the identified stakeholders.

Participatory planning provides the stakeholders a chance to bring up issues early, and ensures that critical partners support the plans that they will need to implement. This requires making sure that the right people are at the table – not just the organizations, but the people with the

needed skill-sets, relevant experience, and expertise to identify challenges in both the plan and measurement of outcomes. This requires including the private sector – not just as representatives of the (non-monolithic) groups that will participate, but as individuals and organizations that have something to contribute, and that will be needed. (This requires planning for the planning – the process can't be kicked off until the needed expertise is identified, and groups with those skills are approached.)

At this point, pilot programs can begin. The types of planning and prioritization discussed by Dr. Jambai are involved, and as he said, this sometimes requires eliminating options because of a lack of relevant expertise, insufficient assistance from partners or stakeholders, or a lack of willingness by organizations and agencies to step up to the challenges. This is also when projects need to identify how to measure outcomes. These outcomes must be impacts, not programmatic checklists. The decision of how to measure should precede the pilot programs. This promotes accountability, allows feedback to and from the implementers, and makes it possible to demonstrate success.

There are also best practices for moving past successful pilot programs. Dr. Jabhari earlier noted that successful projects need to be handed off. This help from international experts can be critical in developing projects, but as Dr. Fischer notes, there is a stage between pilot projects and scaling up. During this stage, phased implementation, there is an opportunity for learning and identifying which parts of a program do and do not generalize. “We can learn from the past without being bound by it”, but we need to create a logistical and management infrastructure to move forward. (This seems to be a crucial opportunity for the hand-off to take place gently, with the national or international experts taking a less active role.)

Dr. Fischer suggested a need to identify prerequisites for success. These include understanding that not every intervention works everywhere, and that adaptation is needed. Feedback can help identify what is and is not working, and to find adaptive solutions. Not every successful pilot innovation is scalable. Even when a fantastic tool or intervention is found in one context or region, or to overcome a given obstacle, it is often critical to find additional tools when addressing the problem elsewhere.

There will be blocks and obstacles, and Dr. Fischer suggests that identifying what isn't working is a success, not a failure. The earlier defined impact measurements are particularly useful at this stage, after initial success of the pilot, to allow monitoring of new implementations. This is also a time to ensure data is available, not just collected. People on the ground know why programs do and don't work in a way national governments do not, and local implementers can use that data to learn and improve. Finally, after a phased scale-up, make a plan to sustain the momentum after scale is achieved. Make local leaders owners, and make sure they see enough value to fund and maintain the programs.

Success is often driven by failure and learning, and Dr. Jenifer Nuzzo presented a critical set of lessons learned from a few past events. A central theme of her talk was that attention needs to be paid to event responders, to ensure the systemic changes promoted by the NAPHS do not

distract or detract from the goals of better response to epidemic events. Two critical points were made. First, health system strengthening interrelates with preparedness in many and complex ways. Paying attention to the needs and experiences of actual first responders highlights places where JEE goals and the barriers to access during events are not harmonized. This can be critical, because improving the strength of health systems can be set back by a generation when a disease occurs, if it is handled badly. Second, there is a critical failure mode in health systems that are not well prepared, where the health system acts to accelerate rather than reduce spread of disease via nosocomial infections. This highlights the importance of noticing the interrelationship between health system strengthening, which can mitigate these problems, and the way in which we approach event response.

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The infectious disease threats that jeopardize global health security are vast and evolve as technology becomes more sophisticated, populations grow, and the world gets a bit smaller. Efforts to reduce these vulnerabilities to infectious diseases have to be just as diverse and resilient. Despite strategies at the international, national, and local level, outbreaks continue to stress critical infrastructure. The Global Health Security Agenda (GHSA) seeks to address these vulnerabilities and gaps to help strengthen national capabilities in preparing for, detecting, and responding to infectious disease threats. The GHSA is an especially unique approach to address biological threats as it utilizes multisectoral partners and reaches far beyond the scope of government, non-governmental organizations (NGOs), and academia. In truth, to address the unique predicament of infectious disease, a new strategy was needed and the GHSA is just that. The 5th Ministerial Meeting of the GHSA was recently held in Bali, Indonesia, to address the most pressing issues facing global health security, assess our current state, and look towards the future with the release of the 2024 Framework.

While the DRC battles an outbreak of Ebola virus disease and influenza hits the Northern Hemisphere, one might think that antimicrobial resistance would be an afterthought at this meeting. The GHSA and those invested in its future are used to putting out fires and still battling the slow burning threats, like antimicrobial resistance, which means that this topic was a frequent point of discussion. Throughout the presentations and sessions, the topic of antimicrobial resistance was frequently brought up, especially in the context of One Health. In the U.S. alone, [23,000 people die a year as a result of resistance infections](#). The latest [WHO reports](#) reveal a global issue in which the most common infections are increasingly becoming drug resistant. From the agricultural sector to healthcare and the environment, combatting antimicrobial resistance is extremely challenging and many at the meeting vocalized their concerns with such a chimeric dilemma.

On the second day, during the third session focused on achieving the 2024 overarching targets, Nick Adkin, Deputy Director of Global Health Security, Department of Health and Social Care in the United Kingdom, spoke on antimicrobial resistance. Adkin's sentiments, even to this antimicrobial resistance enthusiast, were deeply profound and thought invoking. He highlighted that in a future of increased resistance, medical treatments like chemotherapy and standard hip arthroplasty would be too risky, meaning that as resistance grows, our medical capabilities diminish. Antimicrobial resistance is a complex, multisector issue, impacting trade, health systems, and food safety, he noted. During his talk he heavily emphasized the importance of these collaborative efforts, like the GHSA, and the tripartite that is between the WHO, the Food and Agriculture Organization (FAO), and the World Organization for Animal Health (OIE) that was established to combat antimicrobial resistance. Perhaps one of the topics most reiterated was Adkin's focus on revising the Action Package surrounding antimicrobial resistance and putting more focus on an information sharing platform to increase capacity building, facilitate

open forums for debate, and identifying opportunities to keep the topic on international political agendas. His talk underscored the importance of training in countries to strengthen surveillance efforts and laboratory capabilities as a considerable component to tackling antimicrobial resistance is truly understanding the scope of the problem and properly identifying patients with such infections. Towards the end of his presentation, Adkin pointed to a frequently forgotten aspect of antimicrobial resistance – the environment. Thankfully the GHSA and the tripartite both emphasize the One Health approach to these infectious disease issues. Lastly, Adkin left the audience with a vital lesson –we may have made progress, but there is still considerable work to be done and while this is a serious issue, its inherently hidden nature means that people aren't up in arms and this does us a disservice.

As an infection prevention epidemiologist who has worked on stewardship initiatives and management of patients with highly resistant infections, Adkin's talk on antimicrobial resistance was truly rewarding and informative. He raised issues with existing gaps while pointing to successes, which was inspiring but also a startling reminder that we still have a long road ahead. While Adkin's talk may have only been a small portion of the Ministerial Meeting, the continued dialogue surrounding this issue was a comforting reminder that the GHSA doesn't just focus on the current outbreaks and issues, but the full spectrum of biological threats. Attending the 5th Ministerial Meeting was a truly rewarding experience that offered attendees not only the chance to witness frank dialogue about global health security and the challenges to reaching it, but also the vast community of dedicated people and nations that work together to help reduce the threat of infectious diseases.

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Although the theme for the 5th Global Health Security Agenda (GHSA) Ministerial Meeting was “Advancing Global Partnerships,” session 3 was the first session that offered insight into the many ways global partnerships can and should be approached for the GHSA 2024. The panel was composed of diverse leaders from different sectors and countries, highlighting the importance of using a multi-sectoral method to achieve the overarching targets of GHSA 2024.

The panel discussed a wide range of topics. The first panelist, Dr. Nick Adkin, Deputy Director of Global Health Security, Department of Health and Social Care, United Kingdom, started the session with a specific but enormous problem to global health security: antimicrobial resistance (AMR). AMR affects not only public health, but also trade and food safety. As Dr. Adkin stressed, AMR is currently undermining progress already made in the public health field and has the potential to make everyday procedures—like hip replacements and chemotherapy—too risky to perform. Therefore, there is a great need for the global community to work together to fight against AMR. Although it would have been nice to hear how AMR is currently being explicitly battled, it was encouraging to see that many countries had action plans on fighting AMR and that environmental aspects are now being incorporated in the Action Package.

The second panelist was Dr. Fadjar Sumping Tjatur Rasa, Director of Animal Health, Ministry of Agriculture, Republic of Indonesia. Dr. Tjatur reviewed the Zoonotic Disease Action Package (ZDAP), the gaps and challenges faced in key action areas, and proposed international collaboration activates. Since many of the gaps and challenges in key ZDAP action areas focused on different types of partnerships, it was reassuring that the Action Package had made plans to improve and increase international collaboration efforts. I found it exciting that the mentioned collaboration efforts not only included high- and mid-level professionals, but also students, therefore, taking steps to include and train the next generation.

Next was Dr. Mark van Passel, Project Coordinator, National Institute for Public Health and the Environment, the Netherlands, who discussed the Biosafety and Biosecurity Action Package. Among the topics mentioned, the main takeaways were the importance of a multi-sectoral approach, financing, and inclusion of the next generation. During his talk, Dr. van Passel reflected on the Nuclear Threat Initiative (NTI) and Next Generation Global Health Security Network (NextGen) Biosafety competition and stressed the importance of the next generation not only in the Action Package but also the broader community. He also emphasized the Action Packages, like AMR, One Health, ZDAP, and Biosafety and Biosecurity, should be linked. I believe this offered a different but obvious insight I had not considered before: not only should partnerships be improved within Action Packages, but also across Action Packages.

The fourth panelist was Dr. Hyungul Jung, Deputy Scientific Director of Division of Vaccine Preventable Disease Control and National Immunization Program, Korean Centers for Disease Control and Prevention, Republic of Korea. Dr. Jung gave an overview of the National Immunization Program in South Korea. He reported that the program was very successful and

has been able to eradicate Polio, Measles, and Rubella. Dr. Jung attributed the success to universal coverage and increased accessibility on immunization. Although he gave many good programs to improve immunizations, I believe the best mentioned was the immunization awareness campaigns and promotions. Not only are there educational books for parents in different languages and strategic immunization promotions, but there is also a whole week in April that is dedicated to immunization. One of the ways to best fight against the anti-vaccination movement is going to be education. Educating all levels of society, not only adults but also children, helps protect against misinformation and confusion. I would be interesting to see if schools here in United States could adopt something similar.

Nappavan Janejai, Deputy Director of National Institute of Health, Department of Medical Science, Ministry of Public Health, Thailand, was the fifth panelist. Janejai discussed the National Laboratory System Action Package. She mentioned the challenges faced, most being related to communication. Once again, the importance of collaboration between Action Packages was declared. Therefore, it is critical to remember not only do partnerships need to be formed, but they need to allow for reliable communication between members.

The next panelist was Dr. Jamechia Hoyle, Coordinator of Next Generation Global Health Security Network (NextGen). Dr. Hoyle gave an inspiring speech about investing in the next generation. She showed how there are no barriers when you are genuinely committed by highlighting the success of the NTI and NextGen competition and also a mentorship program run by NextGen. Lastly, Dr. Hoyle mentioned the importance of investing in the next generation by investing in workforce development. Educating, training, and incorporating students and early-career professionals into the global health field is critical. It was encouraging to hear Dr. Hoyle's speech. As a graduate student, it felt like she was speaking on my behalf and on behalf of all my classmates that want to enter the global health field but keep finding many obstacles in our way. What was more encouraging was the number of people who went up to her afterward to agree with her speech. However, there were some who agreed with the speech and yet still found excuses for not investing in workforce development. Therefore, there is still a long way and a lot of work to go before the obstacles in front of the next generation are completely destroyed.

The last panelist was Dr. Alan Tennenberg, Co-chair of the Private Sector Round Table (PSRT). Dr. Tennenberg highlighted the accomplishments of the PSRT to date and the expanded role of the Private Sector under GHSA 2024. Not only does this include continued engagement of the Private Sector, but also open communication. With the theme of the Ministerial Meeting being "Advancing Global Partnerships," it is essential to promote a multi-sectoral approach to global health security. I believe that giving the PSRT a chance to be involved in global health security helps strengthen capabilities and capacities and that their further involvement increases the chances of reaching the targets of GHSA 2024.

I am very proud to have been a part of the 5th Global Health Security Agenda (GHSA) Ministerial Meeting. Not only have I learned more about global health security, but I have also built relationships and friendships that I hope will last a lifetime. The meeting made me realized that is still a lot of work to do, but I am confident that progress can be made.

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I work at the National Commission of Atomic Energy of Argentina as Head of Environment, Health & Security Department at the Constituyentes Atomic Center, and it was my pleasure to attend to 5TH GHSA invited by NTI-Bio and NextGen GHS Network.

As an early professional, I always thought that when it comes to safety and security, even the most tragic events of history can be very useful to show us how important prevention, detection and response is. In that way, on Wednesday November 7th, Dr. Jennifer Nuzzo started her presentation emphasizing - when we are commemorating the 100th anniversary from The Great 1918 Influenza- the profound effects that infectious diseases can have on health, security and prosperity of societies and how important is to redouble our commitment to prevent such events to happen ever again.

Dr. Jennifer Nuzzo pointed out how the 1918 great influenza was quite devastating by underlining some of its statistics. In that way, she demonstrated how in Philadelphia the number of death at that moment rose from 1-2 death per day to almost 800 per day just in a span of ten days towards a peak week of 4500 deaths/day. At the very peak almost 1.5 million people were sick. After that, Dr. Nuzzo spoke about the differences between 2018 and today, about how different is the fact that we already have the tools to face this kind of threat, like vaccines, medicines, and lifesaving medical treatments. And to picture that, she stated that we have seen in recent outbreaks and epidemics how the application of these tools can profoundly alter their outcomes. Right after that Dr. Nuzzo gave some context about it by referring to the fact that we also know that these tools are not always available everywhere in the world when are needed. And so, the consequences of this were clearly shown in the 2014 Ebola epidemic when we saw heroic workers literally putting their life in the line to treat such patients stating that these risks that they have faced are completely undue.

Dr. Nuzzo also emphasized that when healthcare workers become ill it has implications far beyond just elevating the overall toll of an outbreak. In that way, it is been seen from past epidemics such as Ebola, SARS and MERS that when is not such transmission in health facilities, these health facilities can wind up in being important drivers on overall transmission of diseases back to the communities.

As a conclusion, Dr. Nuzzo said that health facilities that are unprepared to be able to diagnoses and treat patients in a safe manner can become amplifiers of disease, making much harder to control the outbreak.