

The Link Between Global Health and National Security

A Conversation with Irene Koek, Senior Deputy Assistant Administrator for Global Health

Bea Spadacini: Hello and welcome to USAID's Bureau for Global Health podcast. My name is Bea Spadacini and I am a Senior Communications Advisor to the Bureau for Global Health at USAID. In this last podcast of the year, we want to reflect on a topic that has been highlighted in 2017 and is important to this new administration: the link between global health and national security, with a focus on infectious diseases. For this episode, we are delighted to speak with Irene Koek, Senior Deputy Assistant Administrator for Global Health at USAID. Prior to her current leadership role, Irene was the Senior Infectious Disease Advisor for the Global Health Bureau and the Global Health Security Agenda lead at USAID. From 2010 to 2014, Irene was Director of the Health Office at USAID/Indonesia, where she also served as health attaché and PEPFAR Coordinator. How did you begin your journey into global health and what led you to work on infectious diseases?

Irene Koek: Well, thanks very much Bea. I am happy to talk about this topic here at the end of the year. So, I started in global health, many many years ago actually in family planning, which gave me a great sense of some of the foundational work we have done in global health. Some years later, I moved to USAID's policy office where, in the late 1990s, USAID received an additional piece of money to start working on infectious diseases. This was at the time the National Academy of Sciences had done a report on reemerging diseases and the Ebola outbreak in the DR Congo in the mid 1990s so there was a tremendous attention on infectious diseases, on emerging diseases, also because of the drug resistant TB outbreak in New York City, attention to old diseases that were reemerging. So, this additional money allowed us to take on a whole new piece of work in infectious diseases. USAID had done some small work in malaria and little tiny bits in Tuberculosis but really nothing of any kind of substance. So, with this new funding, I led the process to develop a strategy for the Agency that focused on increased work in malaria and Tuberculosis and cross-cutting work on anti-microbial resistance and surveillance and recognizing that surveillance is such a critically important tool for identifying and responding to infectious diseases. That initial strategy ultimately led to our now large program in Tuberculosis and drug resistant TB that has suddenly grown throughout the 2000s, as well as some of the initial work in malaria that ultimately became our work in the President's Malaria Initiative, which took off and was announced by President Bush in 2005 and has become a major effort to and certainly has had a huge impact on reducing deaths due to malaria.

Bea Spadacini: That is great. You have obviously dealt with these issues for a long time. Can you explain to our listeners what is the link between infectious diseases and national security?

Irene Koek: There is a very strong link between infectious diseases and national security. We saw this really strongly with the Ebola outbreak in West Africa in 2014, where the entire world was afraid of Ebola and certainly here in the US as well. This was also, on December 18, the

President released the national security strategy and there is a reference to exactly these kinds of issues in that strategy, where the strategy talks about, “we will work with other countries to mitigate outbreaks early, to prevent the spread of diseases and also encourages countries to invest in basic health care to do exactly that. So, in 2014, actually it was before the Ebola outbreak in West Africa, the U.S. joined together with some other, 20 odd countries and U.N. partners, including WHO, the Food and Agriculture Organization, and others, to launch the Global Health Security Agenda. The intent of the Global Health Security Agenda, was to help countries build their capacity to detect, prevent and respond to infectious diseases. You know, at its very core, it’s a health systems concept, where you need to help countries build their capacity to identify diseases, recognize what they are, prevent them and respond when there are outbreaks. Global health security is very much a multi-sectoral initiative, recognizing that over 70 percent of emerging and re-emerging diseases we have seen over the last couple of decades are zoonotic, that means they start in animals and they jump to humans. It certainly was the case with the Ebola outbreak, we have seen that MERS Corona virus that came from the mid-East some years ago, was with SARS and a number of other issues and of course Avian influenza, which has been an issue for a long time. So, the part that USAID has taken on as part of the Global Health Security Agenda is really focusing heavily on the zoonotic side and that One Health concept, which is intended to bring together the animal health sector and the human health sector and recognize and make sure there is good communication and good connection between those two so as you see outbreaks and issues in the animal health sector, identifying where that might be a threat to human health.

Bea Spadacini: And One Health is also bringing together agriculture, right?

Irene Koek: That’s correct. Agriculture, environment, all the broader set of other things. The way Global Health Security has been rolled out, it recognizes that one of the threats that we may well see is something like bioterrorism, where there can be an intentional release of some infectious agent so it also brings in the security sector and the defense sector. Certainly, the way the U.S. Government has rolled that out, it has been very much part and parcel of the interagency efforts.

Bea Spadacini: So, what are some of the lessons that we have learned from Ebola for instance, that could apply to other epidemics like for instance we recently had Zika but they say it is only a matter of time before another epidemic?

Irene Koek: Some of the clear lessons from Ebola, is the importance of having a really strong health system to begin with. I mean, this was, the outbreak of Ebola in West Africa was in a region where there are incredibly fragile health systems, not so many health workers and very, very few doctors, nurses and people who have the capacity to be able to identify and respond to the threat when it emerged so the clear lesson is health systems are incredibly important. The other clear lesson is that diseases don’t respect borders and it is not so difficult for a disease to travel from one country to another and it does not take much in our very close world these days with fast communication and fast travel, it is very easy for diseases to spread from one country to another. That was certainly part of the fear around Ebola but it also relates to

some older diseases like Tuberculosis and drug-resistant Tuberculosis. You know we talk, there is a huge amount of attention around Ebola and rightly so given the devastation that Ebola brought to West Africa but at the same time we have continued to deal with Tuberculosis and drug-resistant TB, which is a very old disease but still now the leading infectious disease killer and TB is an air-borne, it is transmitted from person to person. It is an air-borne disease and while it is not particularly efficient disease in terms of transmission, it is something that can spread very easily so it is another lesson for all of us about why disease do not respect borders, they don't stay where you want them to stay and a disease anywhere is a threat everywhere.

Bea Spadacini: What about behaviors and community engagement. I remember reading articles about Ebola, during the Ebola outbreak, about the role of beliefs and socio-cultural norms that prevented mitigating, containing the outbreak?

Irene Koek: One of the other lessons from Ebola was absolutely the critical need to engage the community and communication. Ebola is a terrifying disease so helping people who are more at risk understand what the threat really was and how to take steps to protect themselves, was really important. Some of the interventions that were supported by the U.S. Government were really reaching out to the communities and engaging the communities and improving the safe burial practices and changing the cultural approaches to burial, which includes a lot of touching bodies, which is exactly how Ebola is transmitted. So, changing some of those practices and ways to protect families when they had to bury someone who had died of Ebola was incredibly important as was changing some of the other norms about making sure people understood how diseases can be transmitted and what they could do to protect themselves. But community groups are really, really, important. We think of the health sector, not only what happens to the public health sector but it is community groups, community associations and, also the private sector. The need to engage that full array is very much part of the lessons from Ebola and something that we have known for a long time.

Bea Spadacini: What about information systems and the fact that data was fragmented. I read something about community health workers having to send data to the Ministry and getting information and it was somewhat challenging.

Irene Koek: Information is always challenging right and how good data on what is happening with patients and how that works its way through the system and the right response is always a challenge. There are lots and lots of pieces of information that, as you say, it is often fragmented and it may not get to the person who can make the right decision at the time. One of the lessons from Ebola is that we were able to move forward on a number of technologies, not only for patient care but also for health worker safety, which is the Ebola suit, but some really interesting tools for some global technologies for information and there has been a whole revolution in the use of mobile technology for information, for surveillance and for other information, which really has the potential to change a lot of how we manage disease information or health information or how we can make sure health information gets to the right person to make the decision, which is always the issue. There has to be empowerment

throughout the system so that those who need to respond have the information and have the authority and ability to respond the way they need to.

Bea Spadacini: So, speaking about technologies, what is the role of information and health research when there is a disease outbreak, for example, we do a lot do Grand Challenges here at USAID. Can you tell us a little about that?

Irene Koek: So, research has always been part of what we do and the development of new tools has certainly been core to how USAID has approached health for some time. What we were able to do both for Ebola and for Zika is use the attention and the resources to really spur a lot of innovation around new tools that we needed for both. For Ebola I mentioned, it allowed us to put out a Grand Challenge for a better personal protective equipment for health workers. For Zika, we were also to do a Grand Challenge. The Zika outbreak in Latin America. Zika is a disease. It has been around since the late 40s but a new strain emerged in Latin America that really had a huge impact on the development of the babies, their brain development and lots of disabilities for these young children. Another thing we were able to do with the Zika resources, we did a Grand Challenge and one of the Grand Challenges was support for game changing solutions around addressing these mosquitoes. These are real perishing mosquitos, they are the same mosquitoes that transmit yellow fever and Dengue and Zika and they are extremely difficult to kill or to get rid of. However, one of the technologies that we have been supporting through the Grand Challenges, which was developed some years ago, is deploying mosquitos infected with Wolbachia, which is a naturally growing bacterium which prevents the spread of diseases to humans. So, these mosquitoes, who are infected with Wolbachia, no longer transmit, some of the tests prior to Zika showed that in areas like Australia and Asia, where the tests were taking place, were no longer transmitting Dengue, which is a hugely exciting innovation. If the same technology can work, not only for Dengue but also for Zika and for other things, it could really make a big difference.

Bea Spadacini: Anything else you want to add?

Irene Koek: So, the other thing I want to mention, you know we talk a lot about zoonotic diseases and the spread from animals to humans but we touched also on vector-borne diseases like Zika, Dengue and Chikungunya but then there is also malaria, which is a major one and we have had a lot of investments. Some of the investments in the 90s, by USAID and others, some of the tools really paid off and allowed us to move forward in the mid 2000s with the President's Malaria Initiative and the basic core principle behind PMI is that we had these interventions that could really make a difference, including insecticide-sprayed nets, including the old ones, including indoor residual spraying, which has been around for a long, long time but better treatment for malaria, which really only became accepted and used through policy in countries in early 2000s as well as treatment for pregnant women who had become vulnerable when they were pregnant so the combination of these effective interventions and really scaling them out in country, really had a huge impact on the mortality burden due to malaria, so it's a huge impact.

Bea Spadacini: Well, it's also an impact in terms of stability of countries, right? That is where we tie it in with national security because if people thrive, then they can contribute to the prosperity of their own countries.

Irene Koek: That's exactly right. You know, lowering under-five mortality is hugely important for a country's stability. The connection between ill health and high under-five mortality and maternal mortality and lots of infectious diseases has a huge impact on the stability of a country and they are very closely related.

Bea Spadacini: Thank you so much for helping us connect the dots and learning more about infectious diseases, national security and the recently released national security strategy.

Irene Koek: Thank you very much.

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