Superbugs, Infectious Diseases, and Solutions for Healthier Societies

SEPTEMBER 23, 2019 | NEW YORK

As antibiotic resistance becomes an increasingly serious global health threat, *Foreign Policy* magazine convened a select group of health ministers, international leaders and experts to discuss solutions and best practices to address the issue. The high-level experts roundtable, held on the sidelines of the U.N. General Assembly in New York, was organized in partnership with the U.N. Foundation and 3M.

Public awareness of the communal threat posed by the emergence of antibiotic-resistant bacteria or "superbugs" is low, compared to other global issues such as climate change and terrorism, but the threat posed is just as pressing. The collection of experts urgently emphasized the need to act and highlighted the unsettling lack of preparedness across global health systems.

Throughout the discussion, a number of key themes emerged. Most salient among these was the need for greater collaboration. Prominent participants called for a united front across healthcare systems, governments, private

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sector organizations, and academia. The message was clear: If we are going to overcome this challenge, we are going to need to work together.

Key Themes

Greater Collaboration & Integrated Approaches:

- Foster public-private partnerships to deploy best practices and build infrastructure. Partnerships help service providers meet patients where they are.

- Address well-intentioned regulations that ultimately limit these partnerships from occurring. We need to remove these regulatory barriers.

- Move away from siloed thinking in health ministries to incorporate integrated approaches that include ministries of agriculture, environment, economics, and finance.

Global Readiness & Responsiveness:

- The health system is only as strong as its weakest link.

- End the North/South discussion and look at AMR (Antimicrobial Resistance) as a global issue affecting all of us.

Research & Innovation:

- Incorporate data-driven, evidence-based approaches that improve transparency and accountability. Colombia is an excellent example of effectively implementing this strategy.

- Promote 'soft values,' including health literacy, which helps prevent initial infection and fosters behavioral changes.

Technological Advancement:

- Identify what technologies can facilitate dissemination of knowledge rapidly and service delivery. Invest in telemedicine, AI, and R&D.

- Look at finance, economics, and other platforms to better understand what mechanisms and technologies can spur widespread behavioral changes.

Discussion Highlights

Opening remarks:

"Many people enter the health system and leave worse off than when they arrived. The reason is that diseases can be amplified in weak health systems. Ebola in the Democratic Republic of Congo is an example: a large proportion of health care is delivered by an unregulated private system... We are not sufficiently investing in health. Currently, much of the world is being left behind. We need to avoid the North/South dichotomy, when we speak about health. Some of the most vulnerable places are in the North, where the problem is exacerbated by antimicrobial resistance. We need to think of it as one healthcare system."

—*Michael Ryan, ED, Health Emergencies Programme, WHO*

"We all need surveillance and access to appropriate antibiotics, but we are as vulnerable as the weakest link. Across the globe we are seeing antimicrobial resistance levels increasing. We need to ask how we can begin to use new treatments and new technologies. How can we spend more time with patients and focus on preventing illness initially?"

—*Dame Sally Davies, CMO for England, UK Department of Health and Social Care*

Q: How does the private sector coordinate between countries and what are the best practices?

"3M does this globally in coordination with Ministries of Health. For instance, in Colombia, we (3M) are driving infection prevention, it's our number one goal. We put solutions together based on what the country or health system feels it needs. It's about understanding the key elements of the problem to be solved and putting forth an optimal solution to drive better outcomes and lower overall costs. This allows us to address individual needs at the national, system, and local levels and working in partnership with both the public and private sectors."

—*Victor Miranda, MD, MBA, Chief Medical Officer, 3M Health Care Business Group*

"We started from data so that people in the system could make informed decisions. Transparency and accountability are the driver for health systems, and this approach empowers people to make more informed decisions."

—*Camilo Arenas, Chief of Staff, Ministry of Health, Colombia*

"Good standards and promoting soft values increase health competence. You need to promote health literacy, get involved in civil society, invest in health literacy, and provide information. Sweden has worked a lot with civil society to increase the level of vaccinations and better inform health care decisions about when antibiotics are useful, and when they are not."

—*Olivia Wigzell, DG National Board of Health and Welfare, Sweden*

"While most governments recognize that the private sector has an important role in the response to AMR, the private sector is often excluded from formal planning and governance structures. Best practice is the creation of balanced, multisectoral platforms for engagement where the private sector is represented and seen as a full partner."

—*Silas Holland, Director, Global Public Policy, Merck*

"One of the major issues is that we have siloed thinking and resources are limited, even in a rich country like Denmark. We need to have a more integrated approach. Denmark is taking an initiative, ICARS – the International Center for Antimicrobial Resistance Solutions focused on intervention research to create evidence-based, context specific, solutions in low- and middle-income countries. We do this in countries where you can build a business case to take to the Ministry of Finance. They can then understand what needs to be done and finance it."

—*Robert Skov, MD, Scientific Project Lead, ICARS, Danish Ministry of Health*

Q: What can Ministers of Health do to enhance Universal Health Coverage to their citizens?

"There are many steps that can be taken in a country's journey of health care transformation. One of the simplest and impactful steps is the promotion of use of proven infection prevention and control (IPC) practices. By reducing health care acquired infections, the need for antibiotic use is reduced, dampening emergence of antimicrobial resistance organisms. The resources released can then be targeted toward expanding health coverage consistent with national priorities. WHO recognizes IPC as a critical step."

—*Todd M. Fruchterman, MD, PhD, President & General Manager, 3M Medical Solutions Division, Health Care Business Group*

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Q: What are the greatest obstacles to getting people vaccinated around the world? After an outbreak, what are the templates to deal with those kinds of outbreaks? How can you foment inter-country regional collaboration?

"We need clean air and water. Infections are a global challenge, but there is great confusion or lack of experience on how to approach the issues... There is a great opportunity with technology like AI and telemedicine. Global entities like the WHO and CDC can promote governments to push regulations to allow systems to use these technologies."

—*Dr. Nizar Zein, Chairman, Global Patient Services and Professor of Medicine, Cleveland Clinic*

Q: How much is education a problem? How do you mobilize?

"A resilient health system is key to tackling AMR. In my country Nigeria, AMR is being looked at using primary healthcare and from the communicable disease angle. Potent drugs become ineffective to usual ailment they are meant to treat due to several factors that relate to education which results in increased morbidity and mortality. The need to regulate unwholesome use of antimicrobial drugs in treatment of patients and use in agriculture becomes very important. Education to the public, agricultural farmers and the health care providers both public and private sector is key."

—*Dr. Emmanuel Maribole, Director, Health Planning Research and Statistics, Federal Ministry of Health, Nigeria*

"Countries in high-income areas often have gold standard national action plans. There remains a real challenge for countries who have plans on paper, but don't have the resources to actually implement them. We need to figure out how other countries can assist in that implementation. We need to strike a balance of identifying what they need, and not get trapped in a top-down, donor led, approach. As a community we haven't yet found the right interventions to support developing countries."

—*Jeremy Knox, Policy & Advocacy Lead, Drug-Resistant Infections, Wellcome Trust*

Conclusion

Roundtable participants came to speak from locations ranging from Kenya to Sweden. No matter their background, or professional experience, a sense of unity across the key themes emerged. Antimicrobial resistance is a global threat and requires unified global action. Gone are the days of thinking along geographic and sectoral lines. It is clear that the threat facing us is just as daunting in the Northern Hemisphere as in the South. Governments, private-sector organizations, and multilaterals all have a role to play. Despite the severe challenges that antimicrobial resistance poses, experts attending the roundtable conversation stressed the importance of building awareness and inspiring leaders to act. As the discussion made clear, solutions are going to come from all of us. There isn't much time left to waste.