



TAKING ACTION FOR AMR PREPAREDNESS: Spurring Antibiotic Innovation for Healthy Ageing in Super-Ageing Japan

Report from May 20, 2021
Virtual Roundtable Report



On May 20, 2021, the Global Coalition on Aging (GCOA) and Japan's Health and Global Policy Institute (HGPI) held their second joint roundtable on the challenges of Antimicrobial Resistance (AMR) in super-ageing Japan. The roundtable was co-sponsored by Pfizer Japan Inc.

As AMR is a looming health crisis, the creation of policies to fight against it could have a critical impact in Japan and around the world.

Summary of Key Takeaways

1.

Innovative policy structures that support antimicrobial innovation are being modeled in countries including the United Kingdom and the United States.

2.

Global collaboration on AMR and antimicrobial innovation is essential. No single country can solve this problem by itself.

3.

AMR is an urgent issue for Japan in light of the impact that it could have on Japan's super-ageing society.

4.

There is a window of opportunity for Japan to recognize the important role of incentives for innovation in protecting the Japanese public from the spread of AMR.

5.

There are lessons learned from COVID-19 that could help to address the AMR crisis.

Background and Context

The AMR Crisis

AMR is increasingly present on the short list of serious global health threats, now recognized as a top priority for Group of Seven (G7) governments, prominent on World Health Organization's (WHO) agenda, and spotlighted across the COVID-19 pandemic. AMR is the naturally occurring process by which the microbes that cause disease grow resistant to treatment. When this happens, frequently used infectious disease treatments can become ineffective, or in some cases, unusable.

Already, this problem claims 700,000 lives worldwide every year, and the pipeline for new antibiotics is virtually bare. Without the development of new antibiotics to serve as second lines of defense when existing treatments falter, deaths related to routine surgeries and common infections rise.

If sufficient action is not taken against this issue, the death toll could reach 10 million annually in the coming decades. This could cripple Organisation for Economic Co-operation and Development (OECD) economic growth goals and derail the aims of the Decade of Healthy Ageing launched by the WHO and endorsed by the United Nations (UN) Sustainable Development Goals (SDGs).

AMR and the Ageing Population

While AMR is a crisis for all of society, older adults are at significant risk. This fact makes access to novel antibiotics a crucial need for Japan, where nearly 30% of the population is 65 and over, and that proportion is expected to skyrocket to nearly 40% over the next 30 years. Even as we promote treatments for non-communicable diseases (NCDs) like cancer and heart disease that have exploded in our ageing societies, we cannot

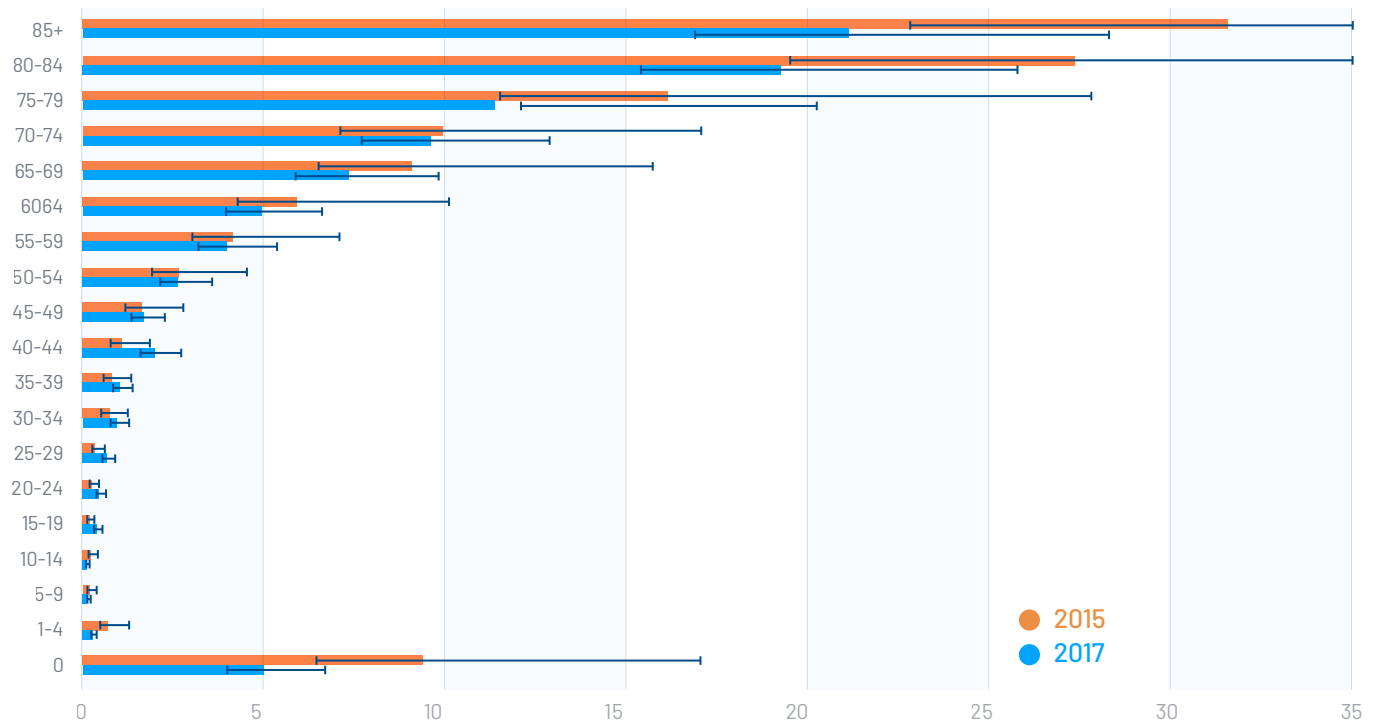
let down our guard on treatments for communicable diseases, which is what made the miracle of longevity possible in the first place.

Increased life expectancy has been primarily enabled by three powerful developments over the course of the 20th century – sanitation and public health; improved maternal-child health conditions, including childhood immunization; and the antibiotic revolution. Of these three advances, antibiotics currently hangs in the balance. Japan's health system sustainability depends on effective antibiotics, and because of rising AMR, they need to be prepared to fight this resistance as it emerges. As stated by Dr. Pol Vandembroucke, "Antibiotics are the backbone of modern medical treatments; there are few treatments without it. Surgery is not possible without functional antibiotics." Today, the development of new antibiotics is stagnant, and the current environment for drug discovery in fact inhibits innovation.

The COVID-19 pandemic highlighted what is at stake. During the roundtable, Dr. Motoyuki Sugai underscored the impact of COVID-19 on older adults, especially in long-term care settings in which both COVID-19 and antimicrobial resistant infections occur much too often. In these settings, better surveillance and stewardship – aided by education on infection control – must be promoted.

Japan's super-ageing status underscored the particular challenge of the AMR crisis to healthy longevity and specifically older adults that must be linked to both the OECD Ageing Strategy and the WHO/UN SDG Decade of Healthy Ageing goals. Mark Pearson of the OECD

MRSA incidence between 2007 and 2015 (European Antimicrobial Resistance Surveillance Network)



Incidence per 100,000 standardized population

Source: The Lancet

highlighted that in OECD countries, 17% of bacterial infections are resistant to at least one type of drug, and that will continue to increase over the decade.¹ But, according to the European Centre for Disease Prevention and Control, the incidence of infections is much higher in elderly people, especially for MRSA, where the highest growth has been in people aged over 80.²

Japan's Stake in AMR Solutions

Japan could benefit from the current moment where there are three specific forward-looking AMR developments: The UK Subscription Model; The US PASTEUR Act and the support from the G7 Health Ministers' Communique, which devotes an entire section to "the growing pandemic of antimicrobial resistance." As

Japan's ageing population makes it increasingly susceptible to non-communicable diseases, such as cancer and cardiovascular disease, and needs for surgeries such as hip and knee replacements become more commonplace, its risks of hospital stays and therefore hospital-acquired infections (HAI) also increases. And, as COVID-19 has shown, infectious diseases can be especially ruthless on vulnerable ageing populations.

Roundtable participants recognized the global challenge of AMR but also that countries must take action to foster innovation and ensure access to life-saving antibiotics at a time when the effectiveness of existing antibiotics, once known for being "miracle drugs," is not promised.

To that end, roundtable participants focused on AMR lessons for Japan:

1. Stemming the Superbug Tide: Just a few dollars more, OECD, 2018

2. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(18\)30605-4/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(18)30605-4/fulltext)

Key Roundtable Takeaways

- 1. Innovative policy structures that support anti-microbial innovation are being modeled in countries including the United Kingdom and the United States.** By decoupling pricing from quantity, these pull incentives, by way of a subscription model, are seeking to encourage investments in innovative antimicrobials. These pull incentives are increasingly being seen as highest-potential options for fueling an ongoing antibiotic pipeline, particularly if they provide enough of a financial payout to encourage new antimicrobial R&D, and Japan must make critical decisions soon if it is to ensure its citizens continue to access to effective antibiotics.
- 2. Global collaboration on AMR and antimicrobial innovation is essential.** No single country can solve this problem by itself. Collaboration can be within the G7, which has a growing focus on AMR and is driving global consensus that action is needed to spur increased innovation. These conversations include several tracks aligned to Japanese government-wide interests on the health, security and finance. The concrete efforts underway in the United States, United Kingdom, the EU, and elsewhere toward the creation of pull incentives for new antimicrobials are gaining attention and momentum globally through leadership from the G7 and the OECD, serving as models for other countries to adopt.
- 3. AMR is an urgent issue for Japan in light of the impact that it could have on Japan's super-ageing society.** During the discussion, Dr. Helen Boucher noted the disproportionate impact of AMR on older people, as older people enter hospitals at higher frequency due to NCDs or routine surgeries and are more susceptible to AMR over time. In addition, Dr. Motoyuki Sugai clarified the major challenges of AMR in long-term care settings related to antibiotic stewardship and a lack of robust surveillance.
- 4. As Japan moves to create a new National Action Plan on AMR following the end of its previous plan in 2020, there is a window of opportunity for Japan to recognize the important role of incentives for innovation in protecting the Japanese public from the spread of AMR.** Takamaro Fukuoka, Director, Health, Labour and Welfare Division, Liberal Democratic Party of Japan committed to a redoubling of efforts against AMR in Japan. Participants acknowledged that among the drivers for such efforts might well be Japan's G7 leadership in two years where it will want to have credibility and trust in its actions on AMR solutions.
- 5. There are lessons learned from COVID-19 that could help to address the AMR crisis.** These lessons include the need for proactive policy reforms to create a robust and sustainable R&D ecosystem. COVID-19 vaccines became available quickly because, in part, the science and technology had been in development for years. Further, regulatory processes, which can be lengthy, and reimbursement schemes, which can be barriers to access, were adapted to ensure access to – and scalability of – life-saving vaccines. COVID-19 became urgent because of the scope and scale of the virus as a health and economic crisis, and that urgency must soon be applied to AMR.

Meeting participants

The GCOA-HGPI Japan AMR roundtable was attended by Japanese and global public health, economics, and policy experts. The fact that this diverse group of experts came together, including the OECD and representation from the UK's G7 leadership on AMR underscored the role that Japan has to play – not only as the world's first super-ageing society but also in its role leading the G7 in two years. Based on these roles, Japan will most certainly be in the spotlight for advancing progress across OECD and G7 countries. Participants included:

Helen Boucher,

Tufts Center for Integrated Management of Antimicrobial Resistance; Treasurer, Infectious Diseases Society of America

Takamaro Fukuoka,

Member, House of Councilors; Director, Health, Labour and Welfare Division, Liberal Democratic Party

Akihisa Harada,

President, Pfizer Japan

Mike Hodin,

CEO, Global Coalition on Aging

Hajime Inoue,

Deputy Director General, Office for Novel Coronavirus Disease Control, Cabinet Secretariat

Andrew Jack,

Global Education Editor, Financial Times

Ryoji Noritake,

CEO, Board Member, Health and Global Policy Institute

Louise Norton-Smith,

Head of Global Antimicrobial Resistance Strategy & Delivery, UK Department of Health & Social Care

Kazumasa Oguro,

Faculty of Economics, Hosei University

Norio Ohmagari,

Director, AMR Clinical Reference Center; Director, Disease Control and Prevention Center; National Center for Global Health and Medicine (NCGM)

Mark Pearson,

Deputy Director of Employment, Labor and Social Affairs, OECD

Motoyuki Sugai,

Director, Antimicrobial Resistance Research Center, National Institute of Infectious Diseases (NIID)

Pol Vandenbroucke,

Board Member, American Federation for Aging Research; Chief Medical Officer, Pfizer Hospital Business Unit



The Global Coalition on Aging aims to reshape how global leaders approach and prepare for the 21st century's profound shift in population aging. GCOA uniquely brings together global corporations across industry sectors with common strategic interests in aging populations, a comprehensive and systemic understanding of aging, and an optimistic view of its impact. Through research, public policy analysis, advocacy, and strategic communications, GCOA is advancing innovative solutions and working to ensure global aging is a path to health, productivity and economic growth.

For more information, visit

www.globalcoalitiononaging.com

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Health and Global Policy Institute (HGPI) is a Tokyo-based, independent, non-profit, and non-partisan health policy think tank established in 2004. Since its establishment, HGPI has been working to realize citizen-centric health policies by gathering together diverse stakeholders and developing policy recommendations. HGPI is committed to serving as a truly independent organization that can provide society with new ideas from a broad, long-term perspective in order to foster fair and healthy communities. HGPI looks forward to continuing to partner with people from all around the world as we continue our work for the development of effective health policy solutions for Japanese and global issues.

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