

2021 AMR Preparedness Index

Michael Hodin, CEO, GCOA

June 14, 2023

8am-9:00am

Agenda

- **About GCOA – Why We Work on AMR**
- **Overview of the 2021 AMR Preparedness Index – Design and Outcomes**
- **Explanation of Index Results**

We have reached a milestone, which for the history of humanity has been unimaginable.

The once extravagant prospect of growing old has become the norm.

Now, to achieve healthy longevity...



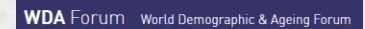
WHO WE ARE

Our Members

Global, cross-sector, elite brands form the voice for ideas, strategy, and influence



Illustration of the GCOA Network in the Asia-Pacific Region



INITIATIVES



Adult Vaccines



*Alzheimer's
& Dementia*



AMR



*COVID-19 &
Innovation*



Digital Health



*Elder
Caregiving*



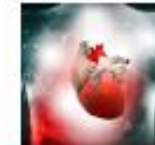
*European
Commission*



*Financial Wellness
& Workplace
Change*



*Global
Institutions*



*Heart Failure &
CVD*



*Nutrition &
Aging*



*Osteoporosis/
Fragility
Fractures*



*Silver
Economy*



Vision Health



*Women &
Aging*



*WHO/Decade of
Healthy Aging*

GCOA is working to call attention to AMR before it's too late.

The Value of Pull Incentives in Japan to Encourage Investment in Antibiotic Innovation to Solve the AMR Crisis

WORKSHOP REPORT FROM THE GLOBAL COALITION ON AGING (GCOA)

April 2023



Global Coalition on Aging

Wonder Drugs vs. Superbugs:

The 21st Century Battle to Save 10 Million Lives a Year

Global Coalition on Aging

AMR & JAPAN'S G7 PRESIDENCY: A Call for Pull Incentives to Drive Innovation

ROUNDTABLE REPORT

antibiotic innovation pipeline is bare, and we are losing the ability to treat infections daily.

2021 AMR Preparedness Index

Global Coalition on Aging

IDSA
Infectious Diseases Society of America

Comment / Letters

Letters | China can do more to squash antibiotic-resistant superbugs

• Readers discuss the need for stronger policy on antimicrobial resistance, and how Hong Kong should respond to the banking crisis

Letters

Published 11:30am, 1 Apr 2023



A woman buys medicine in a pharmacy in Shanghai on March 10. In China, 84 per cent of pharmacies still provide antibiotics without prescriptions. Photo: EPA-EFE

Feel strongly about these letters, or any other aspects of the news? Share your views by

Special Report FT Health: Future of Antibiotics

Antibiotic resistance + Add to myFT

Antibiotic accountability: how countries and companies perform

FT dashboard tracks responses to the growing threat of antimicrobial resistance



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Alan Smith and Andrew Jack NOVEMBER 24, 2021

26

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Patients in north Africa and the Middle East are using antibiotics in sharply rising quantities far beyond the global average, raising concerns over the

The KoreaTimes

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Opinion

Editorial Columns Thoughts of the Times Cartoon Today in History Blogs Tribune Service Blondie & Garfield Letter to the Editor

Guest Column

Korea must act now to combat growing AMR threat

By Kim Bong-young and Mike Hodin

Public officials are overlooking one of the gravest long-term threats to the Korean people, the health system, and economy: antimicrobial resistance (AMR).



Kim Bong-young

Some pathogens – bacteria, fungi, parasites, and viruses – have evolved strains that resist the antimicrobial medications we currently have available to fight them. Health care professionals often must watch helplessly as patients succumb to infections that antibiotics could once have easily beaten. They know that new antimicrobials, including and especially antibiotics, could easily gain the victory – but they have none at their disposal.

The pathogens have gained an evolutionary edge as tools used against them have remained static. This is because the market for investment in new innovation has virtually dried up, thanks to a policy framework that does not provide for swift approval of new innovations or adequately reimburse companies for the investments they make to develop new drugs.



Mike Hodin

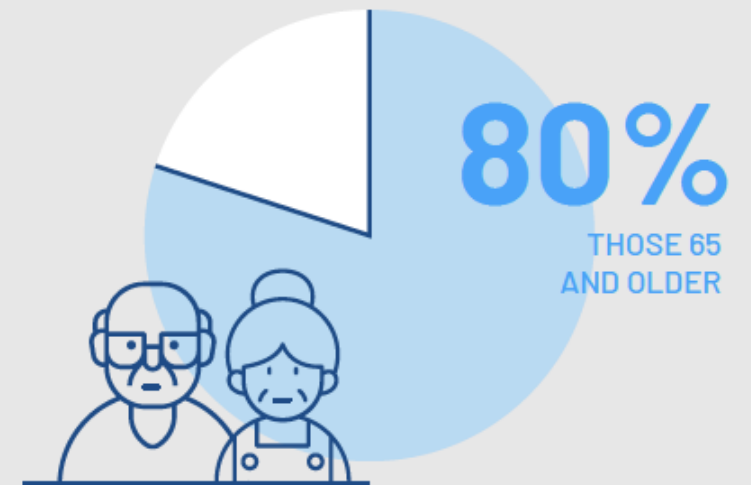
Without action, AMR threatens to undermine the very foundations of modern medicine – killing as many as 10 million people worldwide every year by 2050 and shrinking global GDP by as much as 3.8 percent. Yet, today, Korea currently does not even have reliable data to understand AMR's impact.

Antimicrobial Resistance (AMR) is Eroding the Foundations of 21st Century Health Systems

AMR Threatens Routine Medical Treatment^{12,13}

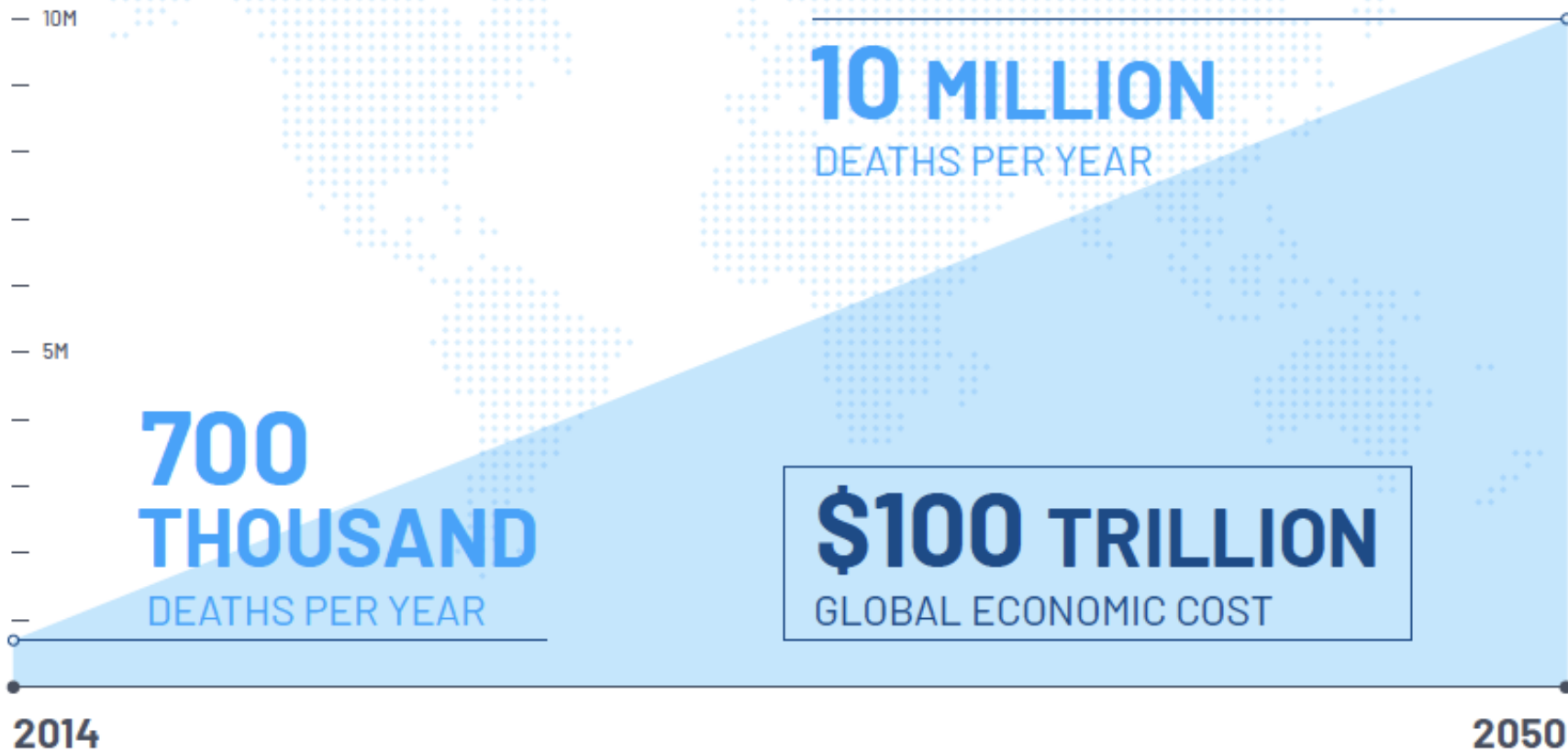


C.Diff Fatalities Disproportionately Occur In Older Adults

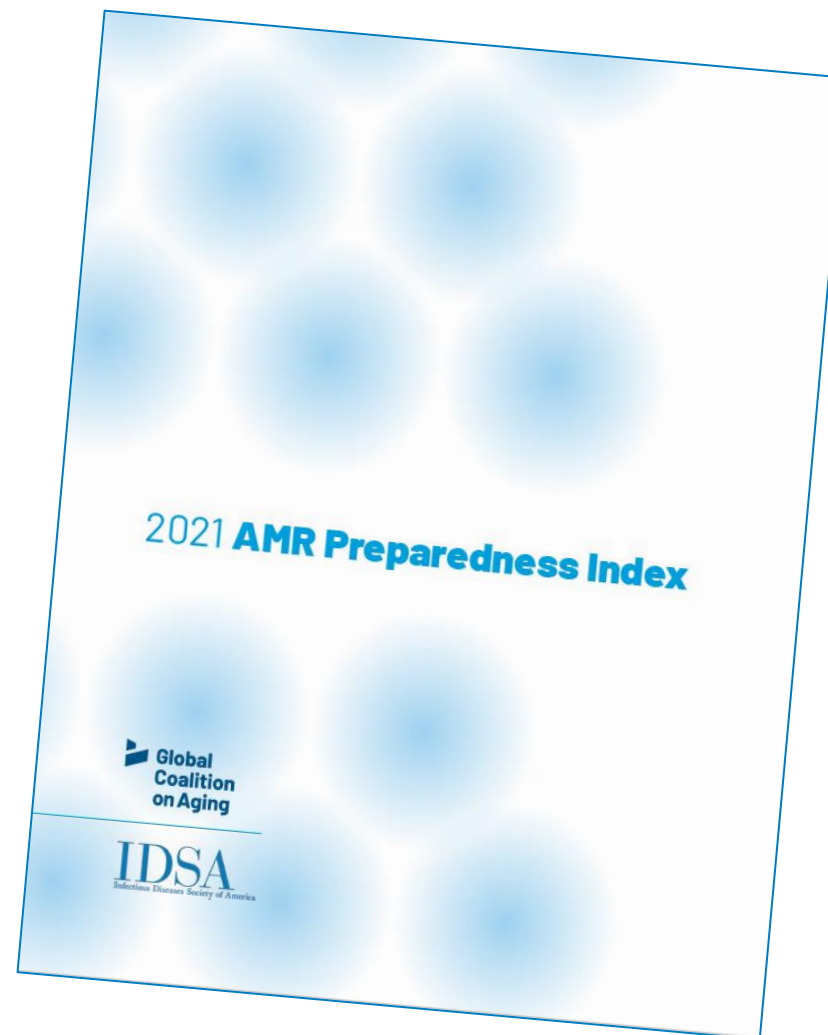


AMR Undermines Economic Growth and Stability

Global Human and Economic Costs of AMR¹⁸



A Call to Action: The 2021 AMR Preparedness Index



The AMR Preparedness Index is a **first-of-its kind** look at how well countries are addressing antimicrobial resistance.

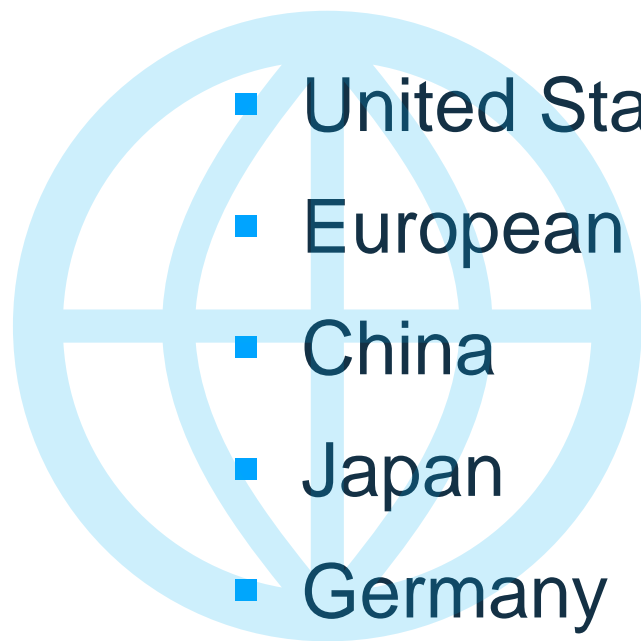
It is a **data-driven tool** that assesses country performance and **holds policymakers accountable** for public commitments they have made to address the growing crisis.

Goals of the AMR Preparedness Index

- Evaluate progress and identify gaps in policy actions
- Provide a third-party-validated tool for use by decisionmakers, experts, advocates and media
- Highlight and reward government leadership where tangible progress is identified
- Set standards for best practices
- Help shape and influence public policy
- Identify and give expression to important voices in the AMR public debate
- Foster cross-sector and cross-discipline partnerships to spur action

Countries Evaluated

Top 12 G20 Economies by GDP



- United States
- European Union
- China
- Japan
- Germany
- India
- United Kingdom
- France
- Italy
- Brazil
- Canada
- South Korea

Index Advisory Council

Members of the AMR Preparedness Index Advisory Council

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

Gemma Buckland Merrett, Science Lead Drug Resistant Infections, Wellcome Trust

John Rex, Chief Medical Officer & Director, F2G, Ltd; Operating Partner, Advent Life Sciences

Ryoji Noritake, CEO, Health and Global Policy Institute

Zhang Zhenzhong, Secretary General, China Health Economics Association

Ninie Wang, Founder and CEO, Pinetree Care Group

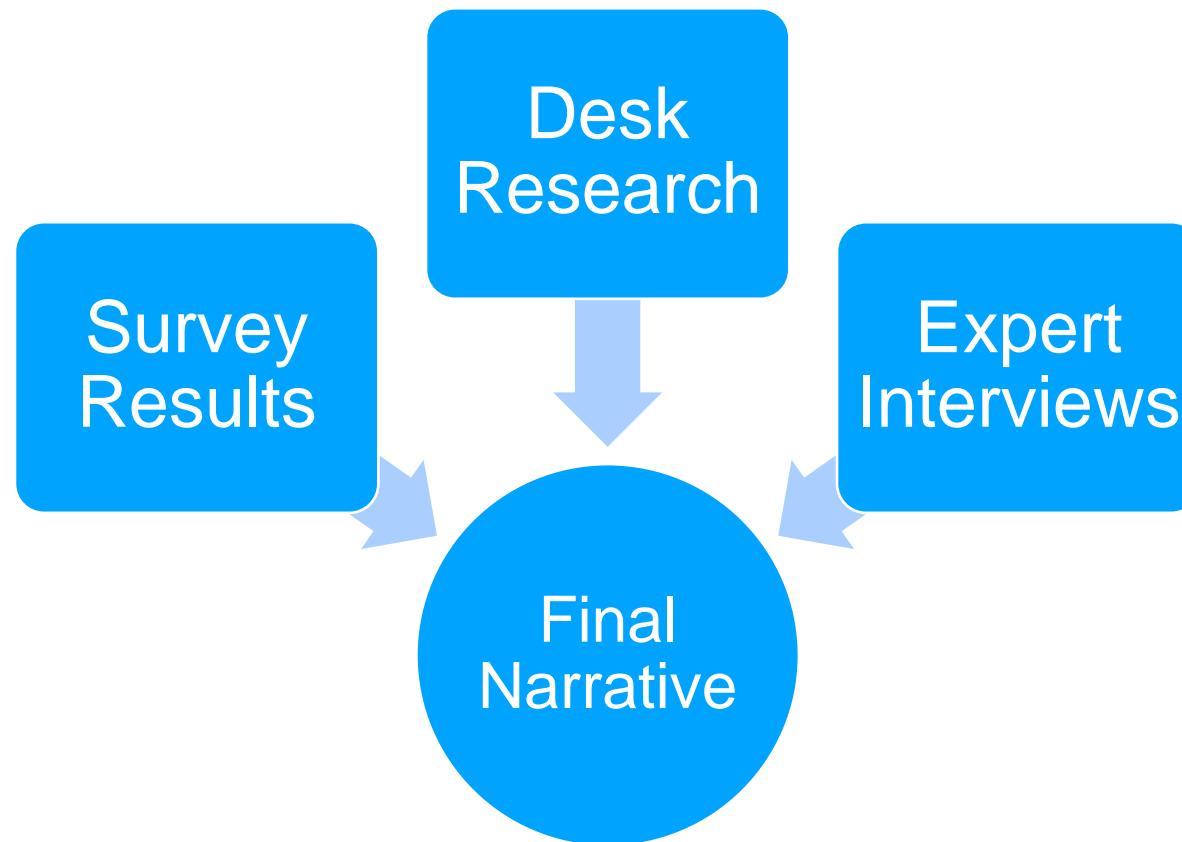
Alex Kalache, President, International Longevity Centre-Brazil and co-President; Global Alliance of International Longevity Centres

Ramanan Laxminarayan, Founder and Director, Center for Disease Dynamics, Economics & Policy

Dame Sally Davies, UK Special Envoy on Antimicrobial Resistance

Index Methodology

Insights from Research Pillars Shape Final Narrative



Policy Evaluation Framework – Categories & Indicators

NATIONAL STRATEGY



- National Action Plan
- Research Investment
- Working Groups, etc.

AWARENESS & PREVENTION



- Information and Training
- Vaccine
- Surveillance and Monitoring
- Healthcare Setting

ACCESS



- General Access and Quality
- Availability
- Affordability

APPROPRIATE & RESPONSIBLE USE



- Healthcare System Utilization
- Usage

AMR & THE ENVIRONMENT



- Environment in AMR NAPs
- Antimicrobial Use in Animals
- Responsible Manufacturing
- Disposal

INNOVATION



- Push Incentives
- Pull Incentives
- Innovation Support
- R&D Investment
- IP Protections
- Research Infrastructure
- Development and Partnership Efforts
- Novel Valuation Methods

COLLABORATIVE ENGAGEMENT

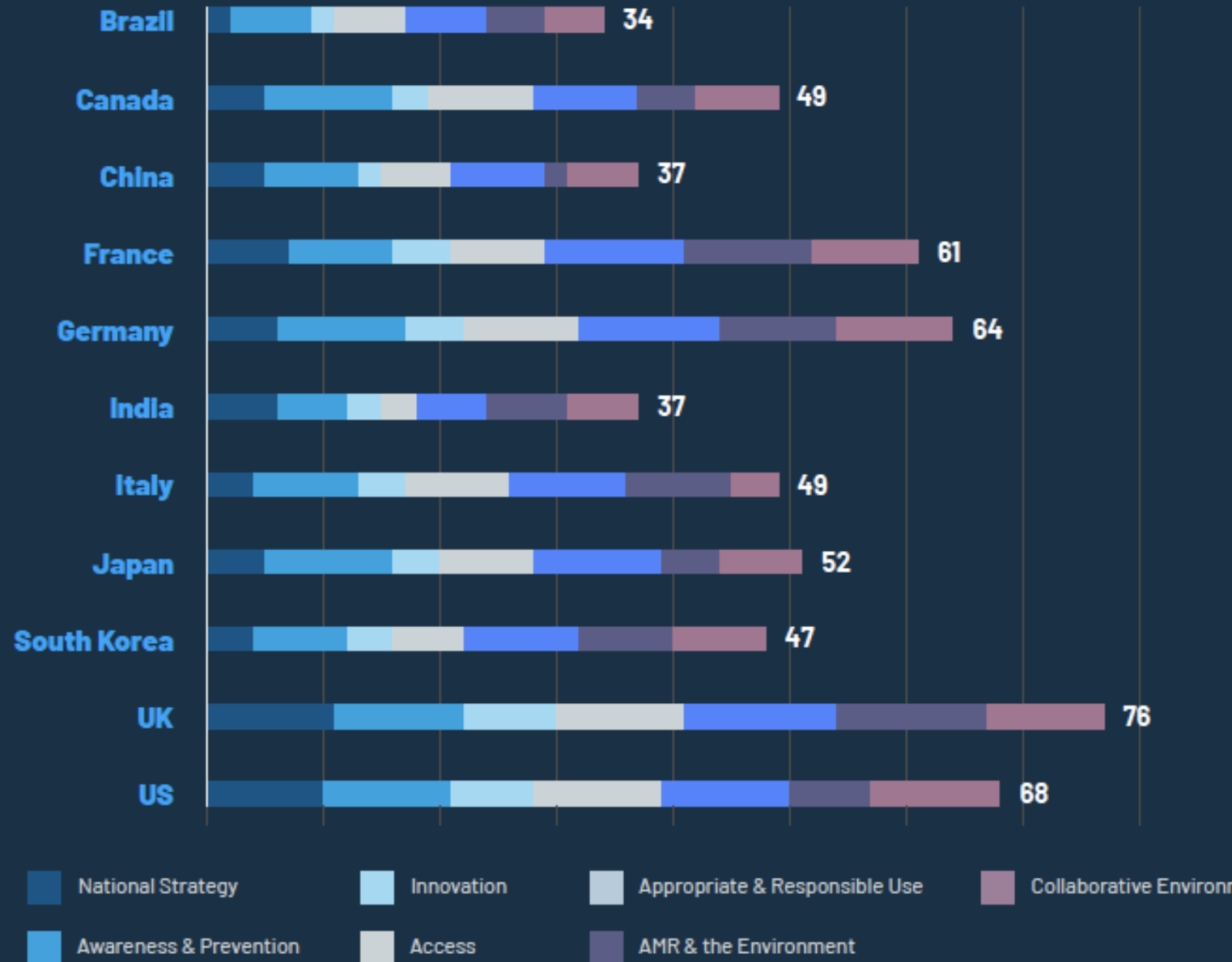


- NGO-Supported Engagement
- Partnerships
- Global Collaborative Actions

Overall Results

The complete ranking of all 11 countries showed the UK leading the way on AMR, while Brazil, China, and India have much work to do still.

Overall Scores with Category Contributions



Results for Japan

The 2021 Index commended Japan for its prevention and appropriate use efforts, while highlighting the need to do more on support for innovation.



Overall Score

52

National Strategy

38

Awareness & Prevention

75

Innovation

30

Access

57

Appropriate & Responsible Use

80

AMR & the Environment

38

Collaborative Engagement

47



How the Index Has Been Used



A benchmark against which to monitor progress and hold decision-makers accountable



A tool to support advocacy, policy, and research at a global and country levels

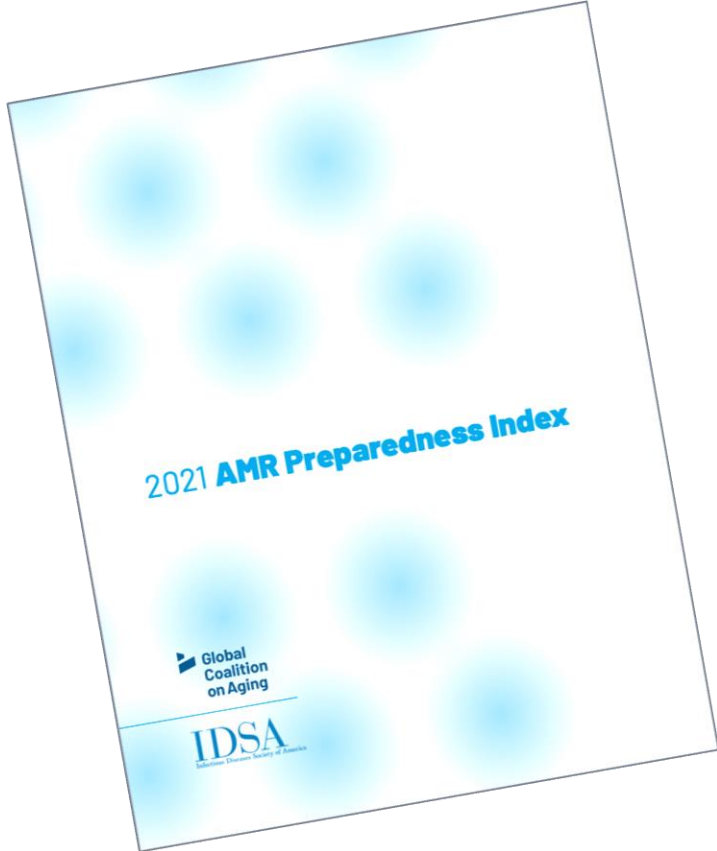


A resource of best practices to successfully address AMR at the country and global levels



A call for collaboration within and among the AMR and aging advocacy communities

High-Impact Launch Event with Expert Panel



Global Coalition on Aging









IDSA
International Dementia Society of America

Webinar:

Join the Official Launch of the 2021 AMR Preparedness Index

June 23rd | 7am EST | 13h CEST | 8pm JST

An expert panel will discuss key findings from the report

 Anand Anandkumar Bugsby Research	 Christine Årdal European Geriatr	 James Anderson IFPMA	 Neil Clancy IDSA	 Michael W. Hodin GCOA	 Dr. Norio Ohmagari National Center for Global Health and	 Susan Wille Schwarz GCOA	 Tiemo Wölken European Parliament, Germany
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Index Shapes the Global Conversation on AMR

The Korea Times

FINANCIAL TIMES

South China Morning Post

THE WALL STREET JOURNAL

NIKKEI Asia

NIKKEI Asia

World Trending Business Markets Tech Politics Economy Features Opinion Life & Arts Podcast

OPINION

Japan must face up to growing danger of drug-resistant germs

To protect aging population, country needs to foster antibiotic development

Ryoji Noritake and Michael Hodin
October 12, 2022 05:00 JST

Illustration of an antimicrobial-resistant bacteria on the colon epithelium. The world can no longer afford to take antibiotics for granted. © SCIENCE PHOTO LIBRARY/AP

Ryoji Noritake is chief executive of Health and Global Policy Institute, an independent think tank based in Tokyo. Michael Hodin is chief executive of the Global Coalition on Aging, which provides business perspectives on aging-related policy and strategy.

In the wake of more than 6.4 million COVID-19 deaths worldwide and unprecedented economic destruction, the global community has no excuse to be caught unprepared for the next pandemic.

Yet right now, a devastating parallel plague is already underway and worsening. Some

Comment / Letters

Letters | China can do more to squash antibiotic-resistant superbugs

• Readers discuss the need for stronger policy on antimicrobial resistance, and how Hong Kong should respond to the banking crisis

Letters Published: 11:30am, 1 Apr, 2023

A woman buys medicine in a pharmacy in Shanghai on March 10. In China, 84 per cent of pharmacies still provide antibiotics without prescriptions. Photo: EPA-EFE

Feel strongly about these letters, or any other aspects of the news? Share your views by emailing us your Letter to the Editor at letters@scmp.com or filling in this Google form. Submissions should not exceed 400 words, and must include your full name and address, plus a phone number for verification.

Antimicrobial resistance is one of the defining global problems of our time.

The Korea Times North Korea National Business Finance Lifestyle Entertainment & Art Opinion Sports World

Opinion

Editorial Columns Thoughts of the Times Cartoon Today in History Blogs Tribune Service Blondie & Garfield Letter to the President

Guest Column

Korea must act now to combat growing AMR threat

By Kim Bong-young and Mike Hodin

Public officials are overlooking one of the gravest long-term threats to the Korean people, the health system, and economy: antimicrobial resistance (AMR).

Some pathogens – bacteria, fungi, parasites, and viruses – have evolved strains that resist the antimicrobial medications we currently have available to fight them. Health care professionals often must watch helplessly as patients succumb to infections that antibiotics could once have easily beaten. They know that new antimicrobials, including and especially antibiotics, could easily gain the victory – but they have none at their disposal.

The pathogens have gained an evolutionary edge as tools used against them have remained static. This is because the market for investment in new innovation has virtually dried up, thanks to a policy framework that does not provide for swift approval of new innovations or adequately reimburse companies for the investments they make to develop new drugs.

Without action, AMR threatens to undermine the very foundations of modern medicine – killing as many as 10 million people worldwide every year by 2050 and shrinking global GDP by as much as 3.8 percent. Yet, today, Korea currently does not even have reliable data to understand AMR's impact, much less address it.

HealthAffairs COVID-19 Topics Journal Forefront Podcasts

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Antimicrobial Resistance: A Major Threat To The Promise Of Healthy Aging

Michael W. Hodin

FINANCIAL TIMES

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Antibiotic accountability: how countries and companies perform

FT dashboard tracks responses to the growing threat of antimicrobial resistance

Toolkits Enable Policy Advocacy

AMR in Japan
2021 AMR PREPAREDNESS INDEX

Japan Scoring Summary
2021 AMR PREPAREDNESS INDEX

SCORES FROM THE INDEX

Category	Overall	National Strategy	Awareness & Prevention	Innovation	Access
Score	52	38	75	30	67
Rank	5	6	4	5	7

HIGHLIGHTED STATISTICS

Statistic
Deaths attributable to resistance in High Income GBD Region (per 100,000)
DALYs attributable to resistance in High Income GBD Region (per 100,000)
Annual Cost Attributed to AMR Infections
Total Public AMR Research Funding

KEY ACTIONS

What key actions has Japan taken on AMR?

- Japan's NAP was in its fifth and final year in 2020; a new version is currently being formulated
- Vaccination programs are well funded and the NAP has sought to integrate vaccination efforts into AMR prevention
- The AMR Clinical Reference Center has led many awareness raising efforts for the general public through traditional campaigns and media buys, while also providing online AMR education for both the general public and through targeted programs to HCPs
- Japan's GLI network is undergoing
- There are interested
- The Japan standards of Health, I making rec to discour

Overall Score: 52

COUNTRY RANK: 5

Overall Scores with Category Contributions

Country	Overall Score
Brazil	34
Canada	49
China	37
France	61
Germany	64
India	37
Italy	49
Japan	52
South Korea	47
UK	74
US	68

Legend: National Strategy, Awareness & Prevention, Innovation, Access, Appropriate & Responsible Use, AMR & the Environment, Collaborative Environment

Text: In 2017, two deadly drug-resistant bacteria strains ravaged Japan, causing an estimated 8,000 deaths. Although prevention efforts are strong, antimicrobial usage has remained fairly stable and calls to revive the antimicrobial pipeline have gone unanswered.

2021 AMR PREPAREDNESS INDEX

Global Coalition on Aging **IDSA**
Infectious Disease Society of America

薬剤耐性 (AMR) との闘いに勝つためには、新規抗菌薬のパイプラインを拡充しなければならない

2021 AMR PREPAREDNESS INDEX

Global Coalition on Aging **IDSA**
Infectious Disease Society of America

薬剤耐性 (AMR) と薬剤耐性感染症による死亡者数は世界で毎年127万人と推定され、2050年には1,000万人に達すると予想されている

10M

1.27M

2022 **2050**

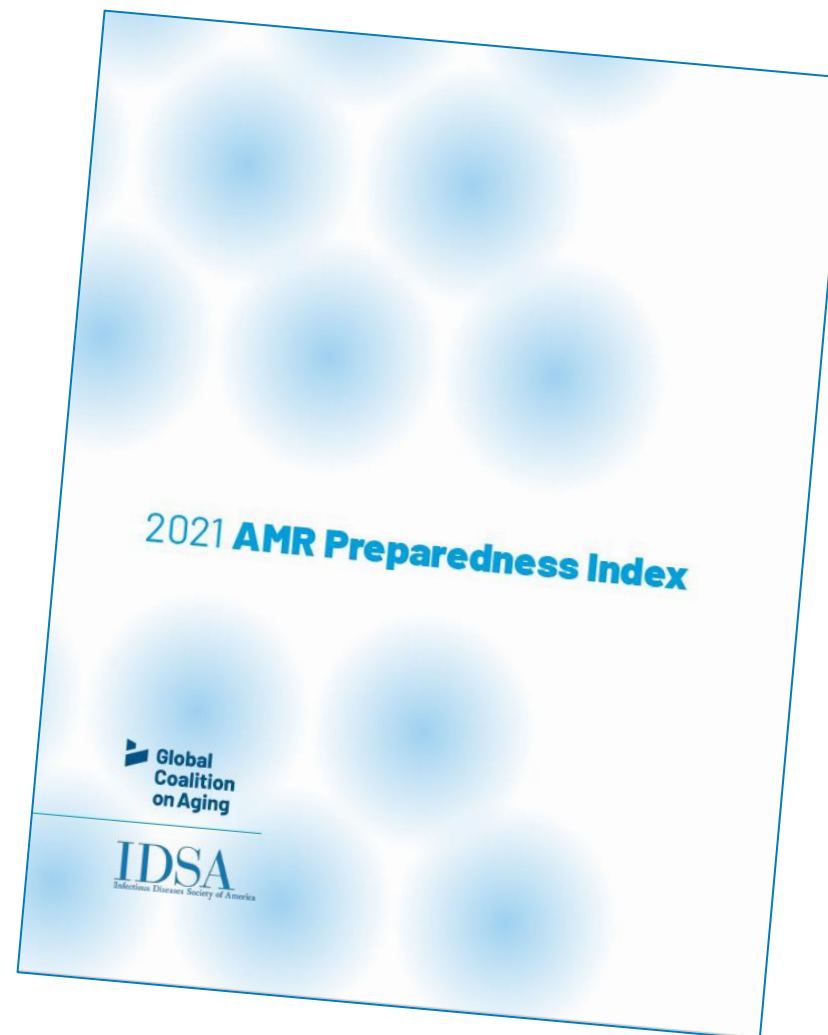
2023 AMR Preparedness Index Progress Report

The 2023 Progress Report will provide a **mid-stream update** on national and international **progress since 2021**, with a focus on the 11 countries examined in the first AMR Preparedness Index.

The 2023 Progress Report will be:

- Narrative-driven
- Oriented to capture and amplify tangible advances towards effective policy, even if not yet complete
- Linked to indicators and Calls to Action from the 2021 AMR Preparedness Index
- Launched in the lead-up to the High-Level Meeting in 2024

Results by Indicator



Priorities for Action & Overall Scores

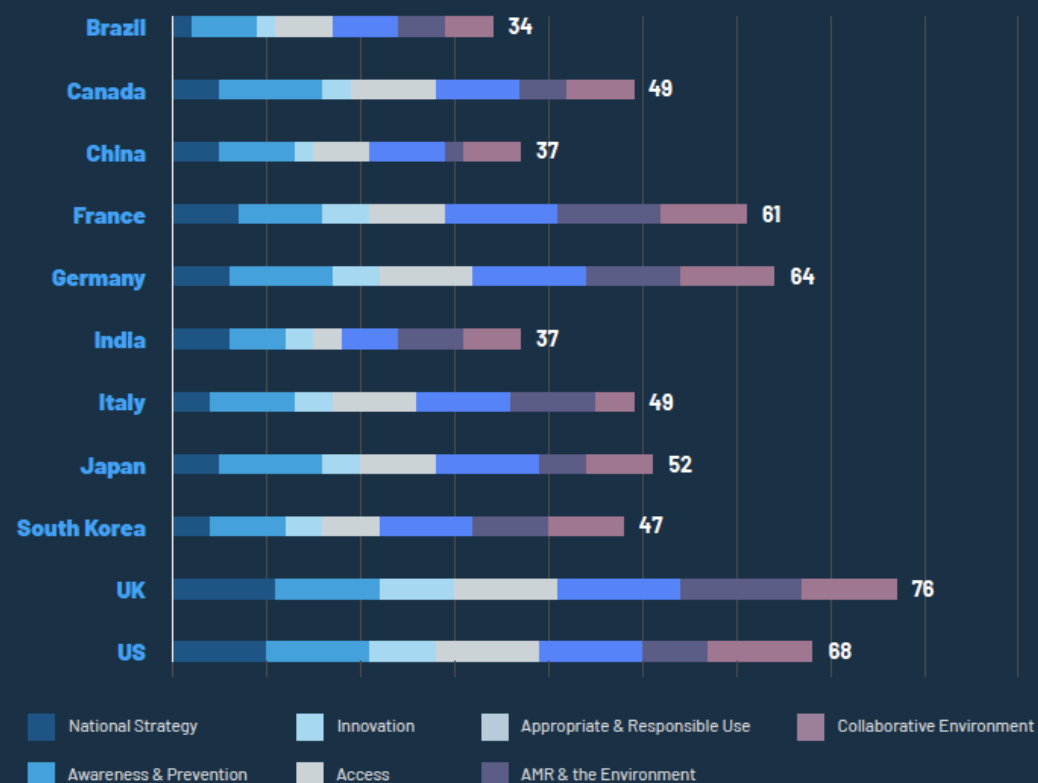
- **Strengthen and fully implement** national AMR strategies
- Raise awareness of AMR and its consequences, while **targeting prevention opportunities**
- Bolster **surveillance** and **leverage data** across AMR efforts
- Enable a **restructured antimicrobial marketplace** to stimulate innovation
- Promote **responsible and appropriate use** of antibiotics
- Enable **reliable and consistent access** to needed and novel antimicrobials
- More effectively **integrate the One Health approach**, including environmental considerations, into national strategies
- **Better engage** with other governments, third-party organizations, and advocacy groups

Overall Scores

The graph below provides a holistic view of each country's scores. It highlights categories where countries have the most opportunity for improvement and areas where countries are demonstrating best or "better" practices. Further scoring visuals for specific categories are provided throughout the Index.

The category scores have been equally weighted – with a maximum of approximately 14% per category – to construct an overall Index score on a 100-point scale. For all countries, there is clearly much room for improvement, though some trends have emerged: most countries (bar the UK and US who fare slightly better) perform especially poorly in the National Strategy, Innovation, and Collaborative Engagement categories, with scores in the Innovation category being the lowest overall; all countries perform insufficiently in the Awareness & Prevention and Access categories, with India lagging behind; and more developed countries tended to fare better in the Appropriate & Responsible Use category.

Overall Scores with Category Contributions



National Strategy: Key Findings & Scores

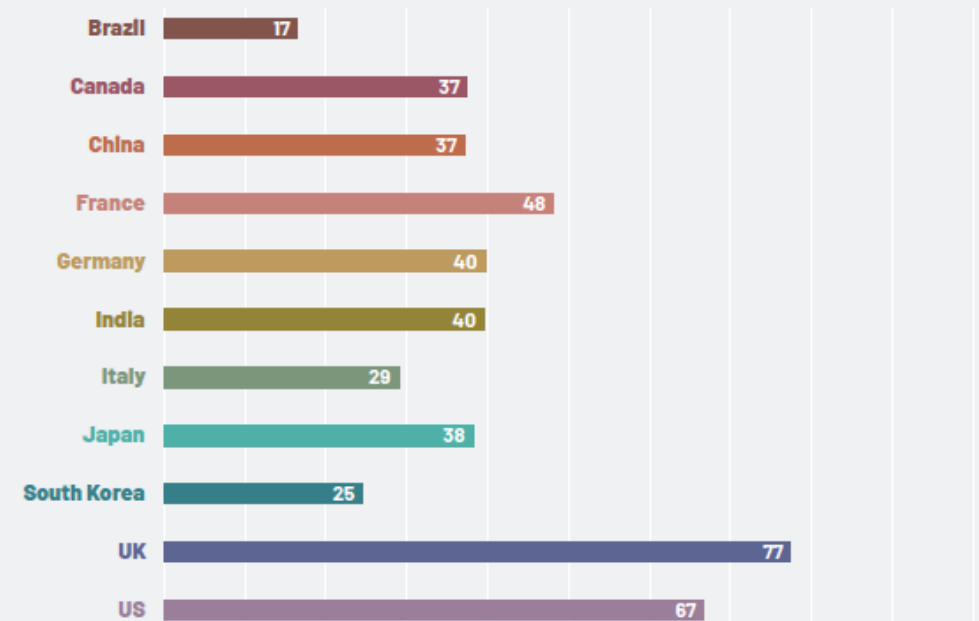
- Countries are **not making adequate investments** to combat the AMR threat
- AMR is **not a political priority** in most countries
- NGOs, advocacy groups, and patient organizations are often **missing from national conversations**
- The global nature of antimicrobial resistance (AMR) has **discouraged countries from taking bold, unilateral actions**
- Many countries are **insufficiently engaged** with the global AMR community
- **COVID-19 has virtually halted implementation** of national AMR strategies



National Strategy

Evaluates the high-level policies, commitments, and investments that national governments have undertaken to combat AMR.

National Strategy Country Comparison



National Strategy: Calls to Action

- Governments must make **bolder financial investments** to tackle AMR
- Governments should **better engage NGOs, advocacy groups, and the patient community** in developing and implementing NAPs and other AMR initiatives
- Governments should develop **more ambitious NAPs** and **provide sufficient funding to achieve goals**
- Governments should **lean into AMR initiatives and actions now**

Awareness & Prevention: Key Findings & Scores

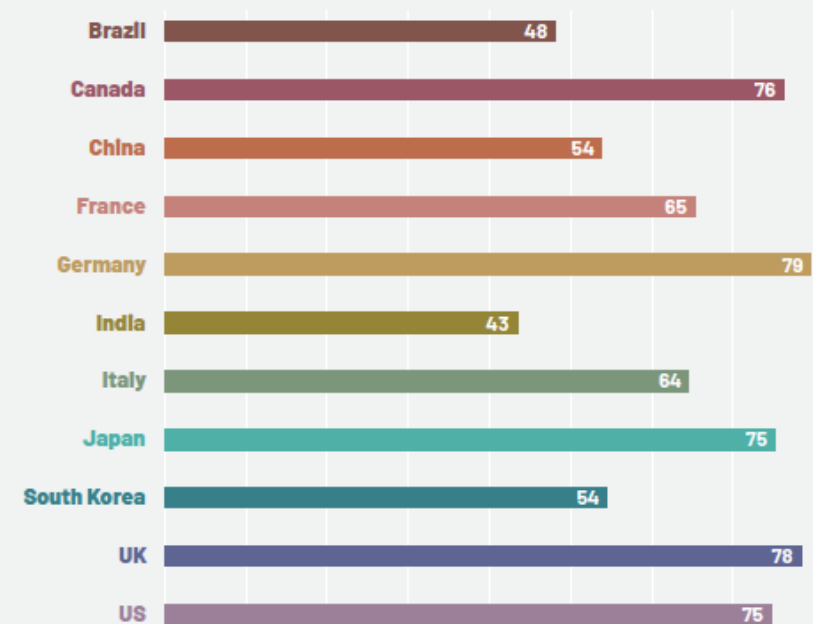
- Public awareness across most countries remains low, **driving overuse**
- Countries' **vaccination programs are not being fully leveraged**
- **Weak, insufficient healthcare systems and inadequate public health infrastructure** are major barriers
- Most countries have dedicated surveillance and monitoring systems, but the **degree of sophistication and transparency varies**
- In many countries, **data collected in monitoring systems are inadequate and do not drive decision making**
- **AMR training for medical professionals is available but needs strengthening**
- Despite ongoing challenges, many governments and NGOs **have successfully implemented awareness campaigns**



Awareness & Prevention

Assesses the level of commitment within countries to fund and facilitate efforts to increase awareness among stakeholder groups and improve mechanisms that can prevent and monitor AMR.

Awareness & Prevention Country Comparison



Awareness & Prevention: Calls to Action

- Governments should strengthen efforts to improve patient awareness
- Governments should bolster training requirements and program funding for medical professionals and medical trainees for IPC and beyond
- Governments should redouble vaccination efforts
- Governments should improve sanitation in healthcare systems and public health infrastructure along WHO IPC guidelines
- Governments should increase surveillance and monitoring commitments

Innovation: Key Findings & Scores

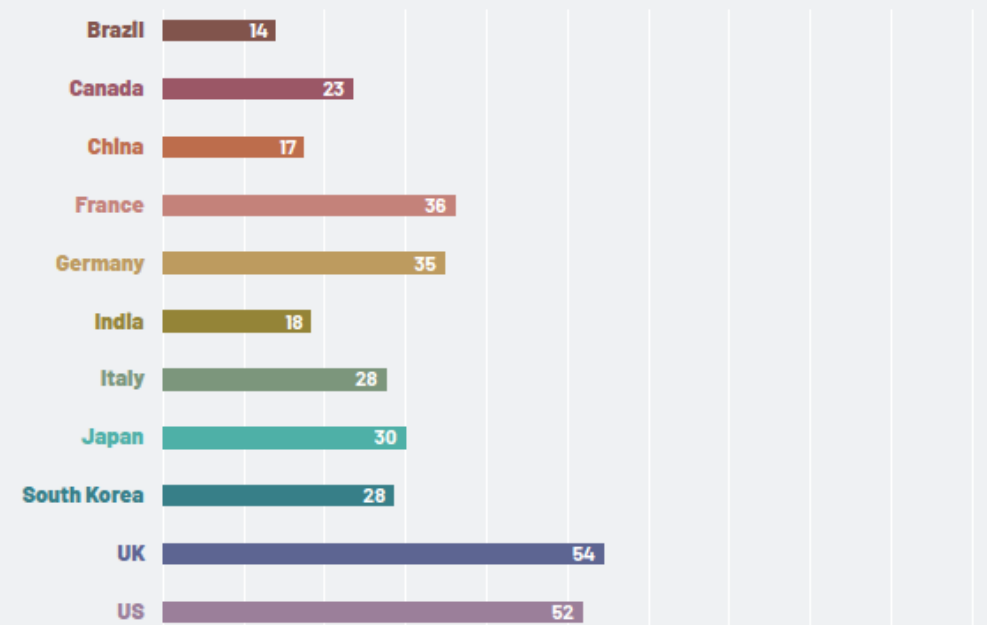
- There is a consensus that **antimicrobials are not fairly valued** in most countries and that reforms are needed
- **No countries have effective pull incentives**
- Most countries have **stalled on high-level discussions**
- **Very few countries have erected the research infrastructure necessary** to support the development of AMR diagnostics, surveillance technologies, and new antimicrobials
- Most countries have made **measurable progress implementing push incentives**



Innovation

Quantifies governments' commitments to foster and support AMR innovation, especially in areas of greatest opportunity, including novel valuation and pull mechanisms.

Innovation Country Comparison



Innovation: Calls to Action

- Governments should **implement pull incentive programs within the next three years**
- Governments should **increase investments in AMR innovations for surveillance and diagnostics**

Access: Key Findings & Scores

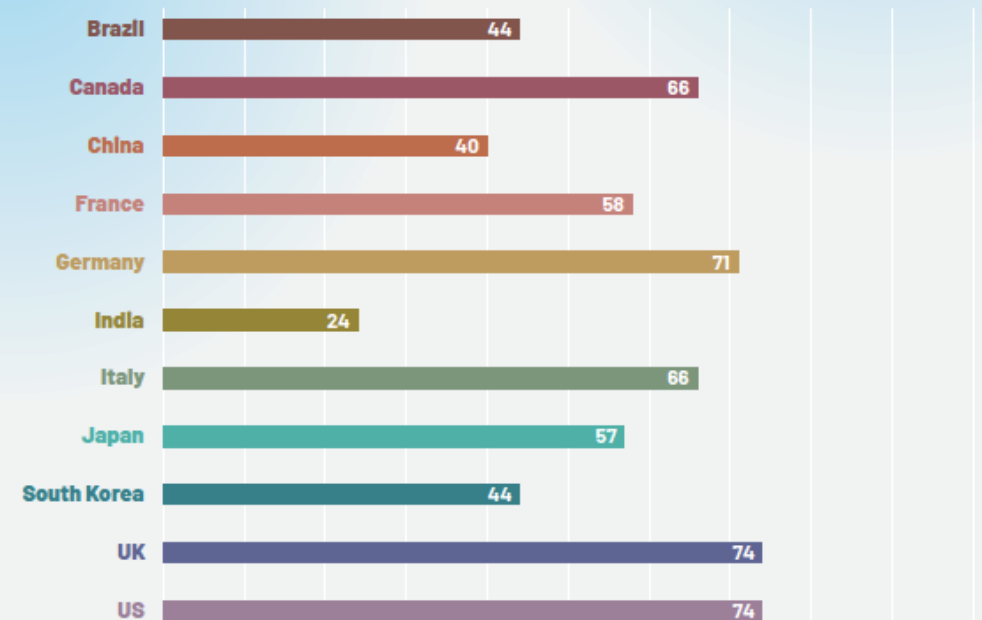
- **Access to novel antimicrobials is limited** in all but a few countries
- Patients continue to **struggle accessing older (non-novel) antimicrobials**
- Government **delays in moving drugs to a reimbursement list** can also stymie access



Access

Measures the level of access that persons within countries have to both older and novel antimicrobials.

Access Country Comparison



Access: Calls to Action

- Governments should **expedite access by reducing regulatory hurdles and accelerating government adoption**
- Governments should **make the availability of novel antimicrobials a national priority**
- Governments should **establish or support sustainable systems for manufacturing and dispensing antimicrobials across the supply chain**

Appropriate & Responsible Use: Key Findings & Scores

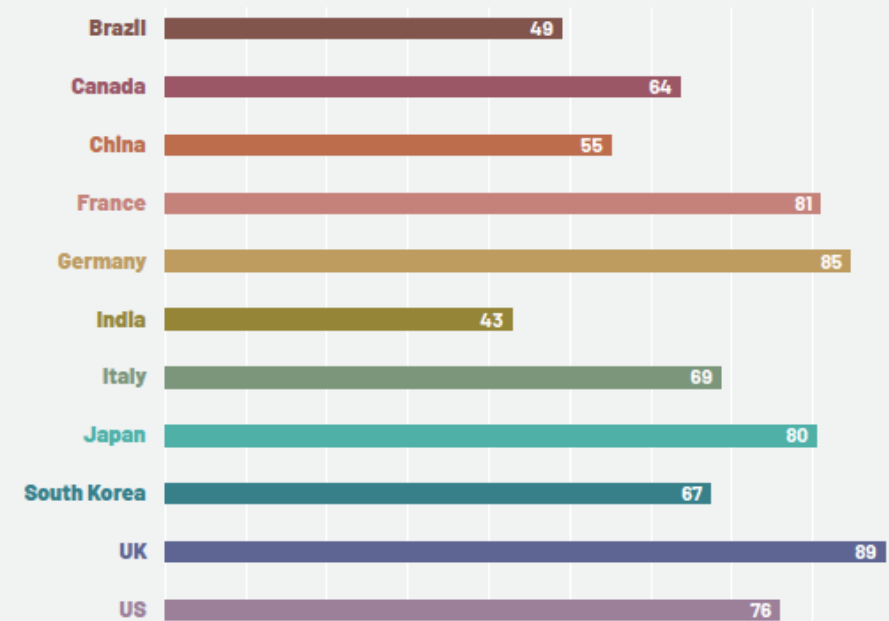
- **Over-the-counter availability compounds AMR challenges**
- For drugs that require a prescription, **overprescribing is a problem**
- **General practitioners lack tools and resources needed for proper diagnosis**
- **Patients clamor for antimicrobials**
- **Governments fall short on monitoring and oversight**
- Hospitals outperform outpatient settings, but **stewardship efforts are generally still inadequate in many countries**
- Some countries are taking **additional action to curb overprescription**



Appropriate & Responsible Use

Assesses governments' efforts to reduce misuse and overuse of antimicrobials and promote rational diagnosis.

Appropriate & Responsible Use Country Comparison



Appropriate & Responsible Use: Calls to Action

- Governments should **provide better access to diagnostic tools for general practitioners**
- Governments should **improve enforcement and administration of existing laws**
- Governments should **provide guidance and funding to strengthen stewardship in inpatient settings and to implement stewardship in outpatient settings**
- Governments should **support expansion and training of the medical workforce necessary to promote appropriate antibiotic use**

AMR & the Environment:

Key Findings & Scores

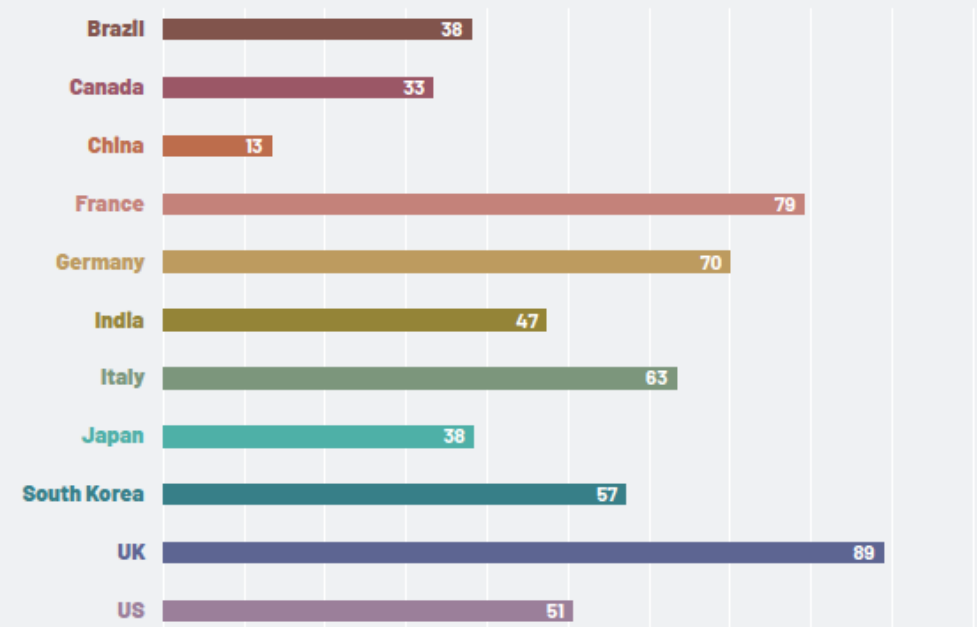
- The principles of the One Health approach continue to gain traction worldwide and are being acknowledged in environmental policies and private sector actions
- More AMR environmental research is required, and non-human uses remain critical
- Policies and implementation are limited, but some stakeholders are taking action



AMR & the Environment

Examines the ways in which national governments are attempting to manage antimicrobials throughout their life cycle: production, usage in the environment, and disposal.

AMR & the Environment Country Comparison



AMR & the Environment: Calls to Action

- Governments should **better integrate environmental controls in their National Actions Plans**
- Governments should **continue to integrate the One Health approach and give equal weight to environmental components**
- Governments should **support enhanced data collection to improve global understanding of the impact of antimicrobials in the environment**

Collaborative Engagement: Key Findings & Scores

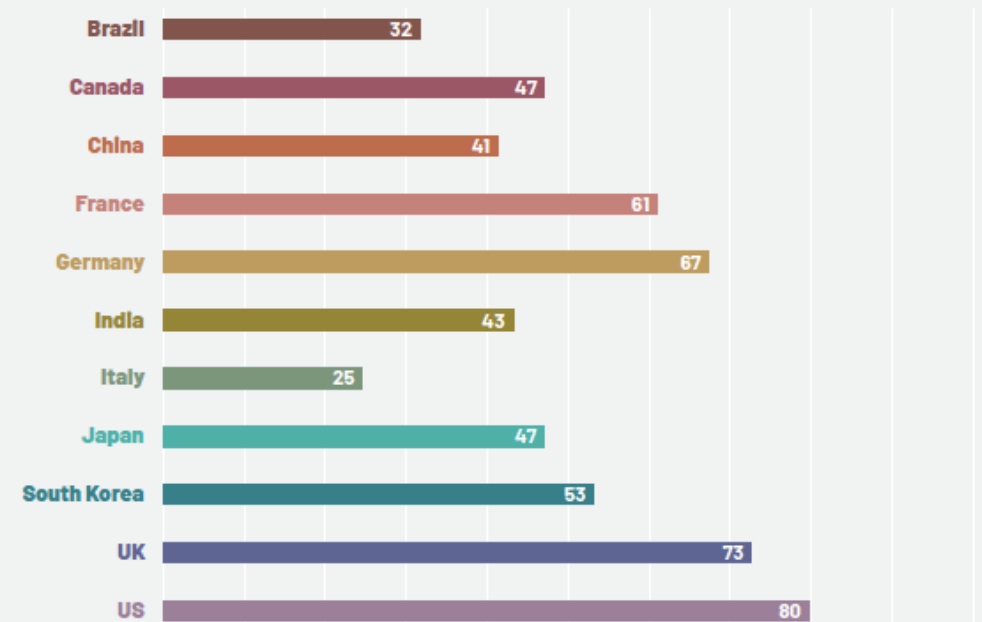
- Country-level NGOs, advocacy groups, and patient organizations play a critical role in advancing AMR initiatives in four core areas:
 - Innovation
 - Research
 - Surveillance
 - Monitoring and awareness



Collaborative Engagement

Captures how effectively national governments are facilitating collaborative engagement to address AMR.

Collaborative Engagement Country Comparison



Collaborative Engagement: Calls to Action

- Governments should **provide more direct support for research institutions and working groups, including establishing and growing clinical trial networks**
- Governments should **partner with NGOs, advocacy groups, and patient organizations on pilot programs**
- Countries should **invest in training the next generation of AMR researchers and clinicians to support clinical trials**

Conclusion

The AMR crisis is here, and national governments must step up now to address existing threats

If countries fail to take needed action, the AMR crisis will become a full-blown humanitarian catastrophe, threatening the miracle of human longevity

With concerted action, progress can be made

Overall Scores with Category Contributions

