

WEBINAR

# SECURE: Improving access to antibiotics through new economic models

Wednesday 14 February 2024

14:00 - 15:00 CET

08:00 - 09:00 EST



secure

## ▶ Today's moderator

### Javier Guzman



**Javier Guzman** is the Director of Global Health Policy and a Senior Policy Fellow at the Center for Global Development (CGD).

He leads research on the economics of global health challenges with a focus on expanding access and driving greater value-for-money for global public goods for health.

This work includes the 2022 CGD working group on *A New Grand Bargain to Improve the Antimicrobial Market for Human Health* – chaired by Javier – which examined policy options for improving antimicrobial innovation, access, and stewardship in low- and middle-income countries and driving global action against antimicrobial resistance (AMR).

# ▶ Today's panel

## SECURE: Improving access to Antibiotics through new economic models



**Speaker:**  
**Alexandra Cameron**  
Senior Expert,  
*Impact Initiatives and Research Coordination (IRC), Antimicrobial Resistance (AMR) Division, World Health Organization – WHO (Switzerland)*



**Speaker:**  
**Kim Faure**  
SECURE: Project Lead,  
*Global Antibiotic Research & Development Partnership – GARDP (South Africa)*



**Yewande Alimi**  
One Health Unit head  
*Africa Centres for Disease Control and Prevention – Africa CDC (Ethiopia)*



**Joël Denis**  
Director General Centre for Vaccine & Therapeutics Readiness,  
*Public Health Agency of Canada (Canada)*



**Jennifer Cohn**  
Director, Global Access,  
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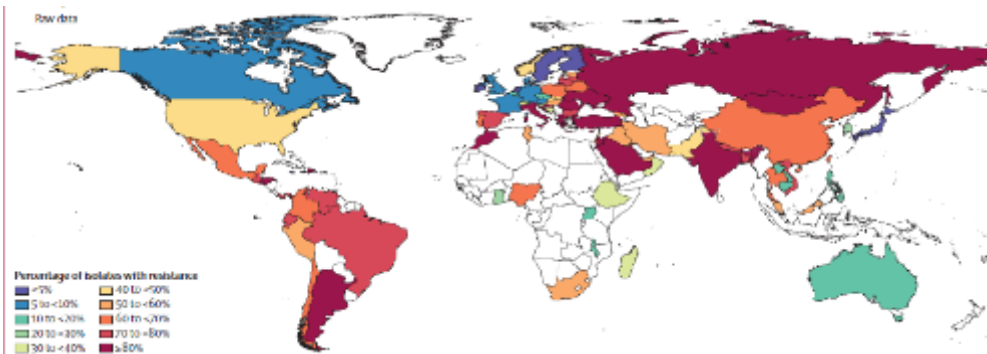


**Moderator:**  
**Javier Guzman**  
Director of Global Health Policy and a Senior Policy Fellow,  
*Center for Global Development (USA)*

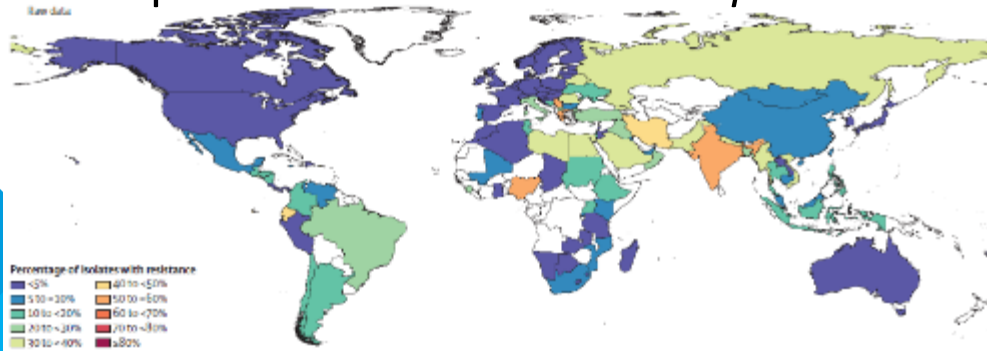
# ▶ Low- and middle-income countries are the worst affected by Antimicrobial Resistance (AMR)

Resistance to antibiotics is growing....

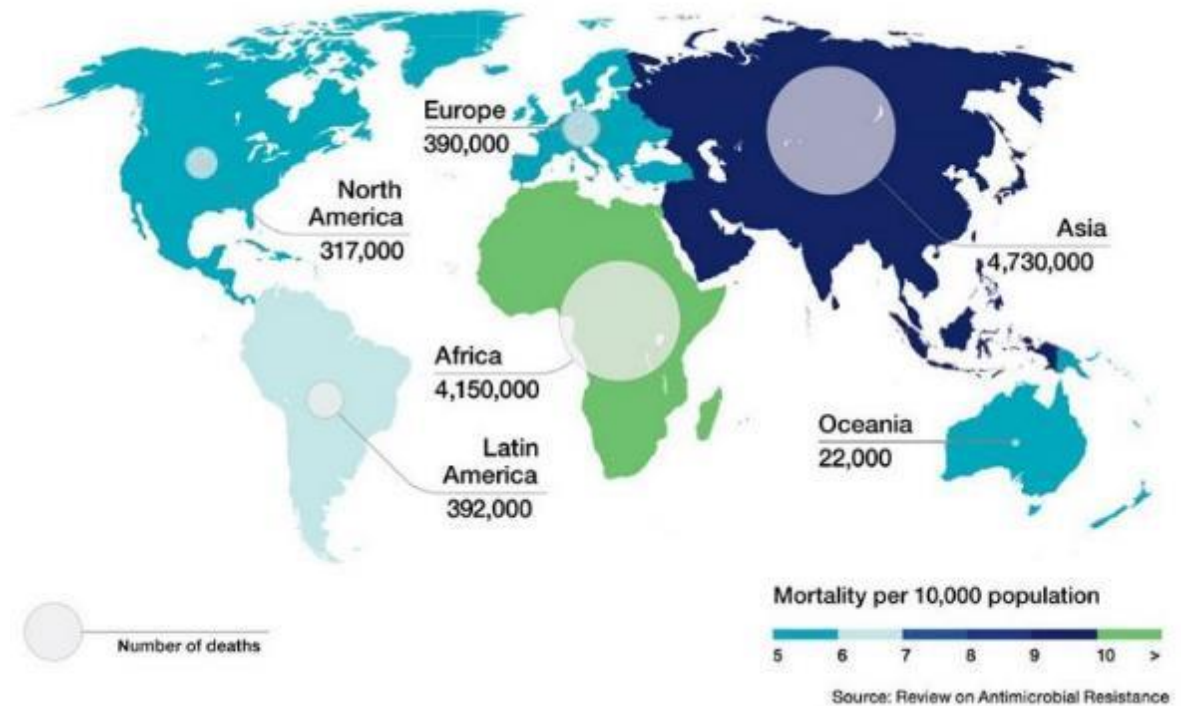
Carbapenem-resistant *Acinetobacter baumannii*



Carbapenem-resistant *Klebsiella pneumoniae*

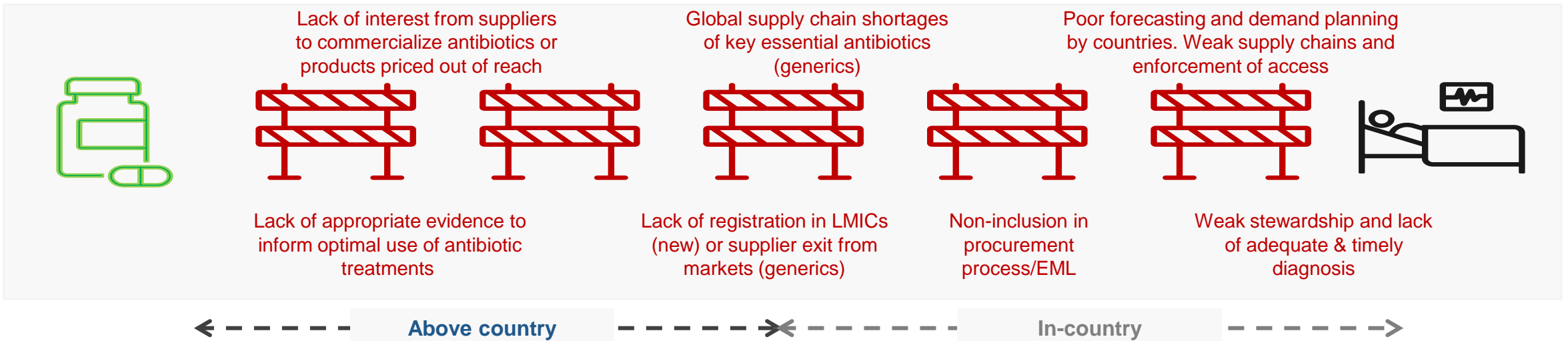


...by 2050, it is estimated that 9 million people in LMICs will die of drug-resistant infections each year



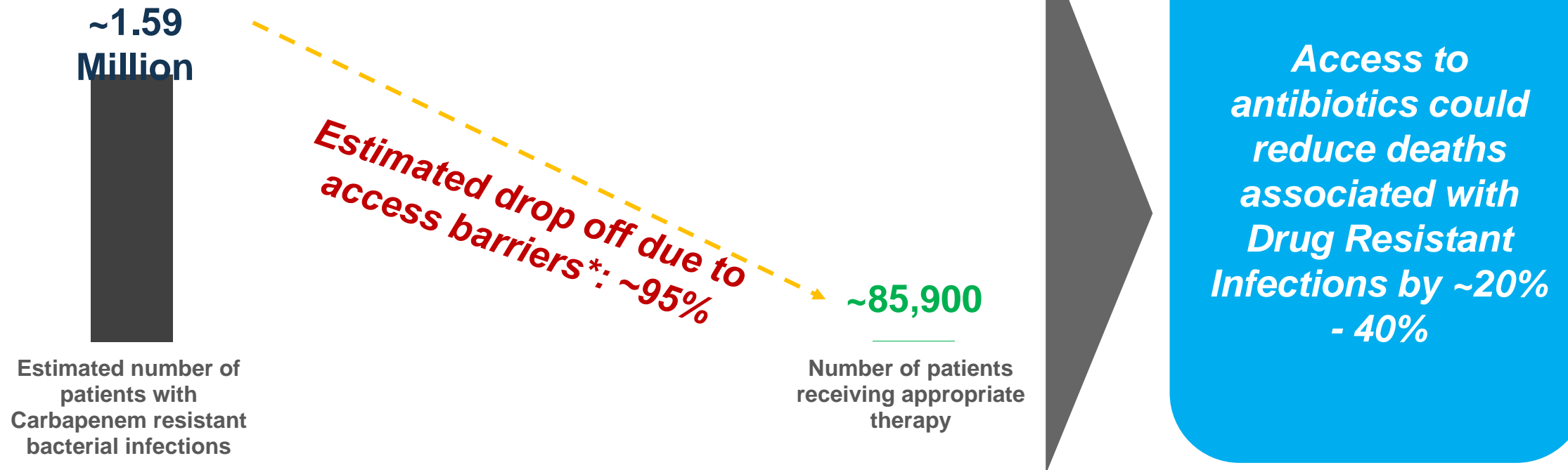
# Multiple challenges prevent sustainable access to life saving antibiotics

## Key Access Hurdles for new and existing antibiotics



Solving for these unique barriers requires a set of tailored interventions

# ▶ Improving access could have a dramatic impact on AMR associated deaths for LMIC's



\*Using estimates from 2019 GRAM study (published in Lancet), we have calculated the access levels for Carbapenem resistant bacterial infections in Bangladesh, Brazil, Egypt, India, Kenya, Mexico, Pakistan, and South Africa

## ▶ **SECURE is an initiative aimed at improving access to antibiotics**

- SECURE is a collaborative initiative from GARDP & WHO
- SECURE Portfolio of Antibiotics:
  - quality-assured antibiotic portfolio **driven by public health and clinical needs**
  - **new antibiotics, especially Reserve**, to address drug-resistant infections
  - **existing antibiotics** that are not widely available or that suffer from frequent supply chain interruptions and/or shortages
- **SECURE will work directly, as well as through partnerships with organizations and countries.** SECURE will also play a key role in ensuring that global, regional and country activities are coordinated and mutually reinforcing.

**SECURE aims to improve access to new and existing antibiotics in a sustainable, equitable and appropriate way**

▶ **How SECURE aims to address the key access challenges:**  
**Outcomes and Impact**

**Optimise country level antibiotic portfolios for treating drug-resistant infections**

**Improve transparency of information for antibiotic purchase decisions**

**Increase product availability and lower prices through better market predictability and efficiencies**

**Steward new product introduction pathways to safeguard effectiveness of antibiotics**

- 1. Increased patient availability, affordability, and appropriate use of prioritized antibiotics**
- 2. Reduced number and/or duration of shortages**

**Reduction in AMR-related mortality in LMICs including neonates and children**





# Economic & Procurement model

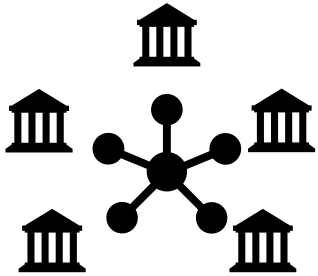
## ► Purpose of the modelling

- To understand the **impact and costs** of different economic and procurement tools that could be used as part of the overall package of SECURE interventions.
- The aim was to create **market efficiencies and predictability**, for example by aggregating antibiotic demand across multiple countries through pooled or coordinated procurement mechanisms.
- The goal is to **optimise pricing and availability** for countries by creating a more attractive market for suppliers and surety of supply, whilst ensuring appropriate stewardship

**Boston Consulting Group** was contracted to support the analysis and development of the unique model.

- Multiple key opinion leader interviews and;
- Pressure tested with expert informants for feasibility and country suitability

## ► Model assumptions



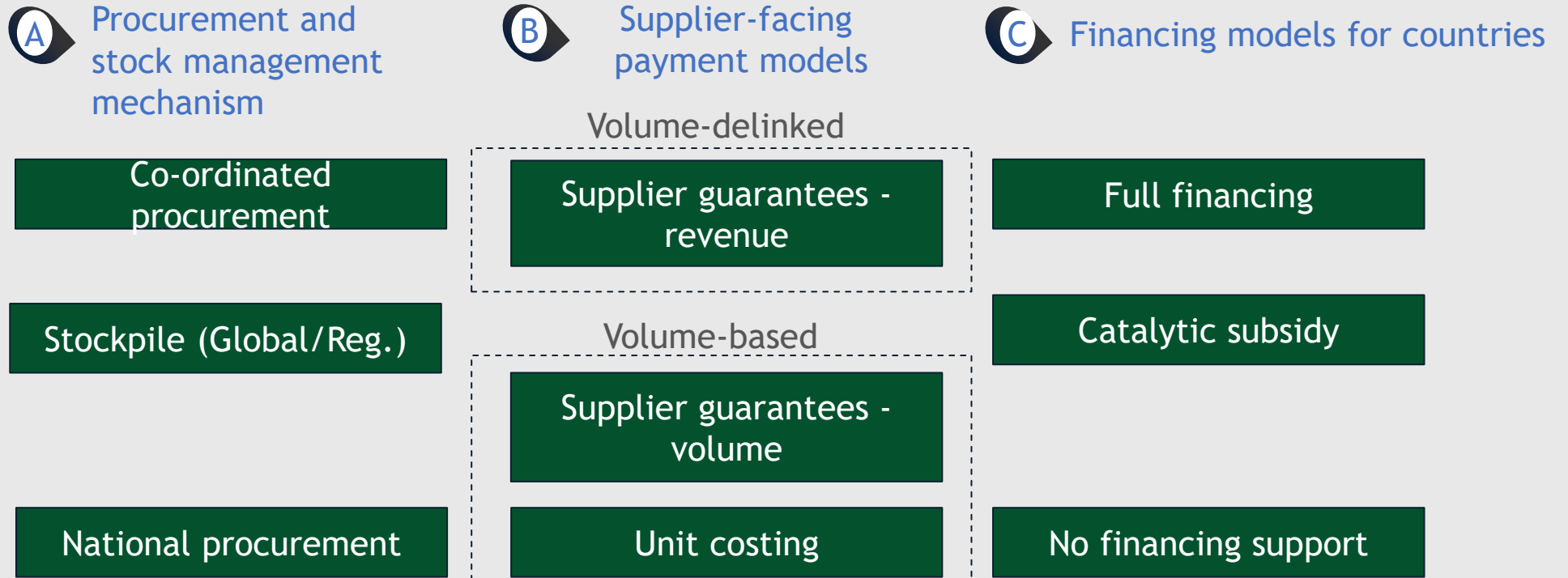
- Assumed pool of 100 million public population that would participate in the mechanism, consisting of a group of countries with LMIC economic status (~ 8 small or 2/3 medium sized countries).
- Antibiotic portfolio would be agreed with countries in the pool, based on their access challenges.
- Process of antibiotic portfolio optimization and prioritization will precede this.
- Accelerated/harmonized registration and packaging mechanisms will also need to be considered.

# ▶ Interventions tested

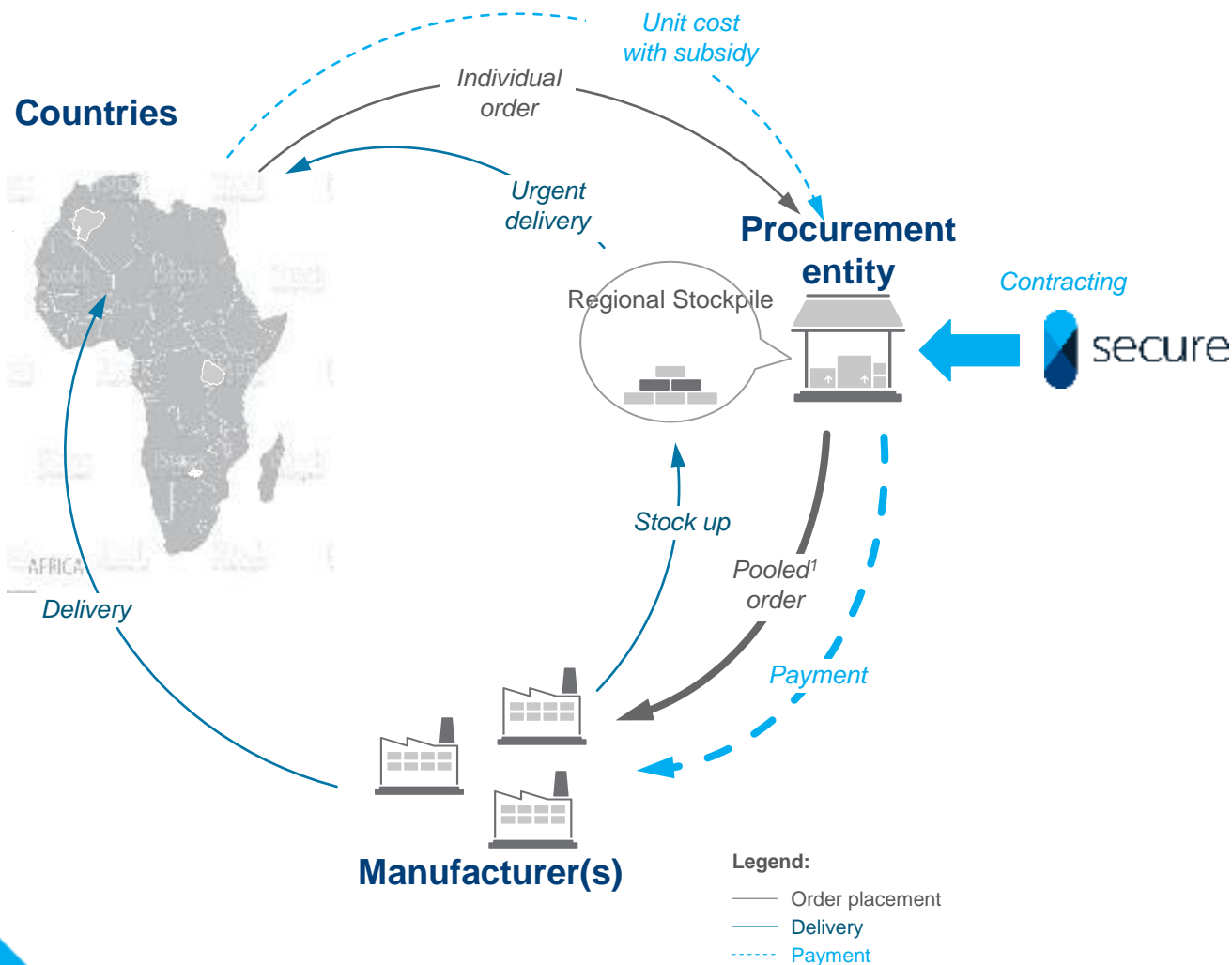
## Economic and financial toolbox



Toolbox



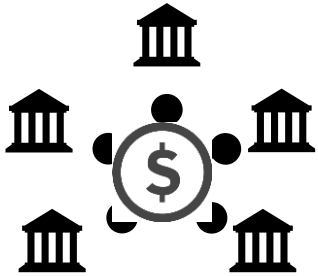
# ▶ How the pooled procurement mechanism may function



## Mechanism function

- SECURE would contract with an existing procurement entity to set up the mechanism and provide technical support to coordinate the countries into the pool.
- SECURE, would finance the catalytic subsidies for first 5 years and act as guarantor in case of country payment default and supplier guarantees.
- Manufacturers deliver product directly to country or stockpile.
- Country responsible for distribution thereafter

## ► Model outputs



- Costs to establish and run the SECURE mechanism are for the entire 100 million pool for the portfolio of antibiotics over the 5 year period of time
- Countries pay for costs of antibiotics especially Access (100%)
- Countries are subsidised via SECURE and its donors for Watch (25% subsidy) and Reserve (95% subsidy) in year 1
- Subsidies decrease thereafter until financing of antibiotics is self-sustaining by countries (for Watch antibiotics within 5yrs)

# Addressing the key access challenges with the most suitable economic and procurement tools



<b>Antibiotic Archetype</b>	Registered, low price, high volume, off-patent	Registered, medium price, medium volume	Non-registered, high price, low volume, on patent
<b>Scenario</b>	“Access”	“Watch”	“Reserve/ new”
<b>Access challenge</b>	Regional shortages due to supply chain, forecasting or manufacturing issues	Affordability, non-inclusion in procurement process, EML and shortages	Affordability, no controlled introduction mechanism, lack of wide registration.
<b>Tools</b>		Pooled procurement	
<i>Mechanism</i>		Regional stockpile	
<i>Supplier-facing models</i>	Unit costing		Supplier guarantee
<i>Country financing</i>	No financing support	Catalytic subsidy	
<b>Example Antibiotic Hospital based portfolio</b>	ampicillin, gentamicin amikacin	ceftriaxone, cefepime, piperacillin-tazobactam, meropenem	colistin, ceftazidime-avibactam, vancomycin
	<i>Products have strong public health importance and persistent access challenges, widely applicable to many countries.</i>		

## ▶ Total Country pool savings through participating fully in the SECURE mechanism over 5 years



Total savings for entire pool (~100m ) over 5 years	Savings USD
Country spend without SECURE participation:	139,316,713*
Country spend with SECURE participation:	96,605,633
<b>Net Savings impact of SECURE participation:</b>	<b>42,711,081</b>
Savings from pooling	28,352,198
Savings from volume guarantee	191,170
Savings from long-term contracting	17,390,478
Savings from subsidy	4,372,533
Administrative fees	-
Expected stockpile orders	(7,595,297)

33.16% saving

Full antibiotic portfolio includes Access - ampicillin, gentamicin, amikacin. Watch - piperacillin/tazobactam, ceftriaxone, vancomycin, cefepime, meropenem. Reserve - ceftazidime/ avibactam, colistin.

\* At average LMICS prices used as benchmark in model



# Costs to establish SECURE mechanism for entire pool of countries for the antibiotic portfolio for 5 years



Costs of mechanism over 5 years	Access ampicillin, gentamicin, amikacin	Watch piperacillin/tazobactam, ceftriaxone, vancomycin, cefepime, meropenem	Reserve ceftazidime/ avibactam, colistin	Total for entire pool (~100m). USD
<b>Total costs:</b>	<b>5,057,805</b>	<b>10,255,454</b>	<b>4,532,216</b>	<b>19,845,475</b>
<b>Net Payment for product</b>	<b>1,431,584</b>	<b>5,380,721</b>	<b>4,102,248</b>	<b>10,914,553</b>
Gross product price	41,777,796	56,643,861	4,986,609	103,408,266
Less country contribution towards product price	(40,346,212)	(51,263,140)	(884,361)	(92,493,713)
<i>Subsidy amount</i>	-	1,891,983	2,480,550	4,372,533
<b>Operating expenses</b>	<b>3,626,222</b>	<b>4,874,733</b>	<b>429,968</b>	<b>8,930,922</b>
<b>SECURE no volumes guarantee</b>			<b>667,561</b>	<b>Additional 667,561</b>

Feasible and self-sustaining solution to improve access to antibiotics in LMICs

## ► Where to from here?

- SECURE is a key role-player in improving access to appropriate essential antibiotics
- SECURE will work in partnership with organizations and countries to encourage their involvement
- A small portfolio of "Access", "Watch", and "Reserve" antibiotics will be identified to test the SECURE model
- We look forward to regional and country discussions, to tailor the economic and procurement tools with the broader SECURE interventions
- Link to full report will be shared.

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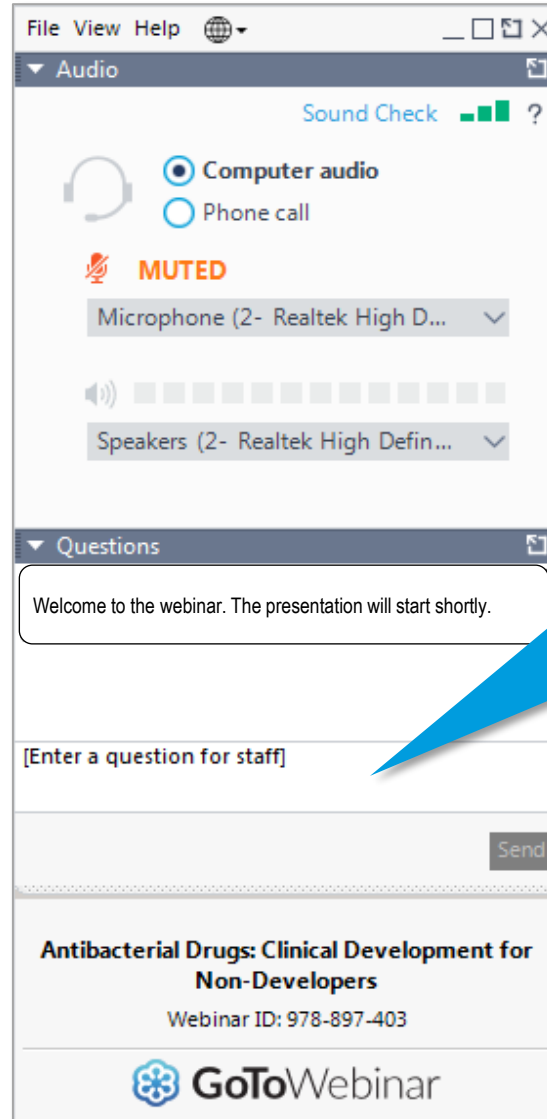
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## ▶ How to submit your questions

If your question is addressed to a specific speaker, please include their name when submitting the question.



The screenshot shows a GoToWebinar interface with two main sections: 'Audio' and 'Questions'. The 'Audio' section includes a 'Sound Check' indicator, radio buttons for 'Computer audio' (selected) and 'Phone call', a 'MUTED' status with a microphone icon, and dropdown menus for 'Microphone (2- Realtek High D...)' and 'Speakers (2- Realtek High Defin...)' with a volume slider. The 'Questions' section contains a message: 'Welcome to the webinar. The presentation will start shortly.', a text input field with the placeholder '[Enter a question for staff]', and a 'Send' button. At the bottom, the webinar title 'Antibacterial Drugs: Clinical Development for Non-Developers' and ID 'Webinar ID: 978-897-403' are displayed, along with the GoToWebinar logo.

The presentation will be followed by an interactive Q&A session.

Please submit your questions via the 'questions' window. We will review all questions and respond to as many as possible after the presentation.

# ▶ Upcoming webinar 27 February

## AMR DISCUSSIONS

 GARDP

### What does the future look like if pull incentives to support antibiotic R&D are insufficient?

#### MODERATOR:



**LAURA JUNG**

Medical doctor & AMR researcher,  
Leipzig University Medical Center,  
Division of Infectious Diseases and Tropical  
Medicine, Leipzig, Germany

#### SPEAKERS:



**AARON KESSELHEIM**

Professor of Medicine  
Brigham and Women's Hospital and  
Harvard Medical School, Boston, USA



**RADHA RANGARAJAN**

Director,  
CSIR-Central Drug Research Institute,  
Lucknow, India



**HENRY SKINNER**

CEO,  
AMR Action Fund,  
Boston, USA

27 February 2024, 14:30-15:30 CET / 08:30-09:30 am EST / 07:00-08:00 pm IST



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