



HERA Industry days Health Emergency Preparedness and Response Authority

2 & 3 June 2025, Brussels



Plenary panel

Breaking barriers to effective funding for innovative medical countermeasures



Breaking barriers to effective funding for innovative medical countermeasures



Magda CHLEBUS Executive Director Scientific & Regulatory Affairs at EFPIA



Marc GITZINGER President of the Board, BEAM Alliance



Hannah CAMERON Adviser to the Europe Director, Gates Foundation



Yann FERRISSE GARDP



Sebastien IVA Chief Executive Officer at Fabentech



Tim NGUYEN Unit Head, MCM WHO

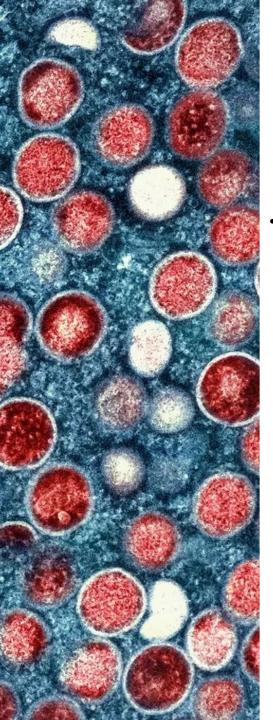
Industry perspective on barriers to R&D for medical countermeasures (MCM)

Magda Chlebus - Executive Director Science & Regulatory Policy, EFPIA



Vaccines Europe An industry for healthy lives

HERA Industry Days, 2 & 3 June 2025, Brussels



Mpox vaccine

2003

2003-2019

- USG (mainly BARDA) support to Bavarian Nordic for the development, manufacturing and supply of a vaccine against a Smallpox.
- Bavarian Nordic supplied ~30M doses of vaccine to the US Strategic National Stockpile even before the vaccine was fully approved.
- Freeze dried and liquid formulations were developed along with the necessary manufacturing infrastructure.
- Vaccine approved by the FDA for use in protecting against
 Smallpox and Mpox

2019

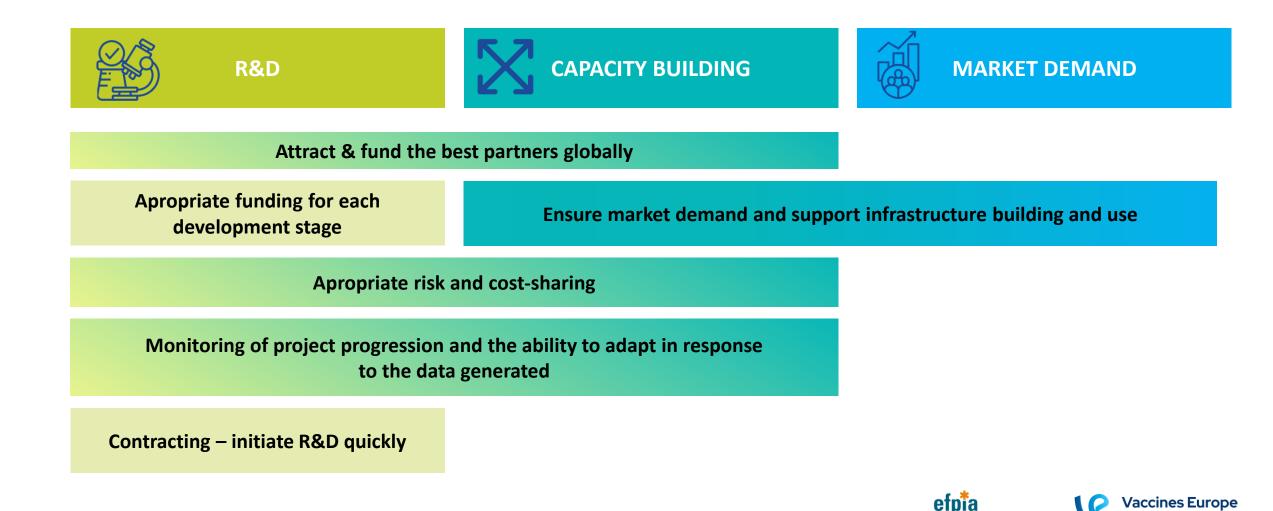
- It has also been approved by EMA and received WHO prequalification.
- Commercial launch in response to the market demand generated by the Mpox outbreaks.

April 2024

It is only because of more than 20 years of support by the USG that the vaccine is currently available to allow vaccination campaigns in Europe, the US, Africa and elsewhere.



Collaboration with industry will drive early through late-stage R&D with the goal of developing new MCMs that will be ready to use in the event of a health crisis



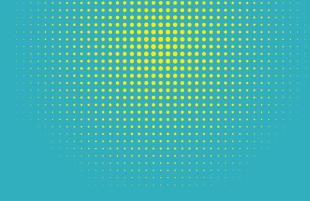
Next MFF: A fit for purpose tool for late-stage development of MCMs

- Contract based with single accountable lead contractor
- Joint governance
- Adequate funding (e.g. 50+ mln per project, min. 50% funding rate)
- Open to companies of all sizes and geographical origins, and possibility to conduct studies and manufacturing ex-EU
- **IP rights with the innovator** (and march-in right as last resort)
- Flexibility to **rapidly amend contracts** as needs evolve and data is generated
- Hands-on support and long-term collaborations that may span more than one funding cycle

As of now: Continued and efficient engagement with the private sector

- Clear communication early engagement at sector and company level on needs
- Technology Watch
- Dialogue on "creating the market" (pull conditions)
- Continued reduction of red tape





Funding AMR countermeasures: SMEs' perspectives

Dr. Marc Gitzinger, CEO BioVersys and President BEAM Alliance

· · · ·

Why funding AMR countermeasures is important

- The AMR market is broken, the pipeline is dry with 80% of the assets in the hands of (mostly) pre-revenue SMEs
- No new class of drugs for 30 years
- The happy few SMEs that made it to the market closed down

ACHAOGEN		Finelinta therapeutics	Nabriva	PARATEK [®]	קיים ד E T R A P H A S E	SERES THERAPEUTICS"
Bankrupt in 2019	Acquired in 2022	Bankrupt in 2019	Ceased op. in 2023	Acquired in 2023	Acquired in 2020	Active, 41% force reduction in 2023

• Public funding is key to help develop the antimicrobials that are essential to modern medicine

SMEs' perception of EU funding vehicles on AMR

Horizon Europe

- Health cluster: Too few relevant calls, too large consortia
- IHI: Same + pre-competitive + need for EFPIA appetite in the topic
- EDCTP: Works well but only with calls rather than proposal driven
- EIC: Relevant design, limited size for late-stage trials, competitive for areas with limited market opportunity such as MCMs

• EU4Health

- Tenders: limited experience
- InvestEU
 - HERA Invest: Large loans are suboptimal in the balance sheet of non-revenue making companies, 2 awardees in 2 years...

A good example: BARDA (the US HERA)

BARDA's proven publicprivate partnership model has supported the development of **over 130 antimicrobial products** through a combination of direct investment and its partnership with **CARB-X**

EXIT PORTFOLIO		ENTER PORTFOLIO	PRECLIN	IICAL	PHASE 1	PHASE 2	PHASE	3 ND	APPROVE
	2023	Oral boron-based BLI		2023					
	2023	sNDA for biothreats & pediatric CABP		2023					
	2023	sNDA for pediatric cUTI & sepsis			2023				
	2022	First-in-class LpxC inhibitor	2022						
	2022	DBO BLI	2022						
2023	2021	Phage-derived lysin			2021		\rightarrow		
	2021	First-in-class LepB inhibitor	2021						
	2020	Live biotherapeutic product			2020				
	2020	Phage therapy		2020		2022			
	2020	In vivo expressed antibodies	2020						
	2020	Sepsis diagnostic	2020						
	2019	IV boron-based BLI			2019			2023	
	2019	First-in-class LepB inhibitor	2019		2022				
2023	2019	Synthetic polymyxin	2019	>	2021				
	2019	IV ultra-broad-spectrum BL/BLI	2019		2020				
2019	2019	Lipoprotein transport protein inhibitor		2019	\rightarrow				
	2018	Oral carbapenem for cUTI		2018		2019	2022	2021	>
	2018	Narrow-spectrum macrocyclic peptide	2018		2021				
2018	2018	Topoisomerase inhibitor		2018	\rightarrow				
# Post-FIH: 4 # Pre-FIH: 47	2017	CARB-X Portfolio	# Pre-FIH: 2	24 # A	ctively funded Ph1+	candidates: 6	Post-funding active	Ph1+ candidates: 1	12
2022	2017	Oral C. difficile therapy			2017	>	2019		
2019	2017	Oral BL/BLI for cUTI		2017	\rightarrow				
	2016	Cephalosporin for S. aureus infections			2016		2018	2023	
2018	2016	IV DBO BLI		2016	\rightarrow				
2017	2016	First-in-class siderophore cephalosporin		2016					
	2016	Rapid diagnostic for C. difficile		2016					2017
2018	2016	Diagnostic for MRSA		2016	\rightarrow				
2020	2016	First-in-class topoisomerase inhibitor	2016	\rightarrow					
	2016	Oral ultra-broad-spectrum BL/BLI	2016		2021				
	2015	First-in-class DBO BLI			2015		2018		
	2014	First-in-class boron-based BLI			2014			2017	2017
2021	2014	Host-directed immune modulator			2014	>	2015 >	2020	>
2015	2014	First-in-class LpxC inhibitor	2014	\rightarrow					
2015		Acetyl coenzyme-A carboxylase inhibitor	2014	$ \rightarrow $					
2014	2013			2013					
2017	2013			2013		2016			
2017				2013		2018	2019	2023	
2017	2013	Oral first-in-class topolsomerase inhibitor							
2017	2013 2012	Oral first-in-class topoisomerase inhibitor Broad-spectrum synthetic tetracycline		2015	2012	2010	2013	2017	2018
2013	2012	Oral first-in-class topoisomerase inhibitor Broad-spectrum synthetic tetracycline First-in-class L-tRNA synthetase inhibitor		2013	2012 2012	2010			2018

The strength of BARDA's model

- **People**: dedicated, expert, experienced staff and SMEs; a shared common goal
- **Product**: non-dilutive milestone-based funding; cost-share with shared risk
- Process:
 - 2 party contract, no consortium or other external stakeholders
 - pharma contractor retains responsibility and control
 - every spend requires BARDA approval; contractor must demonstrate value to USG BARDA
 - biweekly oversight meetings form a strong cross-functional expert team, laser-focused on the ultimate goal of FDA approval with target labelling
- Result:
 - Approx. 6 FDA approved drugs with approx. 1.5bn US\$ invested

• Outlook:

- Hera could do the same, likely more cost effective
- Stockpiling for MCMs especially in early years after approval could help to have a more predictable market upon launch

Funding innovative SMEs: the basics

Avoid large consortia and/or allow SMEs to select partners afterwards



Safeguarding IP ownership and avoid forced dilution – thus ensuring private sector to invest more

Dedicated to actors facing market failure





Significant funding amounts (*in terms of budget and funding rate*)



Focus on scientific core tasks towards product development with a success-driven mindset



Expert staff following the project with the ambition to **provide guidance** for later stages

The Gates Foundation is one of a number of philanthropic donors investing in global health R&D

Gates Foundation Key Facts

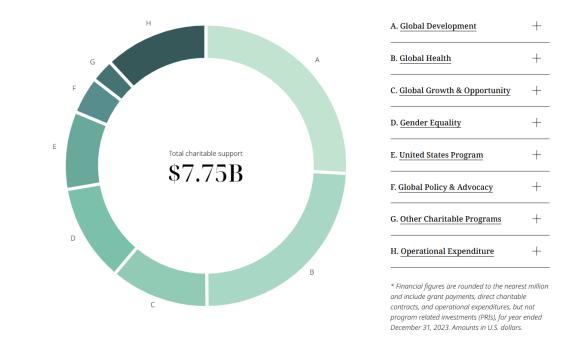
- Non-profit, private foundation launched in 2000
- Total charitable support \$7.75B (2023)
- Over 1,200 grantees
- Primarily grant funding
- Strategic Investment Fund can support via innovative financing options

Our Global health R&D program focusses on

- 1) Maternal, child health and nutrition
- 2) Infectious diseases impacting LMICs

Funding summary

In 2023, the foundation provided charitable support in the following areas:



Total charitable support

\$7,749,000,000*

Research for pathogens of pandemic potential is primarily government funded

But the Gates Foundation contributes significant funding for the development of platform technology



R&D funding for diagnostics, therapeutics and vaccines (2020-2023), as reported in the 100 day mission progress report, Jan 2025

Several challenges exist in financing the development of innovative MCMs



There is often insufficient commercial market to attract R&D investment in product development for infectious diseases predominantly affecting low and middle income countries:

- Lack of data on burden and product demand in low-resource settings
- High cost of late-stage clinical trials
- Real or perceived lack of viable route to patient/route to market in LMICs



R&D and product development for epidemic and pandemic diseases is typified by additional challenges and uncertainty

- Target pathogen unknown
- Sporadic epidemiology creates uncertainty over when MCMs will be needed and how they will be used
- Added complications for product development increases risk (Regulatory issues, Feasibility of late stage trials)
- Lack of 'pull' mechanisms to procure and deploy tools in case of outbreaks
- Limited supply, logistical issues or high prices impact access to those that need it most

Innovative financing and novel forms of collaboration are required



Pooled funding mechanisms such as CEPI and PDPs combine resources effectively from public and philanthropic donors. Alternatively public and philanthropic partners can jointly fund calls for proposals or coordinate their funding around specific health challenges.



Innovative approaches to sharing costs and risk burden across public and private sector, especially for expensive later stage trials- e.g. forgivable loans or equity investments



Demand signals incl. pull mechanisms give confidence for private sector and funders to invest e.g. dual market, advanced market commitment



Incentives for private sector investments in neglected areas of research – *including mechanisms like the priority review voucher (PRV) scheme*



Funders may have different motivations, but can partner towards a shared goal. Building partnerships requires intention and flexibility on all sides.

HERA Industry days Brussels, 2nd of June 2025



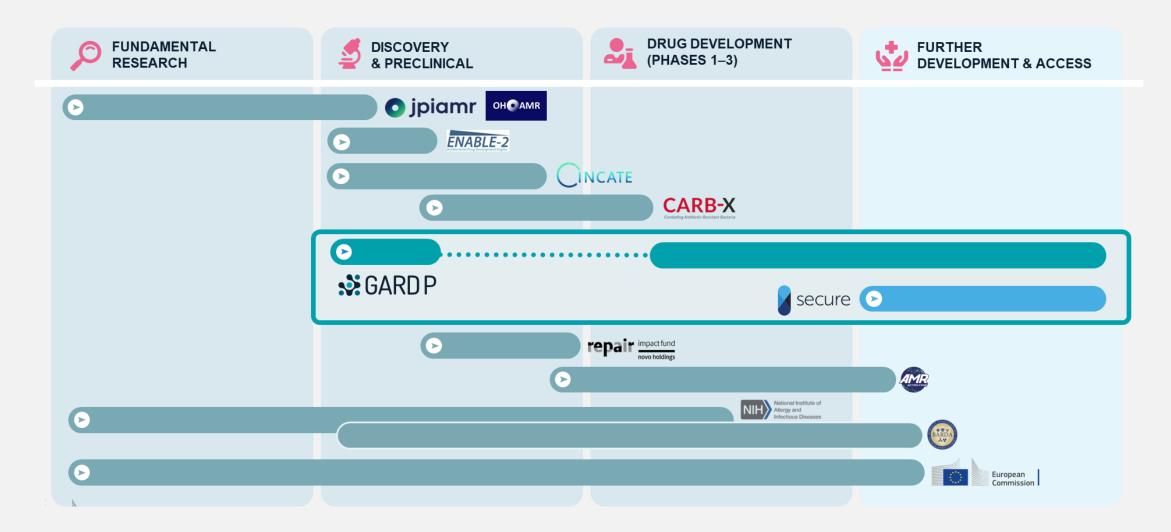
GARDP (Global Antibiotic Research & Development Partnership) An Integrated Approach to Antibiotic R&D & Access

Yann Ferrisse Business Development & Partner Engagement Director

Antibiotic resistance, a global public health priority requiring new solutions



GARDP in the antibiotic R&D and access landscape



GARDP portfolio

TREATMENT	CLASS	PARTNER	STAGE OF DEVELOPMENT	WHO PRIORITY PATHOGENS	GARDP'S COMMERCIAL RIGHTS			
SERIOUS BACTERIAL INFECTIONS & SEPSIS								
Cefiderocol	Siderophore cephalosporin		Approved by US FDA (2019) and EMA (2020). Included on WHO EML. PIP and PSP ongoing.	CRE CRPA	135 countries			
Cefepime- taniborbactam	β-lactam / β-lactamase inhibitor		Positive cUTI phase 3 results. NDA in submission process	CRE CRPA	64 countries + India and South Africa (public market only)			
Investigational compound BWC0977	Pyrazino-oxazinone	bugworks	Phase 1	CR infections, including CRAB	146 countries			
NEONATAL SEPSIS								
Flomoxef	Cephalosporin		Approved in 4 Asian countries since 1998	ESBL	Generic			
Fosfomycin	Generic phosphonic	INFECTOPHARM Wissen wirkt.	Approved in Europe and in some LMICs	ESBL	Generic			
Amikacin	Generic Aminoglycoside	N/A	Generic, introduced in 1977	ESBL	Generic			
SEXUALLY TRANSMITTED INFECTIONS (GONORRHOEA)								
Zoliflodacin	Spiropyrimidinetrione		Positive phase 3 results	Ceftriaxone- and multidrug-resistant <i>N. gonorrho</i> eae	¾ of countries worldwide (~150)			

Time to discuss the relative efficiency and effectiveness of different financing options

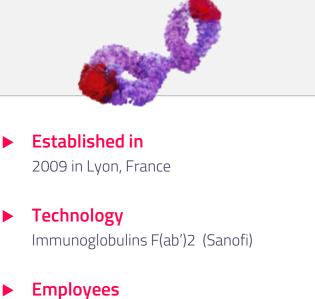
- No single push- or pull-incentive will solve all funding needs;
- Prioritize **public health impact** including needs of underserved populations;
- Anchor an **end-to-end model** & then **coordinate EU funding** across discovery, clinical development, manufacturing, and access;
- **'Innovation**': Fund compounds based on expected population-level outcomes, not just novelty;
- Reconsider the role of public institutions and governments in global health – to lead or to follow.

Broad-spectrum Antibodies for Emergency Situations

Treatments for biodefence solutions and emerging infectious diseases

Fabentech ID

15 years of experience in development and production of medical countermeasures



50 FTE, 20% PhD

Bioproduction site
One proprietary GMP-ready facility

Building the European leader in emergency treatments against biothreats



BIODEFENCE

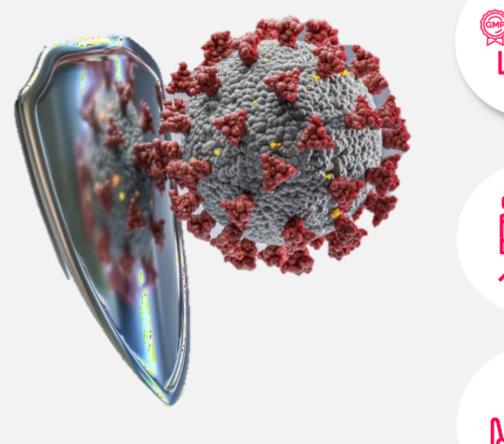
Antidotes against bioterrorism agents Toxins, viruses



PANDEMIC PREPAREDNESS

Anti-infectives against Emerging Infectious Diseases Nipah – H5N1–Ebola – Sarbecoviruses

FabShield[®] platform – BE READY The European shield against biothreats







✓ Robust and reliable technological platform With integrated R&D and production capabilities

 \checkmark 5 antidotes in développement

against deadly biological agents





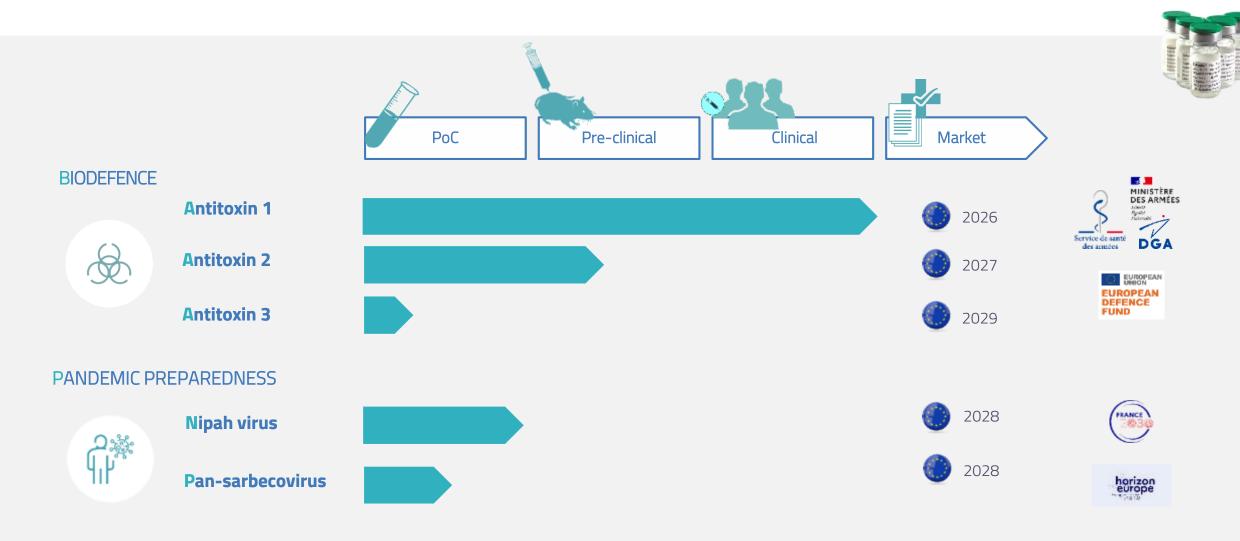
Toxins

Nipah, Sarbecovirus, H5N1

\checkmark Anticipation of future risks

for an immediate response when the threat appears

A diversified pipeline of broad-spectrum therapeutics



On hold programs : H5N1, Ebola and Sars-Cov-2

HERA invest financing : 20 m \in to accelerate deployment & support the transformation



Product development & new technologies



International expansion and commercial activities



Industrial process optimizations



Profitable by 2027



5 antidotes on the market by 2030



Sovereign, reliable and sustainable production in Europe

Breaking barriers to effective fundings for MCMs

Given the exceptional circumstances for use of MCMs, SMEs need



A Stockpiling strategy

- **\$**
- Long-term contracts with end-to-end fundings
- Unified funding pathways to avoid fragmented tools
- Attract private investors

- Regulatory flexibility to accelerate approvals or
- Early access programs



- A « buy EU approach » to support EU strategic autonomy
- Coordination between EU institutions and MS

Health Emergency Preparedness & Response Global Financing Landscape Analysis

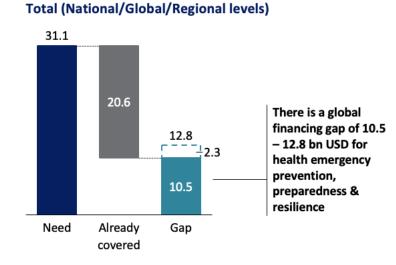
Tim Nguyen, Head of Unit Medical Countermeasures WHO Health Emergencies Programme

HERA Industry - Breaking barriers to effective funding for innovative medical countermeasures 3 – 4 June 2025



Health emergency financing landscape analysis identifies two key issues ...







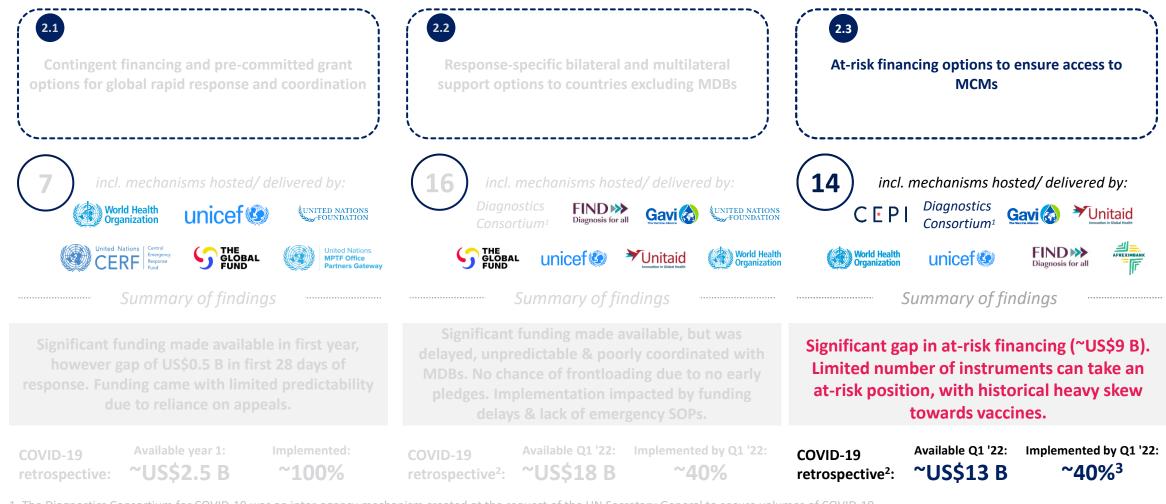
Fragmented & uncoordinated donor-led financing landscape





During the pandemic large amounts were made available, lack of coordination and timeliness impacted response with **key gap in at-risk financing**

Mapping & Gap Analysis Global and Regional COVID19 Response



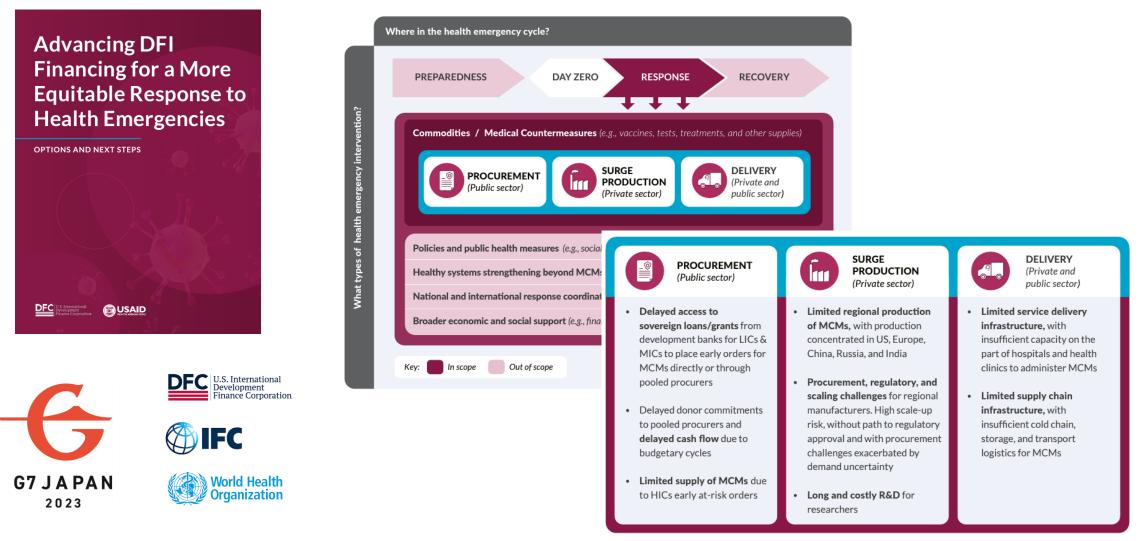
1. The Diagnostics Consortium for COVID-19 was an inter-agency mechanism created at the request of the UN Secretary General to secure volumes of COVID-19 tests and allocate them among over 160 countries with limited market access, according to agreed principles. Over 50 members were involved 2. Based on HSRC analysis Q1 2022 3. Based on Gavi, Unitaid, CEPI, AVAT, FIND Dx





31

Example: DFI Initiative - Focus on accelerating **financing for MCMs in response to a health emergency,** but the **Oversee Development Assistance landscape has changed**



WHO Pandemic Agreement approved at WHA78 - Article 18 Sustainable financing



Intergovernmental Negotiating Body to draft and negotiate a WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response

Proposal for the WHO Pandemic Agreement

Outcome of the Intergovernmental Negotiating Body: agreed text on Wednesday, 16 April 2025 at 01:57 CEST

NOTE: Consistency review (25 April 2025)

Green highlighting indicates text for which agreement has been reached by the Intergovernmental Negotiating Body.

Key points

- Adopt a Financial and Implementation Strategy for pandemic prevention, preparedness, and response
- Parties, especially financial supporters, should align their funding with the Strategy within and outside WHO.
- Establish a Coordinating Financial Mechanism to support the WHO Pandemic Agreement in a sustainable and transparent way.
- The Mechanism aims to increase the effectiveness and efficiency of financial resources for pandemic prevention, preparedness, and response, focusing on developing countries.
- Promote harmonization and coordination in financing for pandemic prevention, preparedness, and response and related capacities.



Breaking barriers to effective funding for innovative medical countermeasures



Magda CHLEBUS Executive Director Scientific & Regulatory Affairs at EFPIA



Marc GITZINGER President of the Board, BEAM Alliance



Hannah CAMERON Adviser to the Europe Director, Gates Foundation



Yann FERRISSE GARDP



Sebastien IVA Chief Executive Officer at Fabentech



Tim NGUYEN Unit Head, MCM WHO



0 0 0 0 0 0 0 • • •

, , , , , , , , , , , , ,

Thank you