

**Summit Consultation 'Focus on Prescription'**

27 January, 16:00 – 18:00 CET  
Online event; by invitation only

AMR INSIGHTS  
TOWARDS A WORLD FREE FROM AMR

**Focus on Prescription**

**Welcome!**

- Questions in the chat box
- Questions addressed at the end
- Recording made available afterwards

**Focus on Prescription**

**Today we note**

- AMR is a much bigger problem than we ever imagined
- AMR continues to increase globally
- We collectively fail to reverse this trend

**Focus on Prescription**

**Today we emphasise**

- Change in human behaviour is key to effectively combating AMR
- Behavioural change starts from thinking differently
- Thinking differently can be managed

**Focus on Prescription**

**Today we strive**

- To take behaviour change seriously to combat AMR
- To lay the foundations for a new dynamic in combating AMR
- To give 'Focus on Prescription' a chance

**Focus on Prescription**

**Today we welcome: Pharma – Authorities – Healthcare – NGOs - Academia**

1. Africa CDC, Ethiopia	16. ICMARS, UK	32. MAAMRI, USA	47. Medicine, USA
2. Alexandria University/International Medical Centre, Egypt	17. Health Policy Watch, Switzerland	33. National Akefen University Teaching Hospital, Nigeria	48. University of Oxford, UK
3. American International University, West Africa	18. Imperial College London, UK	34. Novartis, Germany	49. University of West London, UK
4. AMR Insights, The Netherlands	19. International Centre for Antimicrobial Resistance Solutions (ICARS), Denmark	35. Programme against Antimicrobial Resistance, Republic of Guinea	50. USAID, USA
5. CDC, USA	20. IITG, India	36. Radboud University Medical Centre, The Netherlands	51. USAPD, USA
6. CDC, USA	21. Kantonsspital St. Gallen, Switzerland	37. Research Institute for Tropical Medicine, Philippines	52. Wellcome Trust, UK
7. Directorate of Pharmacy Services	22. Lanka Hospital, Sri Lanka	38. Research Institute for Tropical Medicine, Philippines	53. World Health Organization, Denmark
8. Drug Regulatory Authority of Pakistan, Pakistan	23. Makerere University, Uganda	39. Researcher Regional Health, USA	54. World Health Organization, Malta
9. European University Institute, Italy	24. Mansoura Faculty of medicine, Egypt	40. Sanofi, The Netherlands	55. World Health Organization, Switzerland
10. Emerging Infectious Diseases Society Partners, Health Security Partners, Italy	25. Medicines and Healthcare Products Regulatory Agency, UK	41. Saudi Food and Drug Authority, Saudi Arabia	56. Zambia National Public Health Institute, Zambia
11. Food and Agriculture Organization of the United Nations, Italy	26. Merus, Switzerland	42. Swiss Centre for Antibiotic Resistance, Switzerland	
12. Food and Agriculture Organization of the United Nations, Italy	27. Mindgame, The Netherlands	43. TNO, The Netherlands	
13. Fortis Eurocot Hospital Jaguar, India	28. MSD, The Netherlands	44. TNO, The Netherlands	
14. Fortis Eurocot Hospital Jaguar, India	29. National Institute of Health, Pakistan	45. University of Delhi, India	
15. Global AMR Innovation Fund	30. National Institute of Health, Massachusetts	46. University of Maryland School of Medicine, USA	

**Focus on Prescription**

**Today we inform, consult and join forces**

➤ 16:00 Welcome and introduction		
➤ 16:05 Global burden of bacterial antimicrobial resistance	Dr Catrin Moore	University of Oxford; UK
➤ 16:15 Strategies to curb antimicrobial resistance	Dr Maarten van Dongen	AMR Insights; NL
➤ 16:25 Behavioural change by online interventions	Dr Enrique Castro-Sanchez	University of West London; UK
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➤ 16:45 Awareness gaming: what are your experiences?	ALL	
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➤ 17:25 Towards a global collaboration	Dr Maarten van Dongen	AMR Insights; NL
➤ 17:35 Q&A	AIJ	

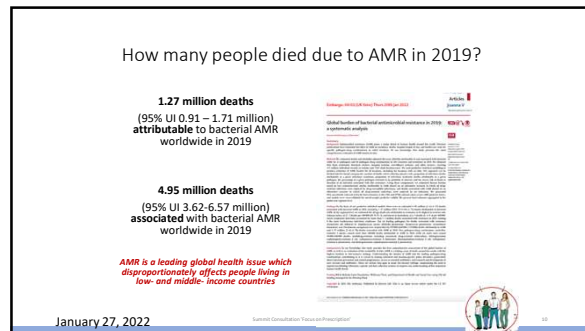
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**Estimating the global burden of Antimicrobial resistance**

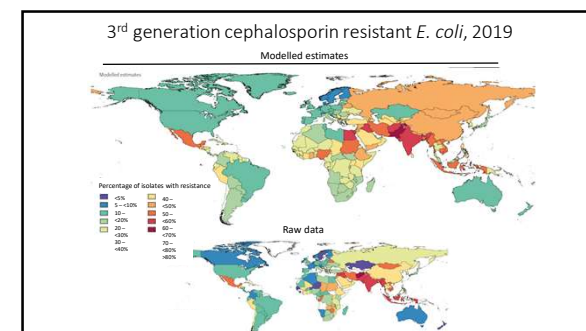
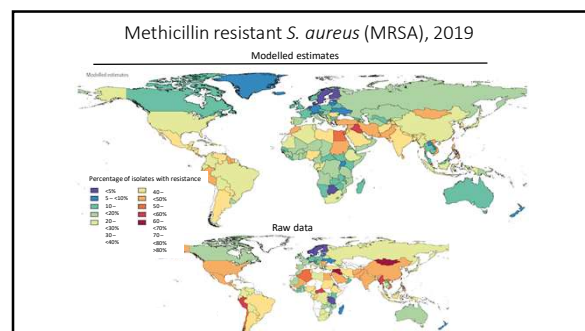
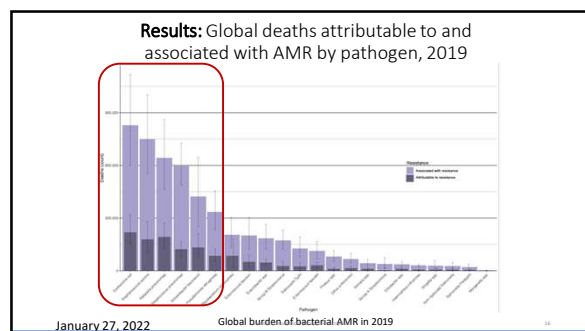
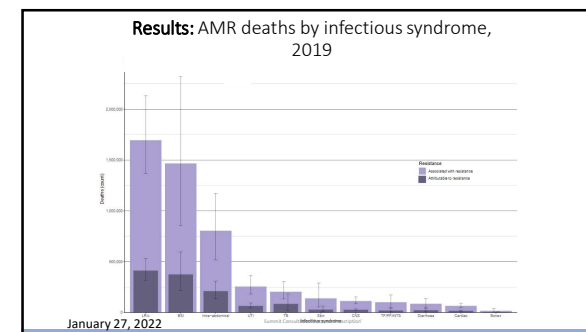
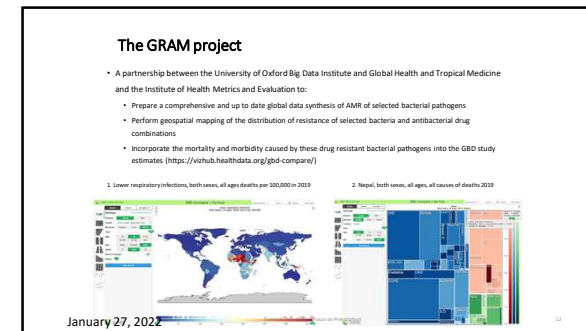
Dr Catrin Moore  
January 2022



*"We have reached a critical point and must act now on a global scale to slow down antimicrobial resistance"*  
Professor Dame Sally Davies, 2019

*"AMR is already one of the greatest challenges facing humanity. Behind these new numbers are families and communities who are tragically bearing the brunt of the silent AMR pandemic. We must use this data as a warning signal to spur on action at every level."*  
Professor Dame Sally Davies, 2022

January 27, 2022



### The next step is taking action: The ADILA project

2017 WHO EML Expert Committee developed the **AWoRe** classification of Essential Antibiotics on the EML/c as Access/ Watch/Reserve

**ACCESS** group: narrow spectrum affordable antibiotics widely available  
**WaTcH** group: broader spectrum antibiotics - specific and limited indications (higher resistance and toxicity potential)  
**ReSERVE** group: last resort antibiotics - used only when other antibiotics have failed or for treatment of multi-resistant bacteria.

- Country level selection of empiric antibiotic recommendations
- Based on local data (AMR, disease, access)
- Local antibiotic guidance

January 27, 2022 | Wellcome Trust, will begin April 2022

### Increasing political will to combat AMR

2014 UK government commissioned O'Neill Review  
 Aim: define the economic impact of AMR, raise the profile, establish global support

2015 Global Action Plan (GAP) Adopted by World Health Assembly for AMR  
 WHO launched Global Antimicrobial Resistance and Use Surveillance System (GLASS)  
 World Health Assembly

2016 AMR resolution at the UN General Assembly – (Interagency Coordination Group (ICG) on AMR)  
 O'Neill Review published  
 Fleming Fund established

2017 IACG convened

2020 One Health Global Leaders Group launched

2021 G7/G20 Meetings: AMR on the agenda

3.0.2 = new indicator: % bloodstream infection due to:  
 • Methicillin resistant S. aureus (MRSA)  
 • E. coli resistant to 3GC

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### Burden estimates for AMR .....

23,000 deaths due to AMR infections in the U.S. in 2013  
 35,900 deaths due to AMR infections in the U.S in 2019

60,000 deaths per year US, Europe (OECD)  
 33,000 in EU & EEA in 2015 (Cassini et al)

38,000 deaths with AMR infections in Thailand in 2010  
 19,000 Thai deaths attributable to AMR

Different methodologies, data sources, and infection focus makes comparison not possible

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- 17:35 C&A

Speakers: Dr Catrin Moore, Dr Maarten van Dongen, Dr Enrique Castro-Sanchez, Dis Gerard Mulder, Dr Shahida Syed, Mr Derek van Dongen, Dr Maarten van Dongen

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#### AMR INSIGHTS (2017)

INFORMING: Antibiotic resistance and your next dose together, E-Newsletter (> 8,500), Information Platform (40 k pa)

EDUCATING: International Masterclass AMR, Seminars on AMR topics

CONNECTING: IHC Matchmaking Symposia, AMR Innovation Meetup

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### Focus on Prescription

#### AMR INSIGHTS AMBASSADOR NETWORK: 408 in >50 countries

Publications, Podcasts, Projects, Blogs

Become a member: <https://bit.ly/2YHnSj7>

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### Projects AMR Insights & Ambassadors

- Dutch Consortium Antibiotics from Water
- Focus on Prescription
- AMRelay (WAAW)
- COVID-19 / AMS study

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### Focus on Prescription

#### 6 Key strategies to combat AMR

- Prevention Infectious Diseases
- Reduction Antimicrobial discharge
- Novel Antimicrobials
- Antibiotic Stewardship
- Improved Diagnostics
- New Antimicrobial Strategies

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### Focus on Prescription

#### Antimicrobial Stewardship

Antibiotic stewardship is the effort to measure and improve how antibiotics are prescribed by clinicians and used by patients. Improving antibiotic prescribing and use is critical to effectively treat infections, protect patients from harms caused by unnecessary antibiotic use, and combat antibiotic resistance.

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**Antibiotics stewardship (CDC)**

- Key principles to guide efforts to improve antibiotic use
- Advance patient safety and improve outcomes. These frameworks complement existing
- There is no "one size fits all" approach to optimize antibiotic use for all settings
- Complexity of medical decision-making surrounding antibiotic use and the variability in facility size and types of care in healthcare settings require flexible programs:
  - Hospitals
  - Outpatients
  - Nursing homes
  - Small & critical access hospitals
  - Resource limited settings

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**Focus on Prescription**

**Harsh reality**

- Prescription may be according guidelines and on a rational basis, BUT
- Prescription in many settings inappropriate due to:
  - Routine
  - Lack of time
  - Lack of knowledge / AMR awareness
  - Lack of testing facilities, diagnostic tools
  - For perverse / financial reasons
  - To satisfy the patient
  - If it doesn't help, it doesn't harm

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**Harsh reality (CDC)**

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**In conclusion (1)**

Behavioural change may add to ensure that applicable doctors:

- Become deeply aware of and understand impact AMR
- Adopt prudent, rational prescribing practices
- Convince their patients of the benefits and necessity

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**In conclusion (2)**

Ideally a program would be available to:

- Effectively and cheaply reach out online to prescribing medical doctors worldwide
- Provide a safe environment to 'learn' and 'optimise behaviour'
- Influence doctors in a measurable way
- Collect and interpret program data to finetune the program
- Collect data for (inter)national policy development

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**Behavioural change by online interventions**

Summit consultation: Focus on Prescription, AMR Insights

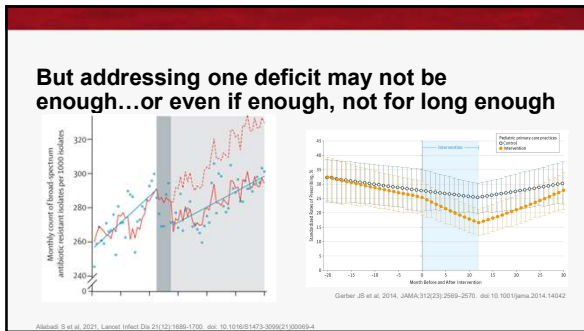
Dr Enrique Castro-Sánchez: RGN PhD MPH BSc Dip Trop Nurs PgDip PgCert DLSTHM PHEA FEAMS Assoc Prof Infection Prevention and Improvement, University of West London Hon Lecturer, Imperial College London

**Declaration of interests**

- Views are mine and not necessarily of my employers or affiliated organisations:
  - University of West London,
  - NHS England/Improvement,
  - Imperial College London (hon),
  - National Institute for Health Research,
  - World Health Organization,
  - Primary Care International,
  - Universitat Oberta de Catalunya
- Funded by NIHR, GCRF, BRC

**Drug-resistant infections, just a matter of addressing the deficits?**

Maine N et al. 2021. BMJ Global Health 6:e003836. doi:10.1136/bmjgh-2020-003836



### Education seems to make prescribers more knowledgeable but not more confident

- Undergrad med students report gaps in skills, confidence, optimal behaviours
- Trainee doctors report **gaps in skills, confidence, optimal behaviours**

Alshabik, R et al. 2021. Lancet Infect Dis 21(12):1695-1700. doi: 10.1016/S1473-3099(21)00068-4

### Guidelines may exist. But following them may be a different matter...

Diagnosis	2013		2018		P-value
	According to guidelines		According to guidelines		
	n	%	n	%	
Acute pharyngitis	18	32.0	16	26.2	0.504
Acute sinusitis	14	25.0	13	37.7	0.281
Acute middle ear infection	10	25.0	17	44.3	<b>0.007</b>
Acute bronchitis	13	25.0	19	47.5	0.134
Pneumonia	42	84.0	16	19.1	0.052
Acute cystitis	15	30.0	19	63.9	<b>&lt;0.001</b>
Acute pyelonephritis	18	36.0	19	47.5	0.231
<b>Total</b>	<b>128</b>	<b>34.4</b>	<b>131</b>	<b>34.8</b>	<b>&lt;0.001</b>

Bold values statistically significant P<0.05.  
Reschinski, Quadrelli et al. 2021. Family Practice, 33(7):259-264

### Decision-support & diagnostics? Ummm...

- Strategies must align with **clinical roles and experience**— useful only for those less experienced
- 'Social tools'— helpful for shared decision-making
- Ambiguities— when to use & impact
- Context— practical issues

Charani, E et al. 2013. J Antimicrob Chemother 68(4):865-7  
Binks, M et al. 2021. BMC Fam Pract 22(201) https://doi.org/10.1186/s12875-021-01317-4



### Applying social science to AMR

- 'Antibiotic prescribing' as 'behaviour' - not linear, but **complex, dynamic social process**, influenced by many determinants
- 'Unwritten rules' influence antibiotic prescribing behaviours
- Clinical autonomy and hierarchies within clinical peer specialties overrule policies and guidelines

Charani, et al. 2017. Clin Microbiol Infect 23(10):752-760

### Applying social science to AMR

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Charani, et al. 2018. Clin Infect Dis 66(11):12-20. https://doi.org/10.1093/cid/cix444



# 'On call: antibiotics'

## Virtual prescribing experience

Castro-Sánchez E et al (2014) 'On call: antibiotics'. Games for Health. Springer Vieweg 2014. 1-8.

- ### Prescribing behaviours
- 01** Minimise unnecessary prescribing of antimicrobials
  - 02** Ensure adequate timing of antimicrobial administration
  - 03** Adopt necessary infection prevention and control measures
  - 04** Obtain biological samples for microscopy, culture & sensitivity
  - 05** Therapeutic drug monitoring, following adequate and/or adjusted dosing
  - 06** IV administration only in severely ill, unable to tolerate oral treatment
  - 07** Review micro results daily, de-escalate to narrow-spectrum promptly
  - 08** Review intravenous treatment daily, switch to oral route promptly
  - 09** Require single dose surgical prophylaxis regimens as appropriate

### Simple, focused, responsive

### Behavioural 'nudges'

**Patients:** Do broad spectrum antibiotics make me better - Easier?

**CQC:** A glowing report for your year antibiotic prescribing is in great shape

**Nurses:** Are you on a bonus for keeping all these patients in the hospital? Can they not go home?

### Immediate feedback

**Diagnosis Report**  
 Patient: **Colin**  
 Diagnosis: **Cellulitis**  
 You failed to correctly diagnose the patient.

### Progress reporting

**-RESULTS-**  
 Your team's performance has improved. Let's take a look at your performance.  
 Diagnosis: 70% / Treatment: 80%  
 Average performance for diagnosis: you could be a little better.

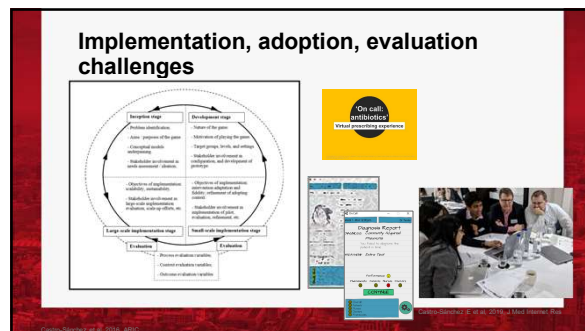
There is a serious room for improvement with your treatment choice. Make sure you are not just treating the patient, but the patient's condition. Think about the patient's history.

Why were you even worried about this patient?  
 Antimicrobial stewardship isn't a game.

### Tracking and ranking performance

**Nurses:** Did you remember to use the alcohol after seeing that patient doctor? Last in friendly reminder!

Rank	Team	Diagnosis	Treatment	Score
1	Pharmacists	85%	90%	87.5
2	Nurses	70%	80%	75
3	Doctors	60%	70%	65
4	Pharmaceuticals	50%	60%	55



### Summary

- Burgeoning of tech-based interventions to improve antimicrobial behaviours, knowledge
- New platforms offer opportunities but implementation, evaluation yet to be robustly demonstrated
- Unintended consequences and opportunity costs...

Google  
 on call: antibiotics

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- > 17:35 CIBA

AMR INSIGHTS  
 MINDGAME

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**Focus on Prescription** AMR INSIGHTS MINDGAME

**Introduction mindgame**

- > 10 gaming experts, based in Amsterdam since 2004
- > We made hundreds of serious games for large organisations played by an audience of hundreds of thousands.
- > We specialize in actionable behavioural change.
- > Our motto: "A game is a safe place to make the mistakes you don't want to make in reality."

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**Focus on Prescription** AMR INSIGHTS MINDGAME

**Mindgame 'Behavioural change model'**

Awareness	Relevancy	Knowledge	Competency	Behavioural change
<b>QUESTION:</b> Does that exist?	<b>QUESTION:</b> It exists, but is it relevant to me?	<b>QUESTION:</b> I have a role, what do I need to know?	<b>QUESTION:</b> I can identify the role, but do I have the skills to do it?	<b>QUESTION:</b> I can do it, but I don't want to. Why not?
<b>GOAL:</b> Epidemiology	<b>GOAL:</b> Antibiotic stewardship	<b>GOAL:</b> Knowledge gain	<b>GOAL:</b> Competency	<b>GOAL:</b> Changing behaviour
<b>GAME MECHANISM:</b> Discovery Challenge (Knowledge Hunt)	<b>GAME MECHANISM:</b> Team competition	<b>GAME MECHANISM:</b> Self-competition (points)	<b>GAME MECHANISM:</b> Scenario role-play	<b>GAME MECHANISM:</b> Choice

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**The medicine cabinet – "Every treatment option available"**

AVAILABLE TREATMENT OPTIONS

**The medicine cabinet – "No Antibiotics" as an option.**

AVAILABLE TREATMENT OPTIONS

**PATIENT CHOICE**

**The medicine cabinet – "No Antibiotics" as an option.**

AVAILABLE TREATMENT OPTIONS

**PATIENT CHOICE** **NO RIGHT CHOICE**

**The medicine cabinet – "No Antibiotics" as an option.**

AVAILABLE TREATMENT OPTIONS

**PATIENT CHOICE** **NO RIGHT CHOICE** **BETTER TO WAIT**

**The medicine cabinet – "No Antibiotics" as an option.**

AVAILABLE TREATMENT OPTIONS

**PATIENT CHOICE** **NO RIGHT CHOICE** **BETTER TO WAIT** **VIRAL INFECTION**

**The medicine cabinet – Efficacy**

EFFICACY

**BROAD SPECTRUM** **GRAM NEGATIVE** **GRAM POSITIVE**

**The medicine cabinet – Price Level**

HIGH PRICE/ IN-PATENT

**BROAD SPECTRUM** **EXPENSIVE** **EXPENSIVE** **GRAM NEGATIVE** **GRAM POSITIVE**

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AMR INSIGHTS  
MINDGAME

The Academic hospital in Eastern USA

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The medicine cabinet – *Known Resistances; Eastern USA*

BROAD SPECTRUM EXPENSIVE EXPENSIVE

GRAM NEGATIVE

GRAM POSITIVE

- NO KNOWN AMR
- SOME AMR
- FREQUENT AMR
- LOCAL AMR

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AMR INSIGHTS  
MINDGAME

A rural practice in Southern Africa

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The medicine cabinet – *Known Resistances; Southern Africa*

BROAD SPECTRUM EXPENSIVE EXPENSIVE

GRAM NEGATIVE

GRAM POSITIVE

- NO KNOWN AMR
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- LOCAL AMR

The medicine cabinet – *After making "risky" decisions.*

AVAILABLE TREATMENT OPTIONS

GLOBAL AMR NO LONGER TO BE USED

The medicine cabinet – *After making "risky" decisions.*

AVAILABLE TREATMENT OPTIONS

GLOBAL AMR NO LONGER TO BE USED

The medicine cabinet – *After making "risky" decisions.*

AVAILABLE TREATMENT OPTIONS

GLOBAL AMR NO LONGER TO BE USED

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AMR INSIGHTS  
MINDGAME

A rural practice in Southern Africa – *after making risky decisions*

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The medicine cabinet – *Known Resistances plus previous decisions*

BROAD SPECTRUM EXPENSIVE EXPENSIVE

GRAM NEGATIVE

GRAM POSITIVE

- NO KNOWN AMR
- SOME AMR
- FREQUENT AMR
- LOCAL AMR



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Forces competing

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

MY AMRESILIENCE

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

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Forces competing

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

MY AMRESILIENCE

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

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Forces competing

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

MY AMRESILIENCE

PATIENT HEALTH

TREATMENT COST

FUTURE TREATMENT

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Awareness gaming:  
what are your experiences?

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We appreciate your feedback: AMR & behavioral change

Go to [www.menti.com](http://www.menti.com)

Use the code **45 09 10 9**

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We appreciate your feedback:

Log out and log in again with the new code:

Go to [www.menti.com](http://www.menti.com)

Use the code **2271 0349**

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Awareness gaming:  
what are your experiences?

Thank you for your input!

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**Global AMR Innovation Fund (GAMRIF)**  
Fighting AMR through International Collaboration

Shahida Syed

27 January 2022  
Summit consultation: Focus on Prescription

### Global Health Security (GHS) at DHSC

- DHSC has a central role in health policy and delivery.
- In the last spending review the Global Health Security team was awarded **£477m of UK Official Development Assistance (ODA)** (34% of total DHSC ODA) funding to develop projects in and for Low and Middle Income Countries (LMICs)
- With the aim of contributing to a world safe and secure from infectious disease and antimicrobial resistance threats and promoting Global Health as an international security priority
- This is also the aim of the **Global Health Security Agenda**, a coalition of different countries working towards these shared objectives.

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### The GHS Programme

- Leadership**: Raising awareness and strengthening international and in-country systems to tackle infectious disease and AMR threats to the UK and globally. Building on UK's strong reputation internationally and demonstrating UK 'soft power' through health diplomacy via multilateral & bilateral relationships.
- Prevention**: **£126m: Vaccines and bio-preparedness project** to develop new vaccines and technologies to tackle diseases with epidemic potential (e.g. Zika, Ebola). **£50m: The Global AMR Innovation Fund** to fund and leverage wider investment in new innovative AMR research and development.
- Detection**: **£265m: Fleming Fund** to improve laboratory capacity and diagnosis as well as data surveillance of AMR in LMICs worldwide. **£16m: Funding** to build capability of a number of Low and Middle Income Countries to meet the WHO International Health Regulations.
- Response**: **£20m: The UK Public Health Rapid Support Team**, to investigate and respond to disease outbreaks before they become health emergencies.

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### An overview

The Global AMR Innovation Fund (GAMRIF), launched in 2016, is a **£65 million UK aid programme** supporting early-stage innovative research in neglected and underinvested areas of AMR R&D for the benefit of people in developing countries.

- We establish **international research partnerships** through a **One Health** approach
- We **work globally** with industry, academia and government
- We **leverage investment** from other donors

Department of Health & Social Care | Please visit <https://www.gov.uk/government/organisations/the-global-amr-innovation-fund> | Summit Consultation 'Focus on Prescription' | 85

### Why One Health AMR R&D?

ANTHROPAL BELLIE IS NOT ATTRACTIVE TO VENTURE CAPITALISTS

LESS THAN 5% OF ANTI-BIOTIC R&D SPENDING IS FUNDED BY VENTURE CAPITALISTS

- AMR is a threat to global health, food safety/security and socio-economic development
- 10 million people per year could die by 2050 from AMR costing the world up to US\$100 trillion
- Developing countries are disproportionately impacted with an estimated 28 million people being forced into extreme poverty by 2050
- The global expansion of intensive farming has led to an increase in antimicrobial use, an estimated 80% of all antibiotics sold worldwide are used in farm animals
- Tools (therapeutics, diagnostics, vaccines and beyond) are urgently needed to tackle a AMR 'the silent pandemic'

GAMRIF was launched in response to Lord O'Neill's Review on AMR recommendation: "A global fund for early-stage research and R&D lacking a commercial imperative"

Department of Health & Social Care | Summit 'Review on AMR, 2016 URL: <https://amr-review.org/> | Summit Consultation 'Focus on Prescription' | 86

### Our portfolio

- CARB-X** (£20m + US\$43m) Vaccines & alternatives
- GARDP** (£7m) Antibiotics – gonorrhoea & core
- UK-China bilateral** (£10m + ¥60m)
- BactiVac** (£1.4m + £2.3m) Vaccine pump-priming
- FIND** (£10.6m) Diagnostics – connectivity & marketshaping – gonorrhoea & sepsis
- UK-Argentina bilateral** (£5m + £5m) Tools for the environment
- InnoVet-AMR** (£11m + CA\$11m)
- ICARS** (£50k + US\$30k) Diagnostics

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### Wrap-around support

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### Our impact so far

- Supported 86 R&D projects and engaged >100 researchers from over 30 LMIC research institutions
- Established 9 new research partnerships, and signed 2 MoUs (China, Argentina)
- Leveraged >£50m of additional R&D investment from other donors

**Impact in > 30 countries**

**Tackling drug-resistant gonorrhoea leveraging the flexible GAMRIF mechanism**

- We support:
  - a new antibiotic in Phase 3 clinical trials (GARDP)
  - a vaccine in preclinical development (BactiVac, CARB-X)
  - a point-of-care diagnostic test moving into scale up (FIND)

**Leveraging political commitments through science diplomacy**

- Through the UK-Argentina partnership we built a continued strong relationship with the Argentinian MoH
- helped secure AMR as a G20 priority under Argentina's 2018 presidency

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### The GAMRIF model works!

International partnerships underpin GAMRIF's impact:

- Partners
  - Product Development Partnerships (PDPs)
  - Global initiatives
  - National research councils
  - Foreign governments
- Researchers
  - Academia
  - Industry
  - Research organisations
- Sectors
  - Human
  - Animal
  - Environment

**GAMRIF Interim Evaluation** ECORYS

**Aim:** Evaluate the process with initial impact evaluation

- GAMRIF is **effective** and is fulfilling its objectives. Funding from other governments and foundations has been directly leveraged and indirectly leveraged through multi-donor working and influencing a greater focus on addressing the needs of LMICs.
- The design and structure of GAMRIF has allowed funding to go to the best science and to combine funding with other partners and resources, to achieve more than could be achieved alone, and to channel that funding via fit-for-purpose delivery mechanisms and industry partnerships, leveraging external expertise and reducing the need for GAMRIF to duplicate.

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### Collaboration required to tackle AMR

"The Review on AMR rightly takes a global perspective as AMR is a global issue, with resistant microorganisms paying no heed to national boundaries. It can therefore only truly be tackled by collaboration within and between nations."  
 – UK government's response to the Review on AMR

"The United Kingdom (UK) is determined to sustain its efforts to combat resistance, taking local, national and global 'One-Health' approaches across humans, animals, the environment and food, in line with global ambitions and in collaboration with other nations, partners and the international community."  
 – The UK's 20-year vision for AMR

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### Lessons learned

- Work towards the same goal – "no one is safe until everyone is safe"
- Share principles – "the whole is greater than sum of its parts"
- Be confident in own's vision while understanding the other side's position
- Be willing to negotiate and compromise
- Be open and honest – even more important in the virtual environment

**CARB-X**

- Donors are a diverse collection of organisations with different aims and objectives, e.g.
  - BARDA – US security
  - Gates Foundation – neonatal and vaccines
  - GAMRIF – LMICs
- Willingness to coalesce around shared principles
- Enabled CARB-X's true global brand

**UK-Argentina Pan-Programme Integration Project**

- Challenged 5 bilateral project teams to collaborate on a shared project (PPP) to increase the impact of the outcomes from each individual project
- Combine expertise and data for co-design of policy with agricultural livestock sectors and ensure consistent messaging and communications
- Avoid duplication of research and contradictory communication to stakeholders and policymakers

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## Thank you!

For more information on GAMRIF, please visit:  
<https://www.gov.uk/government/groups/the-global-amr-innovation-fund>

Follow us on Twitter @UKgovGHS

### Focus on Prescription

Today we inform, consult and join forces

16:00	Welcome and introduction		
16:05	Global burden of bacterial antimicrobial resistance	Dr Catrin Moore	University of Oxford; UK
16:15	Strategies to curb antimicrobial resistance	Dr Maarten van Dongen	AMR Insights; NL
16:25	Behavioural change by online interventions	Dr Enrique Castro-Sanchez	University of West London; UK
16:35	Online awareness gaming to drive change	Dr Gerard Mulder	Mindgame; NL
16:45	Awareness gaming: what are your experiences?	ALL	
16:55	Global collaborations to curb AMR	Dr Shahida Syed	Global AMR Innovation Fund; UK
17:05	<b>Break</b>		
17:15	Focus on Prescription: development, needs & objectives	Mr Derek van Dongen	Mindgame; NL
17:25	Towards a global collaboration	Dr Maarten van Dongen	AMR Insights; NL
17:35	Q&A		

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### Focus on Prescription

For prescribers by prescribers

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### Focus on Prescription

#### The three step program

The development and implementation of a serious game to improve the antibiotics prescription behaviour of medical doctors is realised in 3 consecutive, partly simultaneous steps:

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### Focus on Prescription

#### 1. Are you resistant

The online survey tool 'Are you resistant' is meant to obtain a thorough understanding of the current knowledge level and insights amongst health professionals in general.

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### Focus on Prescription

#### 2. Prescription Challenge


In developing the serious game 'Prescription Challenge', we assume that the prescribing doctor has to make an informed, rational decision regarding the prescription of antibiotics. In addition to the many well-considered choices that are made (fortunately), there is still a large target group that makes a choice based on one or more unjustified, unfounded insights or on the basis of automated handlings.

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### Focus on Prescription

#### 3. Online prescription tool

As a third step, and only on the basis of a successful, global implementation of the game, we plan to develop an online aid for prescribing health workers to help these make the most durable choices. To this end, we will develop a mobile phone based online working method that makes it possible for any prescribing doctor, anywhere in the world, to arrive at the optimal treatment for any infectious disease in any setting.




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### Focus on Prescription

#### Generation data for multipurpose use

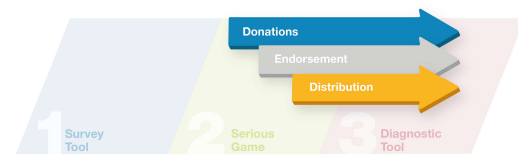
- Continuous learning cycle in the program
- Data analyses for policymakers and educational purposes



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### Focus on Prescription

#### What do we need to achieve our goal



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### Focus on Prescription

#### We appreciate your feedback:

Log out and log in again with the new code:

Go to [www.menti.com](https://www.menti.com)

Use the code **1515 9395**

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### Focus on Prescription

#### Next steps

- Evaluate: Menti / Q&A (FEB/2022)
- Conclusions and recommendations (FEB/2022)
- Contact for further information (*online form*) (FEB/2022)
- Development plan global cooperation (MAR/2022)
- Realisation (APR/2022 >>)

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### Focus on Prescription

#### Questions and answers

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## Summit Consultation 'Focus on Prescription'

27 January, 16:00 – 18:00 CET  
Online event, by invitation only



AMR INSIGHTS  
A WORLD OF FIRST FROM AMR

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### Focus on Prescription



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