

DIHAD Conference 2022

Good Health and Wellbeing (SDG 3)
&
Clean Water and Sanitation (SDG 6)

ANTIMICROBIAL RESISTANCE and SDG

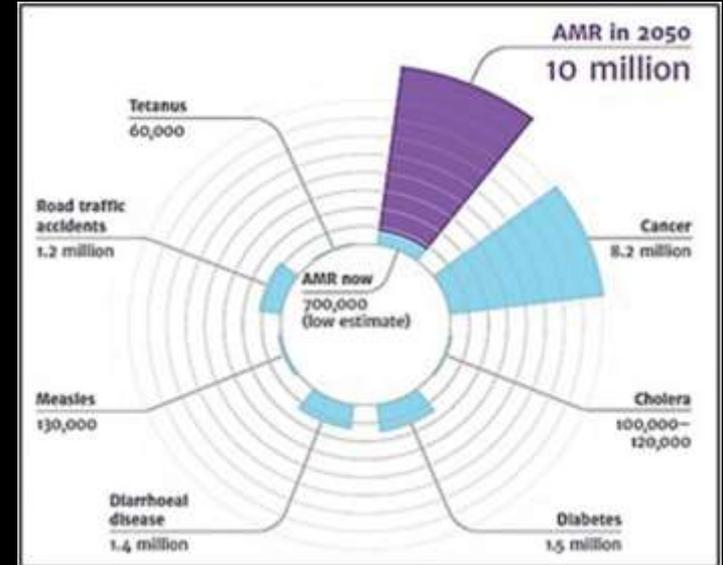
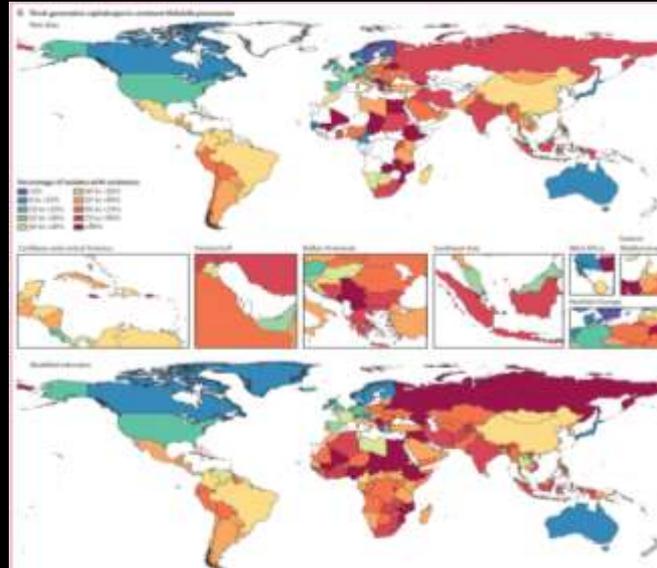
Dr Nada MALOU. The MSF Foundation



LA FONDATION

AMR: major Public Health threat

- ❑ 4.95 million (3.62–6.57) deaths
- ❑ 1.27 million deaths attributable to bacterial



SDG and AMR are highly interlinked

AMR requires unprecedented levels of global coordination



SDG 3 "will be impossible to achieve without effective antimicrobials"¹

TACKLING ANTIMICROBIAL RESISTANCE ON TEN FRONTS



SDG and AMR are highly interlinked

AMR puts the achievement of SDGs related to health, agriculture, animals, the environment and food directly at risk. In addition, actions and objectives related to these SDGs are closely related to individual AMR content areas



2

Zero Hunger

Livestock production in low-income countries would be affected the most. Under a high AMR-impact scenario, up to 7% of productivity might be lost by 2030. Animal protein plays an important role in nutrition for children and women.

AMR puts the achievement of some SDGs indirectly at risk, due to cascading impacts on economic wellbeing & inequality



8

Decent work and economic growth

AMR's impact on global GDP might be as large as the 2008–2009 global financial crisis, amounting to losses of \$3.4 trillion by 2030.

1

No Poverty

AMR could push an additional 24 million people into extreme poverty by 2030

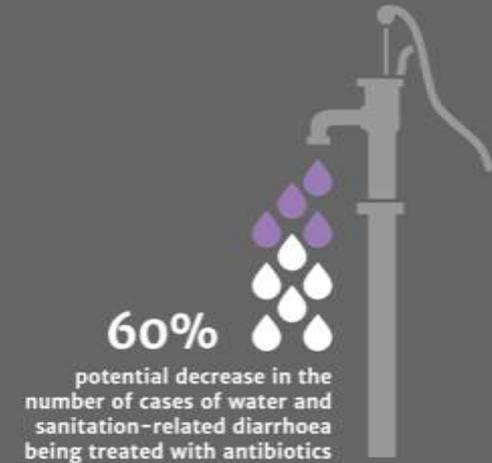
SDG and AMR are highly interlinked

Further SDGs minimize the negative impact of AMR and have implications for the implementation of global and national action plans



BETTER WATER AND SANITATION REDUCES ANTIBIOTIC CONSUMPTION

In the four middle-income countries studied, introducing water and sanitation infrastructure could substantially reduce the number of related diarrhoea cases treated with antibiotics.



Equitable Access to water and sanitation can reduce AMR

Equitable Access to diagnostic : essential for UHC

- ❑ Diagnostic: Essential for universal health coverage
- ❑ 47% of the global population has little to no access to diagnostics.
- ❑ 1.1 million premature deaths in low-income and middle-income countries could be avoided annually
- ❑ The level of primary health care is the diagnostic so-called last mile and particularly affects poor, rural, and marginalized communities globally; appropriate access is essential for equity and social justice.

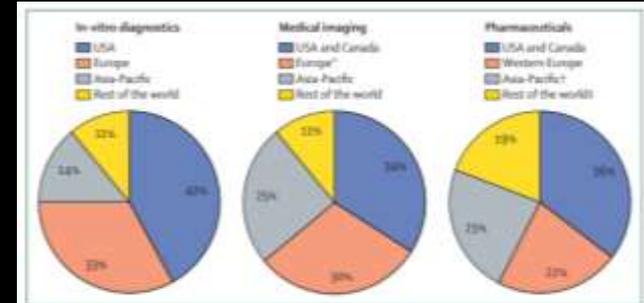


Figure 5: Global market shares of diagnostics and pharmaceuticals purchases in 2015-19 by world region. The majority of global purchases of diagnostics and pharmaceuticals are from high-income countries in North America and Europe.

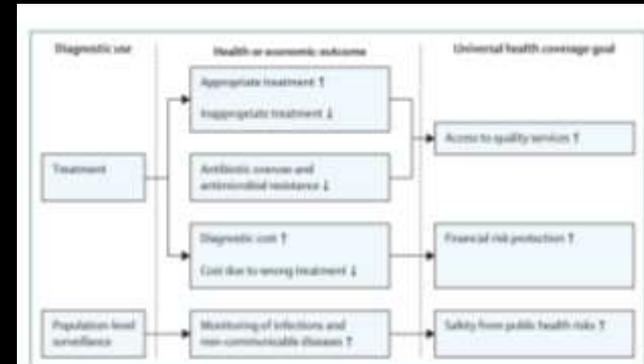
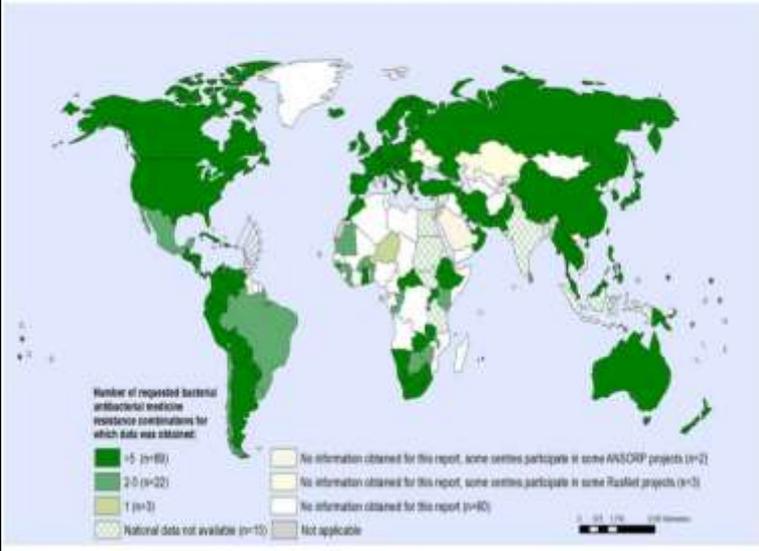


Figure 2: Diagnostics are essential for universal health coverage. Diagnostics are used to guide treatment of patients as well as population-level surveillance, both of which affect health and economic outcomes. These outcomes, in turn, have a multifaceted and substantial impact on achieving specific goals of universal health coverage.

AMR in Middle East: The invisible threat

Available National Data* on Resistance for Nine Selected Bacteria/Antibacterial Drug Combinations, 2013

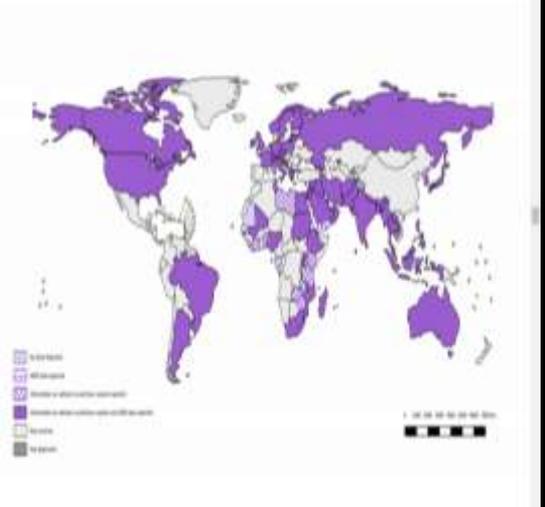


GLASS-AMR submission



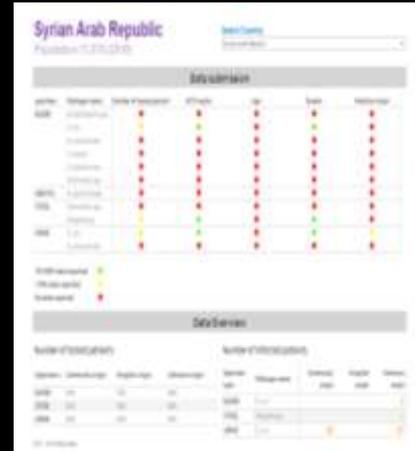
By the end of data call, 31st July 2019

- 82 countries/territories/areas enrolled
- 78 countries/territories/areas submitted data
 - 12 countries provided only the information on the status of their national AMR surveillance systems.
 - One country provided AMR rates only
 - 65 countries provided the information on the status of their national AMR surveillance systems and 2018 AMR rates



EMRO: Returned data set (s)/ no. of Member States : 7/21 (2014) -----16/21 (2020)

AMR in Middle East: The invisible threat



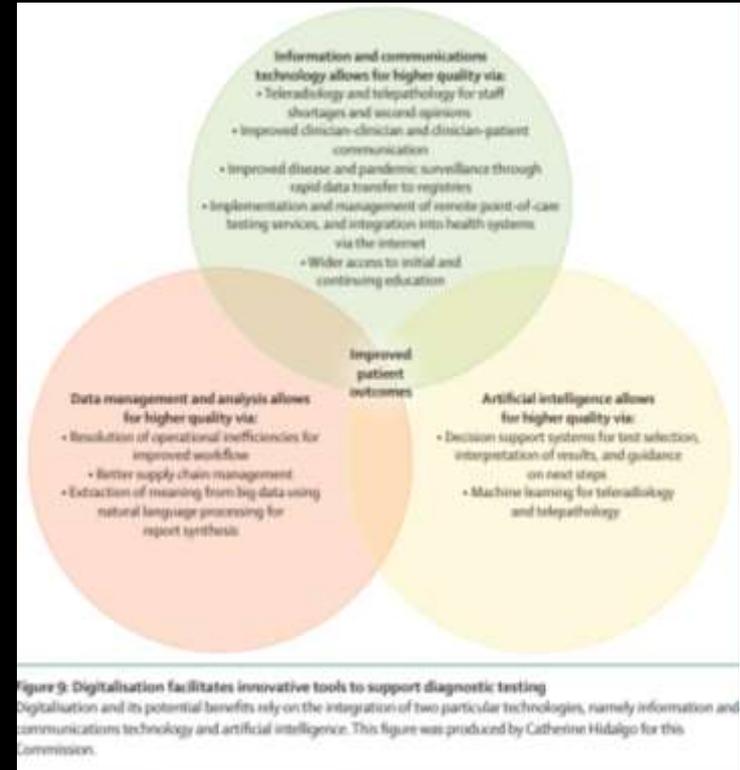
..... but still lack of data

AMR in Middle East : MSF experience



Barrier for acces to microbiology Diagnostic

- ❑ Physical infrastructure : Water, Electrical supply, equipment, space
- ❑ Operational infrastructure: adequate management systems for workflow, procurement chain (particularly a cold supply chain), information technology for laboratory information systems, digital image management systems (eg, picture archiving and communication systems), maintenance, support to data collection
- ❑ Health workforce: Ratio pathologists/pop: sub-Saharan Africa countries are less than one per million population VS 48 in canada

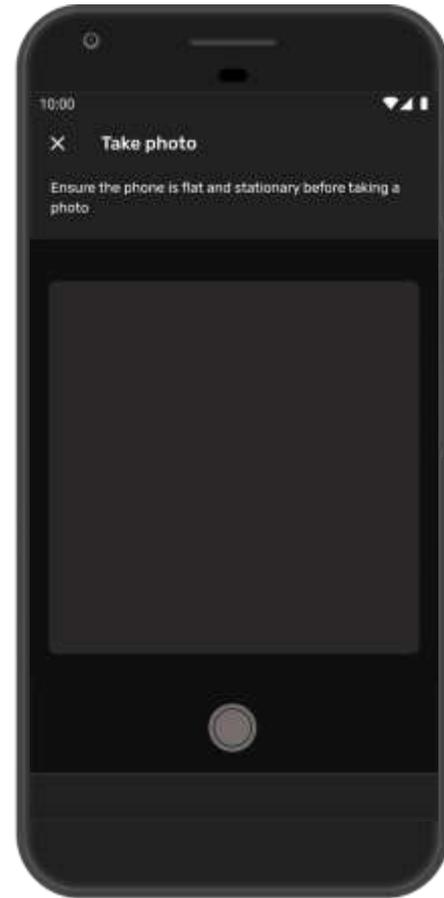


The Lancet commission for diagnostic

Antibiogo: Smartphone based app to read and interpret antibiogram tests: Free and open access

1. Picture of the petri dish
2. Semi automatic detection of antibiotic discs and inhibition zone
3. Expert System: Application of 3000 interpretation rules
4. Display results to clinicians

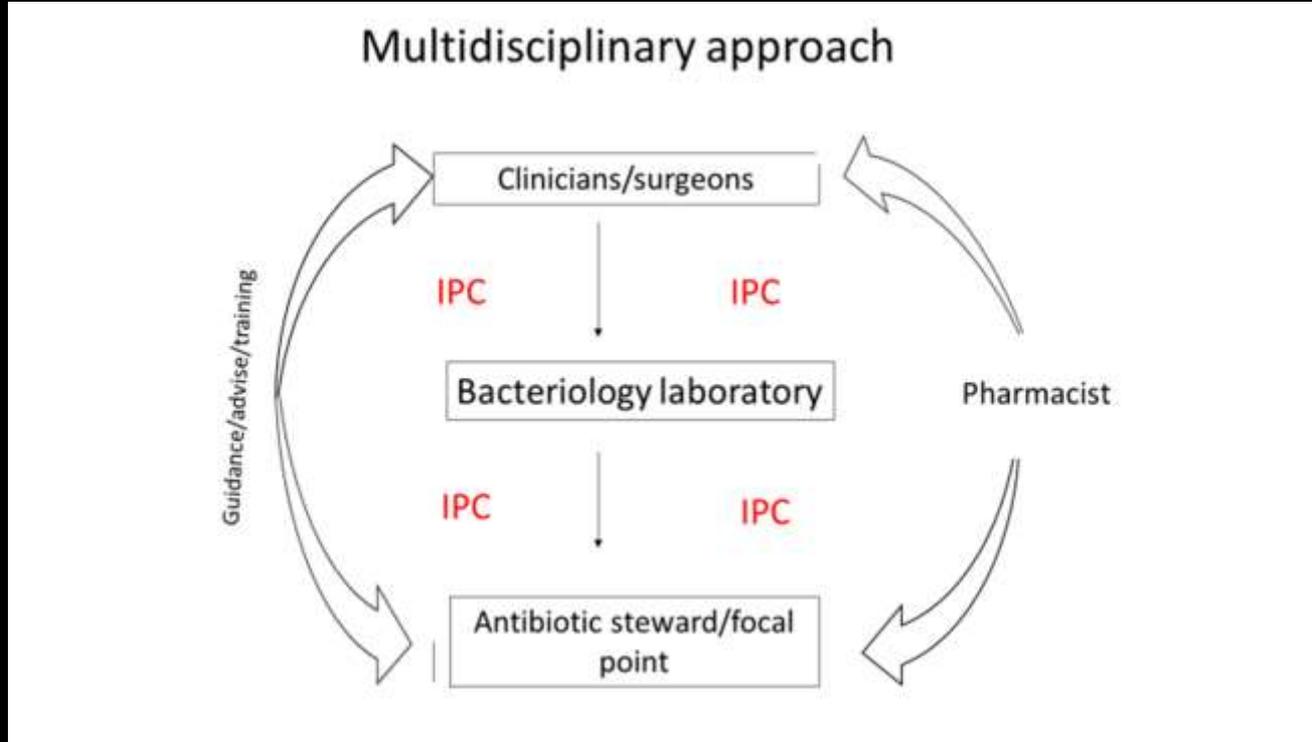
<https://www.youtube.com/watch?app=desktop&v=y3oxQLLNhs&feature=youtu.be>



Antibiogo: Collaboration between Humanitarian, tech and academic



MSF strategy to tackle AMR in Hospital setting



Thank you