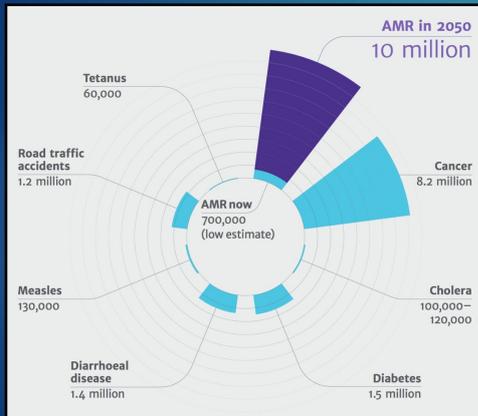


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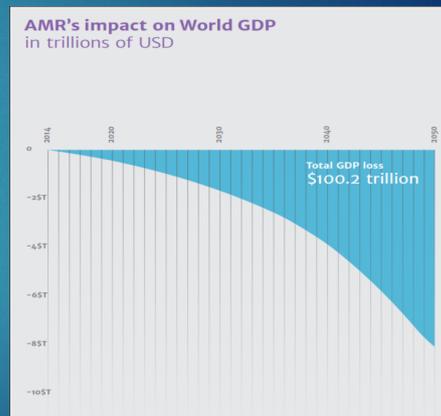
International Centre for Antimicrobial Resistance Solutions

Robert Skov, MD, Senior Consultant
National AMR Coordinator, Lead of ICARS project team
Statens Serum Institut, Copenhagen, Denmark

Human Cost of AMR – Lives Lost



Economic Cost – Global GDP Loss



TACKLING DRUG-RESISTANT INFECTIONS GLOBALLY: FINAL REPORT AND RECOMMENDATIONS THE REVIEW ON ANTIMICROBIAL RESISTANCE CHAIRED BY JIM O'NEILL MAY 2016



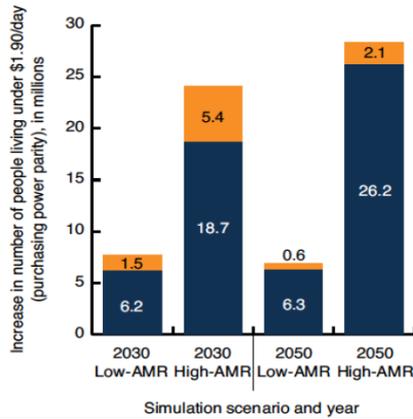
IMPLICATIONS FOR POVERTY ERADICATION AND STABILITY

Final Report
DRUG-RESISTANT INFECTIONS
A Threat to Our Economic Future

Low AMR: global GDP falls short by 1.1 percent annually by 2050, shortfall exceeds \$1 trillion annually after 2030

High AMR: global GDP falls short by 3.8 percent annually by 2050, shortfall reaches \$3.4 trillion annually after 2030

Additional people falling into extreme poverty: nearly 8 million by 2030 in the low-AMR case; more than 28 million by 2050 in the high-AMR case



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AMR is not just as a public health or agricultural challenge, but an adaptive development challenge (problem of development)

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- AMR is a development challenge that will disproportionately affect low- and middle- income countries from an economic and social perspective
- Failure to address AMR will negatively affect some SDGs; also, the pursuit of some SDGs will help combating AMR



Final Report

DRUG-RESISTANT INFECTIONS

A Threat to Our Economic Future

ICARS

Cumulative savings of extra health care costs to 2030 are \$4 trillion if “low-AMR” case is avoided and \$11 trillion if “high-AMR” case is avoided



AMR – a wicked problem!

ICARS

AMR respects neither sectors nor borders.

The ever growing human population as well as the livestock production increases the demand for antibiotics

In several countries lack of access to antibiotics causes more deaths than infections due to AMR bacteria

Actions against AMR

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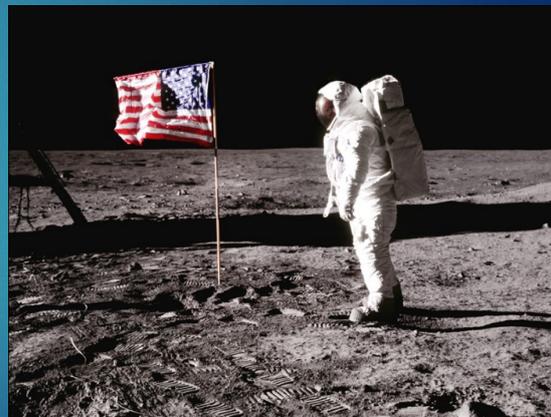
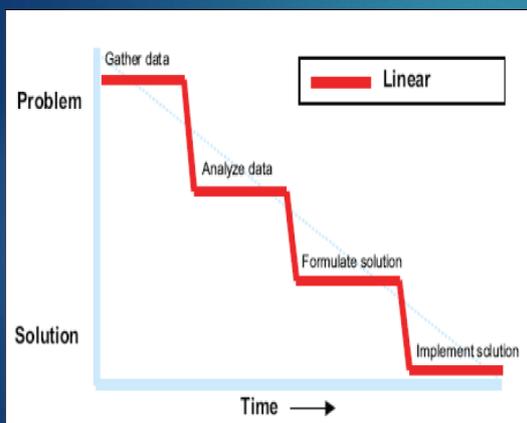
WHO, FAO, OIE, UNEP (Tripartite+) together with key organizations are developing the necessary policy frameworks for action globally.

The global policy frameworks are translated into the national action plans in the majority of countries

Several initiatives by the Tripartite+, countries, NGOs and research institutions are ongoing or initiated these years

Traditional wisdom for solving complex problems: the 'waterfall'

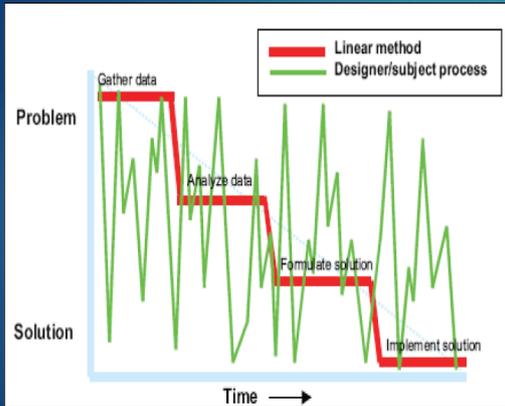
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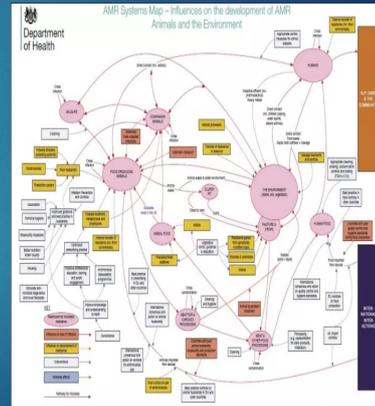
Tame problems

ICARS

Opportunity-driven problem solving:
the “jagged line of learning”



Wicked problems



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Several low- and middle income countries (LMIC) struggle with implementation of their AMR action plans as well as to find feasible solutions to mitigate the problems of AMR

There is a need for an international research centre focusing on **implementation and solutions** in LMIC

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Why Denmark

ICARS

Denmark has worked “One Health” for 25 years with monitoring of AMU and AMR in human and veterinary bacteria since 1995

- Merged the National Vet Institute and the Statens Serum Institut



Denmark has a large livestock production with experience in the cooperation of authorities with farmers, vets and companies leading to a fairly low AMU and AMR

Denmark has experiences in AMR projects in LMICs with a high degree of local involvement

ICARS Mission

ICARS

*The ICARS centre will act as an independent global knowledge node for generating, aggregating and disseminating evidence on antimicrobial drug resistance and support the development of **feasible context-specific solutions** for its containment.*



ICARS' scope



ICARS

Implementation and solution driven research are key objectives for ICARS

- Multidisciplinary as well as interdisciplinary
- Evidence based
- Work in a One Health approach cutting across human, livestock and plants, as well as the environment
- Will serve as an independent global knowledge node collecting existing and novel experiences gained from implementation research across scientific disciplines

Focus on low- and middle-income countries

AMR Specific as well as AMR Sensitive issues

ICARS scope



ICARS

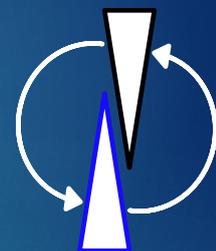
Support the translation of policies into evidence-based practices

Will work with strong local participation to secure development of contextual and feasible solutions for the individual country/region

- Bottom up approach

Will be a learning organization and will evaluate processes and impact of interventions

- Failure in interventions, may be due to the process rather than the rationale



Road ahead



April 2019: Presentation of ICARS at the margin of the WB Spring Meeting

- Identification of strategic funding partners (countries, foundations)

Autumn 2019: ICARS transforms from an idea to an international centre

- Establishment of an international board
- Hiring a managing director
- ICARS goes live

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Thank you for your attention