USING ABM TO INFORM (HEALTH) POLICY-MAKING: CHALLENGES AND OPPORTUNITIES

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ABM and Policy-Making In An International Context: Some Thoughts On Why We are Underusing This Key Tool

**Fit for purpose but not flexible:** models are developed for specific tasks and transferability/adaptation is complex

**Data limitations:** ABMs are ‘data hungry’ and there is a lack of cross-country comparable data to feed the models

**Policy-makers like to feel ‘ownership’ of the model:** stakeholders want to adapt and ‘customize’ the analyses
THE OECD PUBLIC HEALTH TEAM IS DEVELOPING AN ABM MODEL TO EVALUATE THE ROI OF POLICIES TO TACKLE AMR
What is AMR? Why Does the OECD Care?

1 in 5 infections in OECD is resistant to antibiotics and resistance will keep growing.

2.4 M people will die in Europe, North America and Australia in 2015-50 due to AMR, without prompt and effective action.

3.5 B USD per year Cost of AMR to the Healthcare services of OECD countries between 2015 and 2050.

Source: OECD. Stemming the Superbug Tide: just a few dollars more. 2018. oe.cd/amr-2018
But There is Hope! A ‘Mixed’ Intervention Package Would Decrease Healthcare Expenditure by 3 USD/Capita/Year

Source: OECD. Stemming the Superbug Tide: just a few dollars more. 2018. oe.cd/amr-2018
Infectious Diseases, Including AMR, Are an Excellent Case Study For ABM Models

The emergence and spread of AMR

Source: OECD. Stemming the Superbug Tide: just a few dollars more. 2018. oe.cd/amr-2018
The OECD Public Health team is developing an ABM in C++

Modelling the spread of resistant infections in the community and across hospitals is a key focus of the model:
- Development of a ‘virtual’ (and simplified) healthcare system with patient flows
- Extrapolation from ‘data-rich’ countries to others, by using international datasets

The derived model will be used to test the return on investment of selected policies such as:
- Are investments optimized by targeting policies on ‘high-risk’ hospitals?
- Is screening of all incoming patients to detect AMR a good investment?