Why use elicitation?
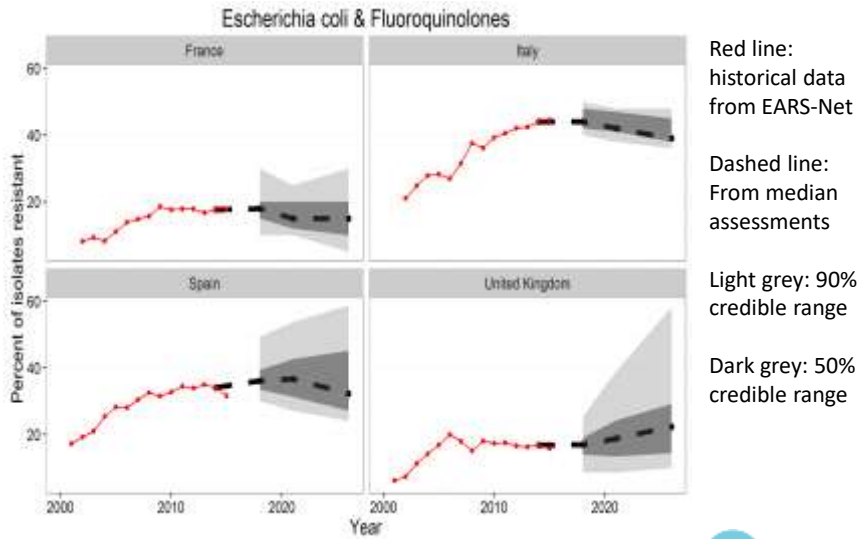
- Well, for example…
  - Technology is at early stage and no trial data with human subjects exists
  - Technology is in use but data has not been collected
  - Technology is in use but randomisation is not possible and causal attribution is problematic
  - Interest is in long-run consequences beyond trial endpoints
  - Results do not generalise from the trial setting to the target setting

Example: Anti-Microbial Resistance

- Technology is at early stage and no trial data with human subjects exists
  - Strong pressure for government to provide upfront payment early in the development cycle
- Technology is in use but data has not been collected
  - Trial data is often noninferiority trials or trial data does not even exist for older antibiotics
- Technology is in use but randomisation is not possible and causal attribution is problematic
  - Stewardship interventions are public health interventions and applied at the population level
- Interest is in long-run consequences beyond trial endpoints
  - Interest is in preventing the spread of resistant pathogens and protecting the lastline antibiotics (eg Colistin)
- Results do not generalise from the trial setting to the target setting
  - Response to treatment depends on local characteristics of the epidemic

Escherichia coli & Fluoroquinolones

Red line: historical data from EARS-Net

Dashed line: From median assessments

Light grey: 90% credible range

Dark grey: 50% credible range

Experts provided assessments for 2018, 2021, and 2026.

DRIVE AB RE-INVESTMENT IN R&D AND RESPONSIBLE ANTIBIOTIC USE

- Elicitations led by Abby Colson

Can we really believe experts?

- The history of medicine is littered with experts who were confident but wrong
  - Venice treacle as a remedy for bubonic plague
  - Radical mastectomy for breast cancer
  - Thalidomide is "completely safe"

Expert judgement is just another form of data

- Follow protocols in eliciting expert judgement
  - Protocols do exist (though not in health)
- Don't rely on *one* expert
  - Ask multiple people and pool or compare experts
- Validate experts
  - Can experts give right answers where the answer is known?
- Monitor conflicts of interest
  - Select your expert panels accordingly
- Recognise perhaps there are some subjects on which there are no experts
  - What will be the rate of knee replacements in the year 2500?