



# Economic Evaluation of New Antibiotics: Health Still the Focus

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Policy Research  
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Health & Care  
Interventions

**FRAMEWORK FOR VALUE ASSESSMENT  
OF NEW ANTIMICROBIALS**

Implications of alternative funding arrangements for NICE Appraisal

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## Naive HTA won't fit the bill

Randomized regulatory trials

Full range of comparators

Suitable effect sizes

Population health effects

Appropriate time horizon

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## Challenging elements of assessment

- Comparison for a given indication
- Modelling long-term net health effects
- Uncertainty

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## Comparison for a given indication

### **New antimicrobial**

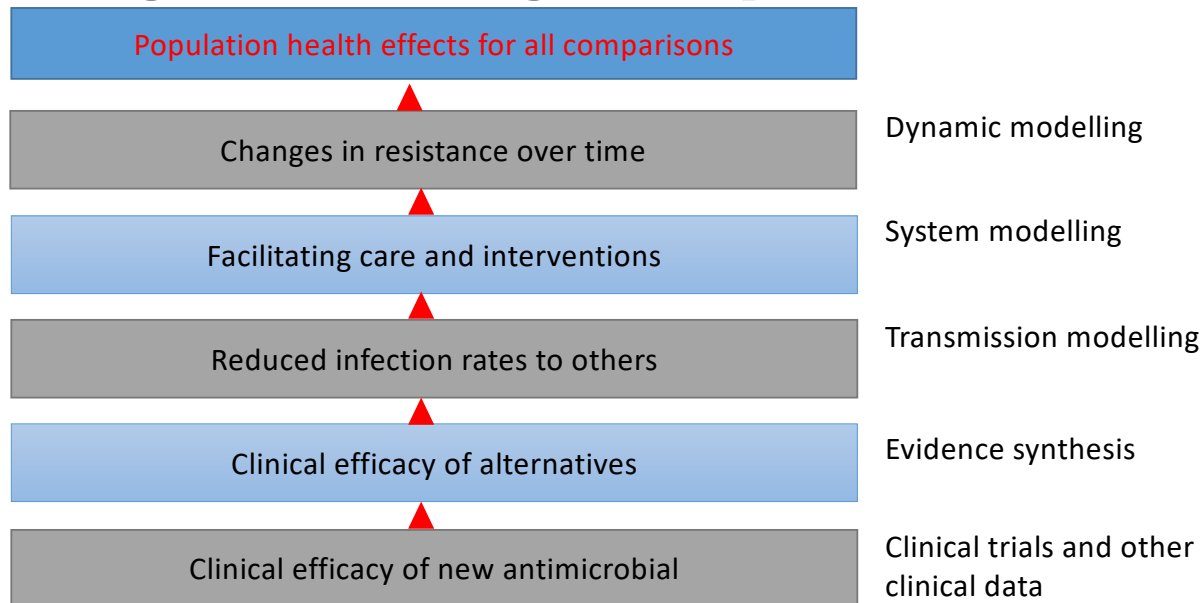
- Used early
- Used at given level of resistance
- Left as last resort
- Used empirically
- Used following testing
- Mixing and rotating
- ...

### **Alternative management**

- Current antimicrobial 1
- Current antimicrobial 2
- Used empirically
- Used following testing
- Mixing and rotating
- ...

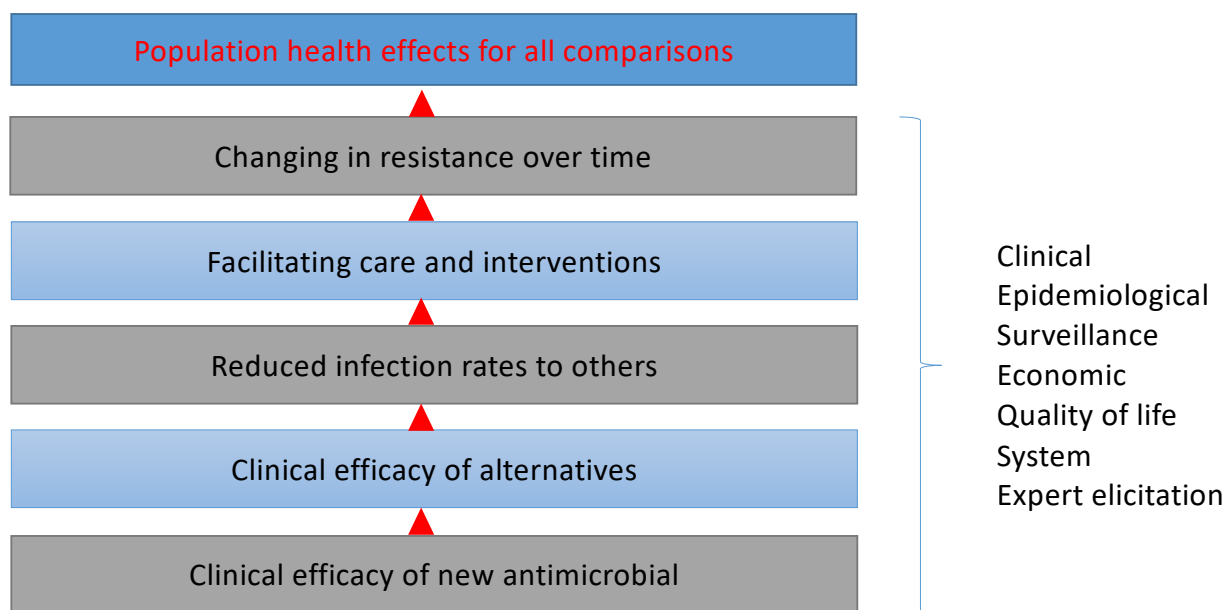
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## Long-term modelling for all options

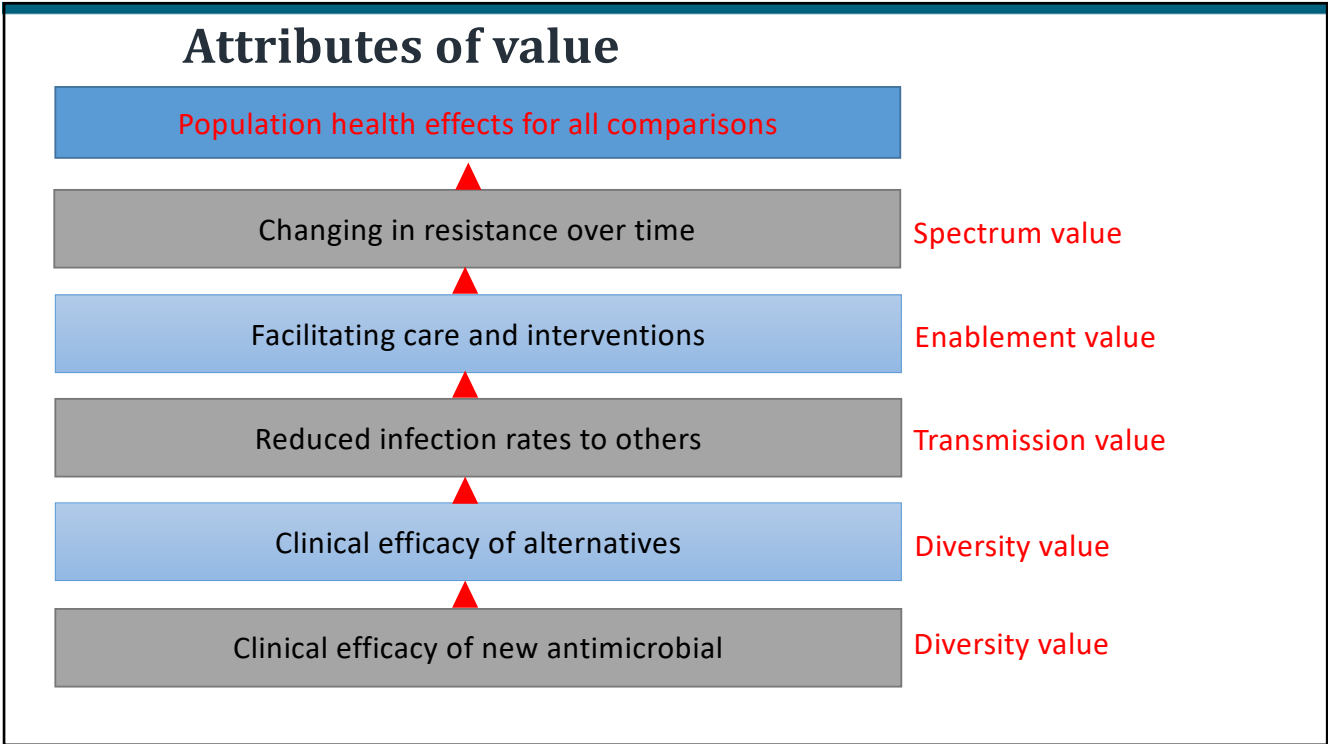


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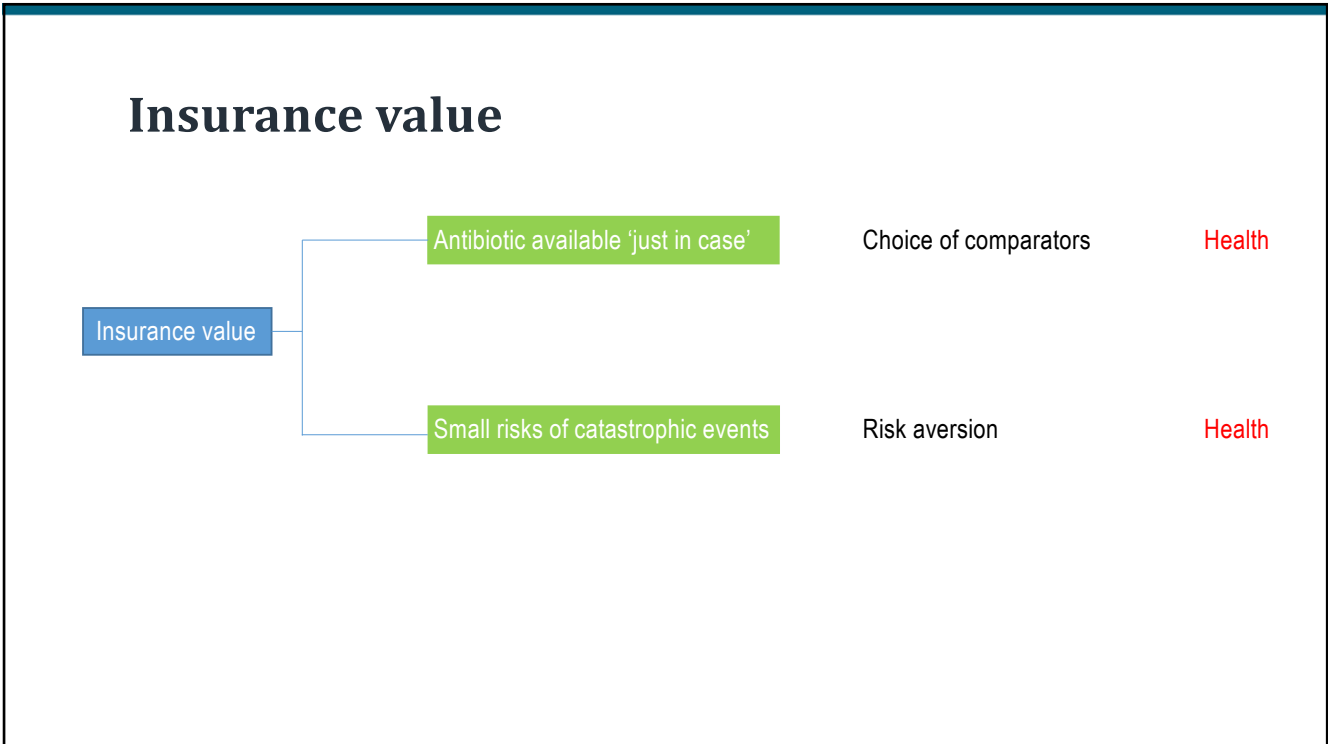
## Evidence



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## Managing uncertainty: iterative assessment

Mean cost-effectiveness

Evidential uncertainty

Decision uncertainty

Cost of uncertainty

Value of future research

Future changes

Research feasibility

Approval

vs

Approval 'only in research'

vs

Approval with research

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## Summary

- Policy challenges in how to incentivize the development of new antimicrobials appropriately
- Any policy will need to determine how much funding a health system should devote to newly available product
- Standard approaches to economic evaluation in HTA are unlikely to be suitable
- A fuller methods framework is necessary, but the focus needs to be on health outcomes

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