



Assessing the Challenges of Applying Standard Methods of Economic Evaluation to Public Health Interventions

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Components of the Project

- Review of the literature.
- Focus on four methodological challenges.
- Options for dealing with the challenges.
- Case studies.
- Recommendations and conclusions.

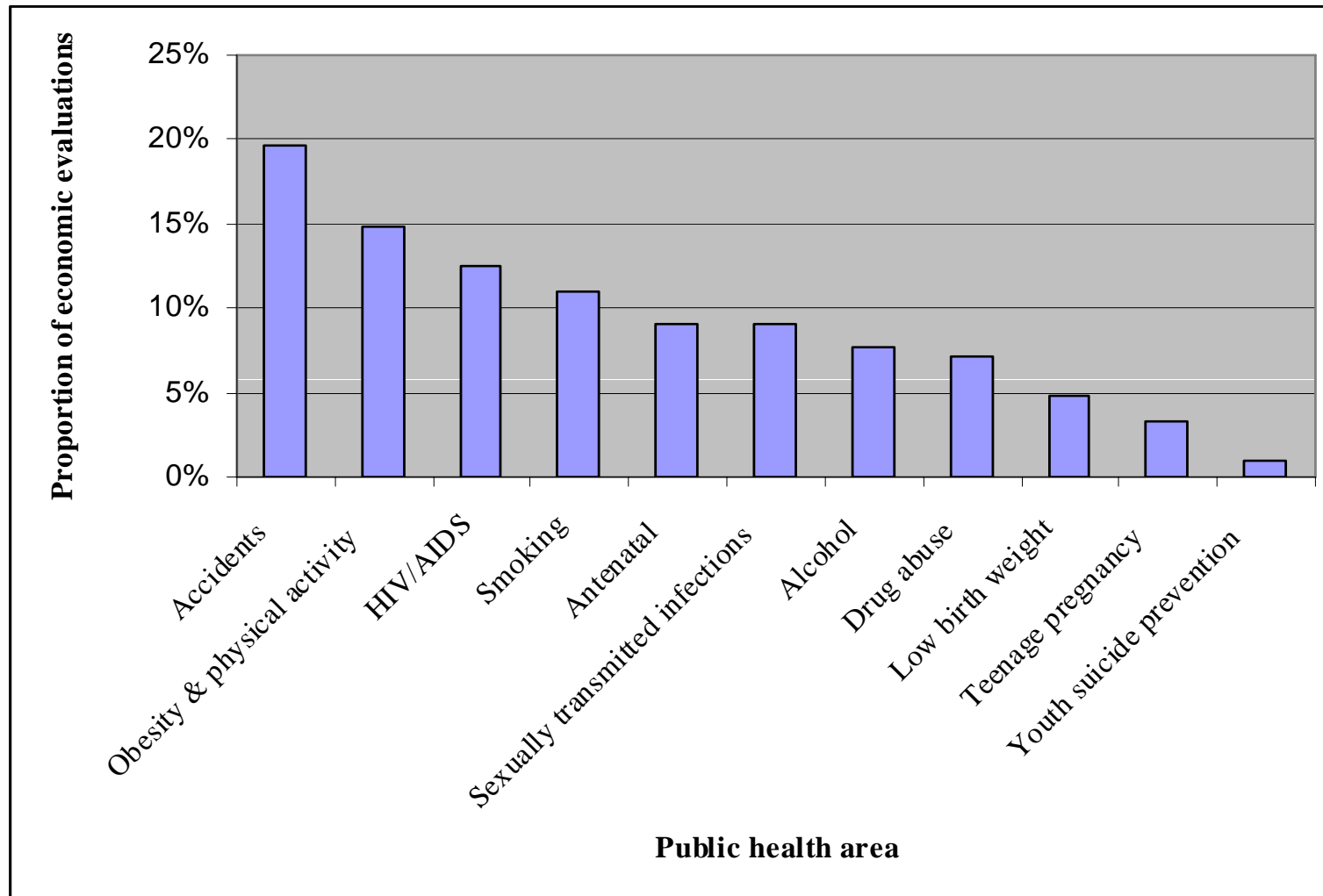
Analytical Challenges Posed by the Evaluation of Public Health Interventions

- Inter-sectoral effects.
- Estimates of relative treatment (programme) effects.
- Measurement and valuation of outcomes.
- Equity.

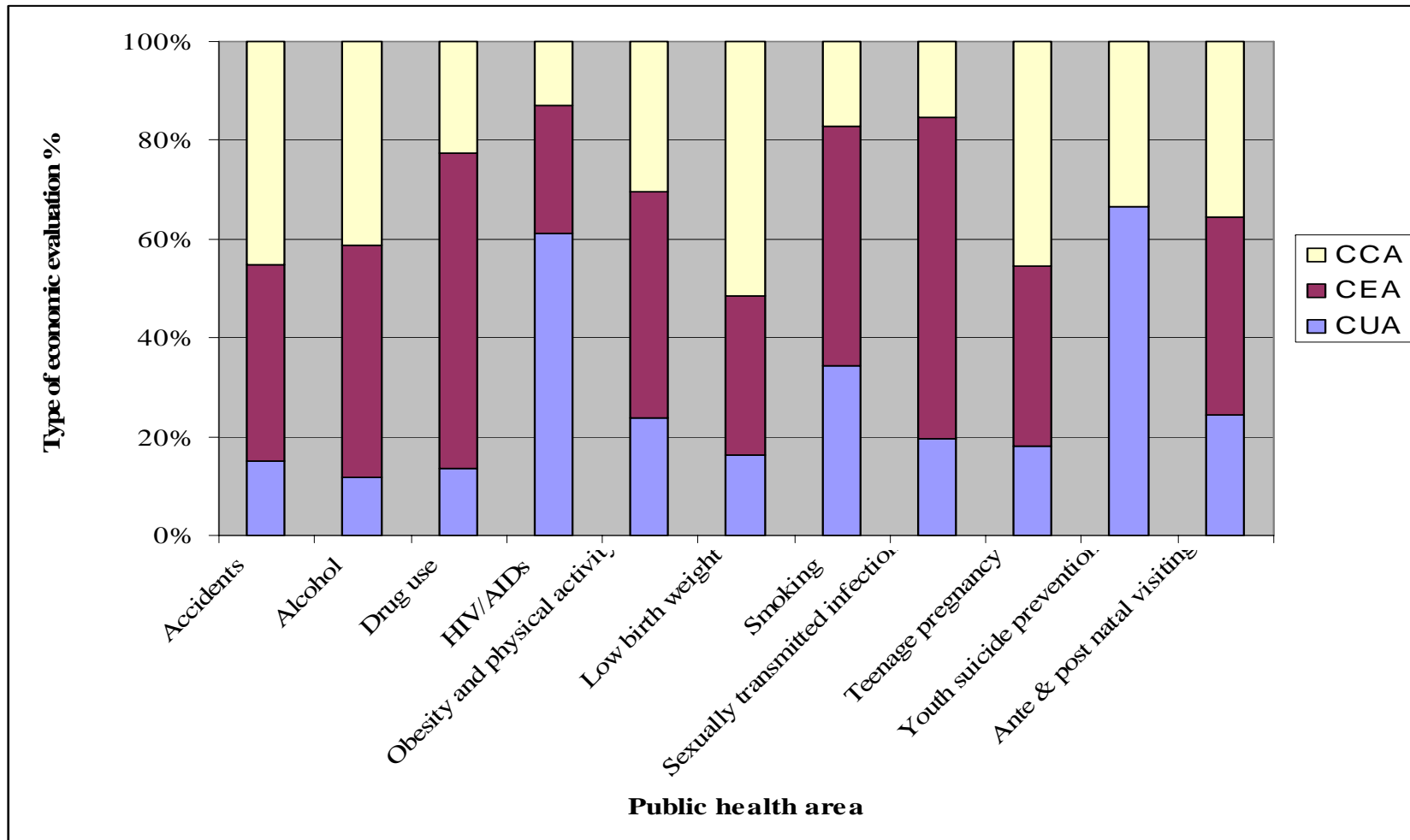
Literature Review Methods

- Searched NHS EED database
 - extensive coverage
 - easy access to abstracts
 - easy access to papers.
- Choosing Health, DH Public Health White Paper
 - Topics, n=11

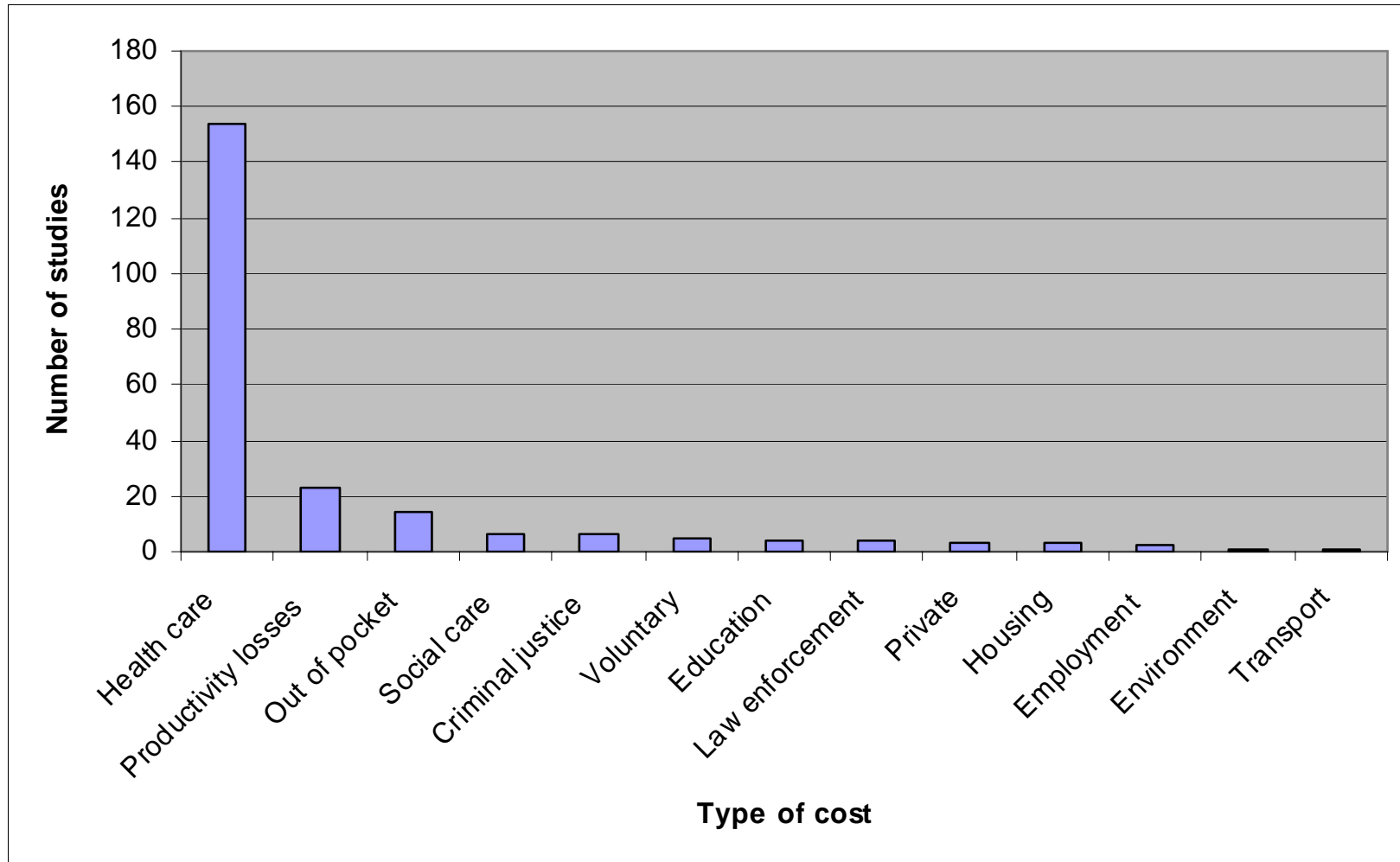
Public Health Areas



Economic Evaluation Type by Public Health Area



Costs



Estimate of Programme Effectiveness

SOURCES OF DATA

- Experimental studies, 27%
- Observational studies, 27%
- Reviews, 46%

INCORORATION OF MODEL

- Of the experimental studies above 13% included a model
- Observational studies, 22%
- Review, 89%

Inter-Sectoral Effects

- Current literature does not cast the net very broadly.
- Evaluations of PH interventions need to consider both public and private costs.
- Need to explore the 'ripple effects' (e.g. bicycle helmets).

Estimates of Relative Treatment (Programme) Effects

- Primary studies (e.g. potential for some RCTs).
- Data synthesis
 - modelling short to long-term
 - combination of effects from different designs
 - econometric modelling.

Measurement and Valuation of Outcomes

- Each method has its pros and cons.
- The options include:
 - money valuation
 - superQALY
 - cross-sectoral compensation test.

Equity Considerations

- Growing literature, although not generally applied in the context of economic evaluations.
- Methods for incorporating equity concerns:
 - discussion
 - distributional analysis (who gains/loses?)
 - opportunity cost analysis of equity
 - equity weighting analysis.

Recommendations

- Attribution of outcomes.
- Measuring and valuing outcomes.
- Equity considerations.
- Intersectoral costs and consequences.

Attribution of Outcomes

- Where possible, conduct RCTs.
- Try to match the outcomes in trials with those available in long-term observational studies.
- Where RCTs cannot be undertaken, fill gaps in the evidence base through natural experiments and non-experimental data.

Attribution of Outcomes (contd.)

- In economic evaluations synthesise all data, experimental and non-experimental. Conduct research into these methods (R).
- Make more use of techniques to analyse non-experimental data (e.g. propensity scores, time series analyses, more sophisticated econometric modelling).

Measuring and Valuing Outcomes

- Needs to be more debate about the theoretical and value propositions underlying the various forms of economic evaluation.
- Always perform a cost-consequences analysis, prior to proceeding to a valuation of outcomes.

Measuring and Valuing Outcomes (contd.)

- Explore the practicalities of applying the intersectoral compensation test approach (R).
- Continue research on developing a more general measure of well-being (R).

Equity Considerations

- Conduct pilot studies of health inequality impact assessment for selected public health interventions.
- Where the most cost-effective option is judged inequitable, calculate the opportunity cost of not selecting that option.
- Undertake primary research on the effectiveness of interventions designed to tackle health inequality (R).

Equity Considerations (contd.)

- Undertake further research on equity weighting, focussing on contexts relevant to public health (R).

Intersectoral Costs and Consequences

- Intersectoral impacts of interventions should be quantified (in a cost-consequences analysis). (Could assess the need for budgetary transfers.)
- Should be more consideration of the impacts of public health interventions on the voluntary sector and private individuals (re: impacts on the effectiveness of programmes, need for incentives).

Intersectoral Costs and Consequences (contd.)

- An analysis should be conducted of costs and consequences by beneficiary group (i.e. defined by health status, SES, etc).
- Should assess whether a general equilibrium approach would be more suitable for the evaluation of broad public health interventions (R).

Conclusions

- In principle the general methods of economic evaluation can be applied to public health interventions.
- The current literature is disappointing and represents many missed opportunities.
- Efforts need to be made in improving the effectiveness evidence base, through RCTs and observational studies.
- Economic evaluations in this area need to pay a lot more attention to intersectoral effects and equity considerations.