Estimating health opportunity costs: HOW?

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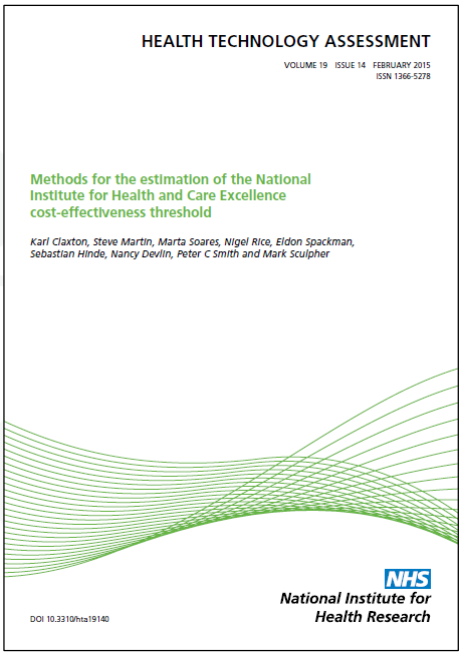
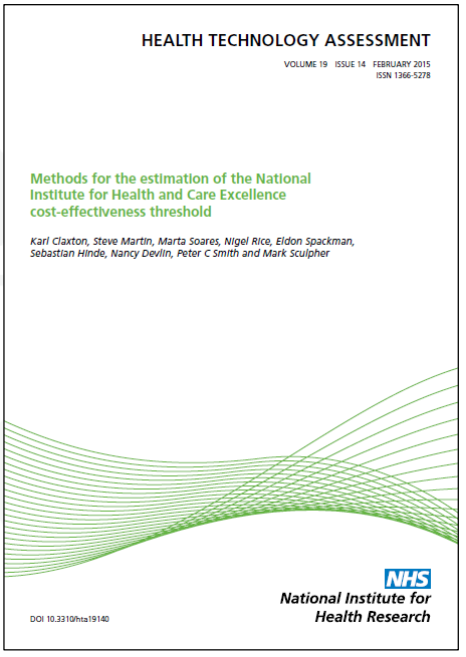
"Any student of Econ 101 knows that economists measure costs by opportunity costs, meaning everything that is given up to get something else."
Alan Krueger



"The general approach taken is to use routinely available data to look at the relationship between overall NHS expenditure and patients' health outcomes. By exploiting differences between PCTs in expenditure and outcomes, it is possible to infer the costs of generating health improvement from NHS services at the margin. In principle, this is what is needed as the basis of the NICE cost-effectiveness threshold as it provides an indication of the health forgone through the services displaced by the additional budget effect of the Institute's guidance."



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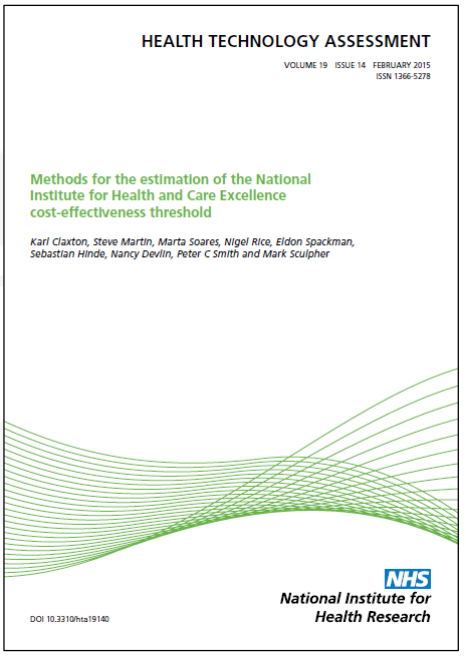

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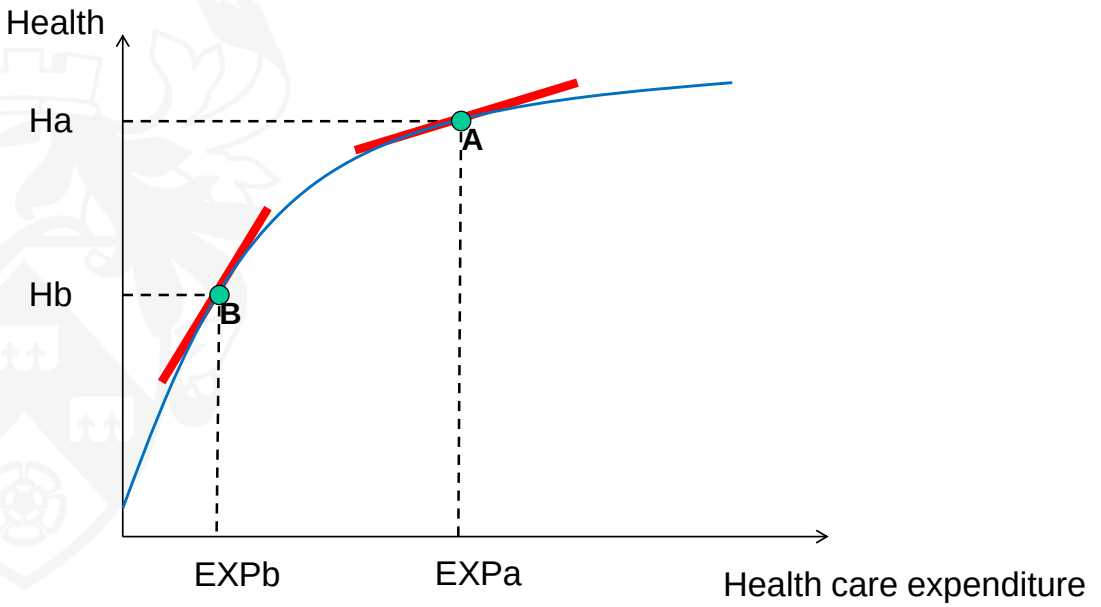

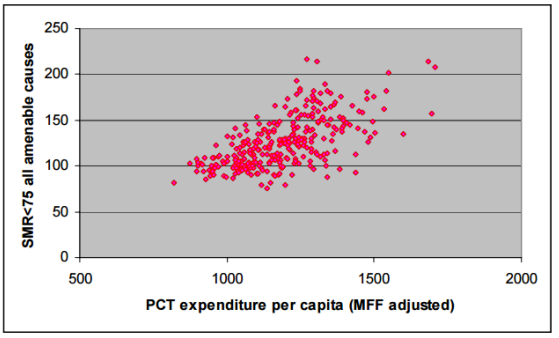

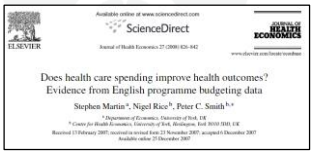

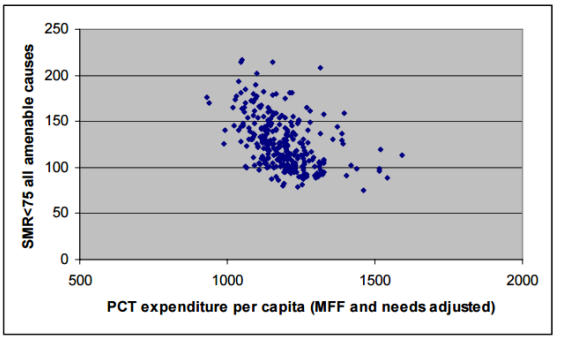

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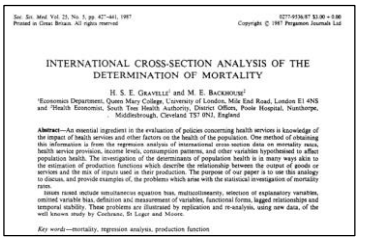
Poll: 4. Have you got access to the kinds of administrative data required to estimate health opportunity costs in your jurisdiction?

Econometric challenges

- simultaneous equation bias
- multicollinearity
- selection of explanatory variables
- omitted variable bias
- definition and measurement of variables
- functional forms
- lagged relationships



INTERNATIONAL CROSS-SECTION ANALYSIS OF THE DETERMINATION OF MORTALITY

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Abstract—An essential ingredient in the evaluation of policies concerning health services is knowledge of the impact of health services and other factors on the health of the population. One method of obtaining this information is from the regression analysis of international cross-section data on mortality rates, health service provision, income levels, consumption patterns, and other variables hypothesised to affect population health. The investigation of the determinants of population health in in many ways akin to the estimation of production functions which describe the relationship between the output of goods or services and the mix of inputs used in their production. The purpose of our paper is to use this analogy to discuss, and provide examples of, the problems which arise with the statistical investigation of mortality rates.

Issues raised include simultaneous equation bias, multicollinearity, selection of explanatory variables, omitted variable bias, definition and measurement of variables, functional forms, lagged relationships and temporal stability. These problems are illustrated by replication and re-analysis, using new data, of the well known study by Cochrane, St Leger and Moore.

Key words—mortality, regression analysis, production function

Instrumental variable

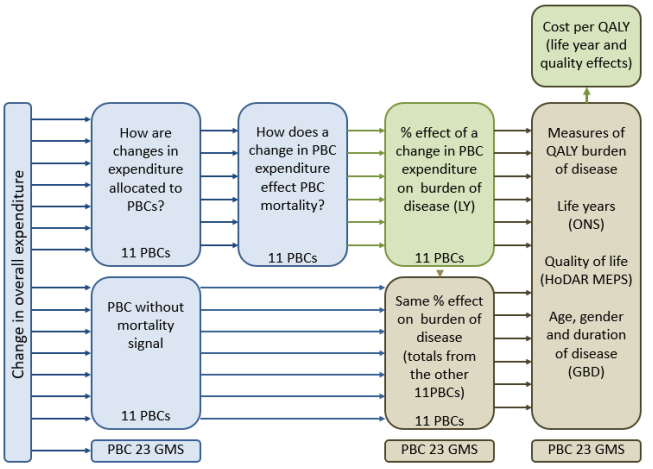
Unobserved factor

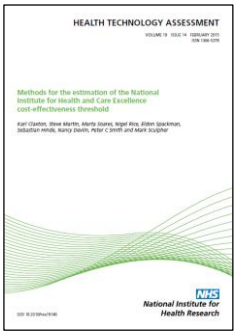
Health expenditure → Health outcomes

Examples of instrumental variables used

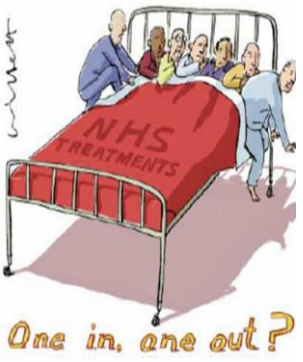
IV	Country
Proportion of households that are lone pensioners (etc)	
Proportion of population providing unpaid care	
Number of graduating nurses	
Proportion of nurses nearing retirement age	
Public expenditure	
Institutional arrangements (funding formula rules)	

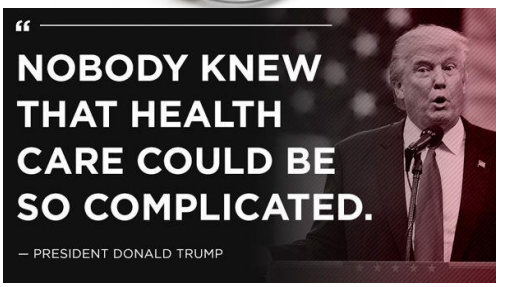
From mortality to a generic health measure





Health opportunity costs in more plural systems





New technology included in package → Increase in premium → Reduced affordability causes increase in uninsured → Losing coverage increases mortality → Roughly $100k per QALY


Journal of Health Economics

Demand for health insurance: Evidence from the California and Washington ACA exchanges

Evan Saltzman


STATE MEDICAID EXPANSIONS AND MORTALITY, REVISITED: A COST-BENEFIT ANALYSIS

BENJAMIN D. SOMMERS


Deriving an Opportunity Cost-Based Threshold for CEA in the United States

David J. Vanness

Department of Population Health Sciences
University of Wisconsin-Madison

International Health Economics Association
July, 2017

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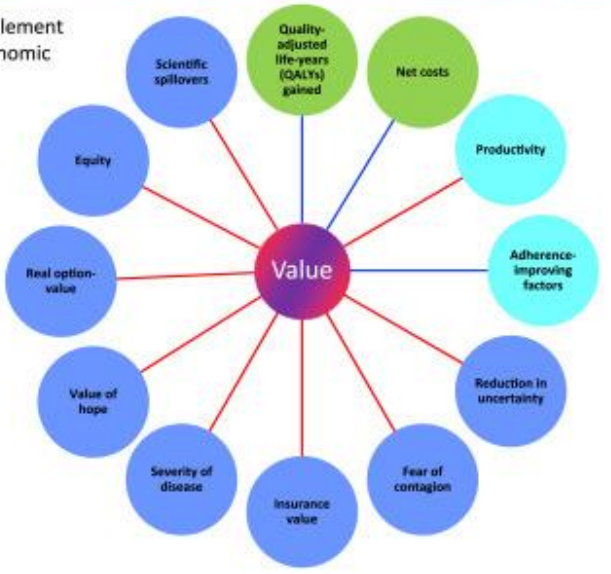
Poll: 5. Are you aware of ongoing research of this kind in your jurisdiction?

Elements of Value

Challenge: Map each element into an underlying economic framework for value assessment.



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- Too many to name, but:
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