Book Launch

Applied Methods of Cost-effectiveness Analysis in Healthcare and Applied Methods of Cost-benefit Analysis in Health Care

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Dr John Deeble
Introduction

Dr John Deeble is an Emeritus Professor of the Australian National University.

In the following essay he spoke about the history of health economics in Australia. He delivered the essay to launch the two latest volumes in the Handbooks in Health Economic Evaluation Series published by Oxford University Press: *Applied Methods of Cost-effectiveness Analysis in Healthcare*¹ and *Applied Methods of Cost-benefit Analysis in Health Care*².

In the early 1960s, health economics appeared on the health service management scene in Australia. Ten years later interest was ignited in health economics by debates about health care financing. A well-attended conference in 1979 saw the establishment of an association of Australian health economists that has grown in number and vigour since. Deeble reviews the contribution of health economics to pharmaceutical and health service pricing and looking at the current round of reforms opines that ‘the future is rosy’! Plenty of work exists for health economists to contribute to the formation of the health policies born of reform.

Book Launch

When Philip Clarke asked me to speak at the launch of these two books, I wondered what I could usefully say. I have read them though not, I must admit, every word. They are excellent statements of the role and methods of economic evaluation in health, the issues involved and the state of the art in the early 21st century. They will be very valuable aids in the teaching of health economics, in clarifying what is involved and practical application. Evaluation is not my area of expertise. I have, of course, taught it at the general level, written a little on its application to public health and in my various guises have been a user of its results. But these are primarily books by economists for economists and while there are aspects that I would like to pursue, I would not presume to review them in the conventional sense.

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And it is not what I was asked to do. Philip suggested that in introduction I should say a few words about the development of health economics in Australia and where it stands now. I am, I suppose, uniquely qualified to do this because I was the first economist to work in and on health care in this country and my working life has spanned the whole history of the specialty.

**Development of health economics in Australia**

One risk of asking a nearly 80 year-old man to talk is that he will lapse into irrelevant reminiscences but I cannot convey the immense changes that have occurred without some back-casting. When I entered health care in 1957 as a relatively junior hospital administrator in Melbourne I was, as far as I am aware, the first graduate with an economics training to enter that field. It was largely irrelevant though. The health professionals ran the health services, as in many ways they still do. Five years later when I decided that the broader issues I wanted to investigate could only be addressed within a university, there was almost nothing in the mainstream economics literature. Kessel had written on price discrimination in medicine in 1958, Lees had analysed the British NHS in 1962 but both published in a law journal, not a economics one, and when my first paper on hospital cost analysis was published two years later it was in an American health journal (*Medical Care*) again not an economics one. But times were changing.

Kenneth Arrow’s seminal article on ‘Uncertainty and the Welfare Economics of Medical Care’ was published in the *American Economic Review* of December 1963 and in 1964, just after I started compiling the first Australian estimates of health expenditures and their financing, Brian Able-Smith published a structure of health expenditure accounts developed for WHO. Health economics was made.

When Dick Scotton and I simultaneously published our major research results in 1967 – mine on costs and sources of finance in the *Economic Record*, his on voluntary insurance and the incidence of costs in *Australian Economic Papers*, they were accepted without demur as were our proposals for universal insurance in 1968.

The policy debates about Australian insurance funding certainly focused attention on both the economics and the politics of health and the level of interest grew in academia, the health services and public administration. Names like Jeff Richardson from Macquarie, Darryl Doessel from Queensland, Bob Wallace from Adelaide and George Palmer from the University of New South Wales come to mind.
In September 1979 I was heading the Australian National University’s Health Research Project, a small group of economists and demographers which ultimately became the NHMRC Health Economics Research Unit and, later, a component of the National Centre for Epidemiology and Population Health. Tony Culyer was to visit Australia at the time and I arranged a conference of economists interested in health to coincide with his visit. We met for one day only. Only six invited papers were presented but they were relatively large, the nominated discussants were given free rein and the debate was open. I can’t remember how many people came but in the forward to the volume in which the papers and discussion were reported, I said that the response was remarkable, both in terms of attendance (particularly from government bodies) and the quality of discussion. At the end of the day, we formed the Australian Health Economists Group – named after its UK counterpart and a suitably modest title – of which I was president for the first four years. In 1984 it became The Australian Health Economics Society. The 32nd conference of health economists in 2010 lasted two full days, with 70 papers over an immense range of topics. Nearly three quarters of them related to evaluation studies, methodologies and related issues. Australian health economists now regularly present at international meetings and the range of educational and research programs has grown dramatically. There are now nine specialised research centres in universities in all the states and at least four major consulting firms possess expertise in health. On the teaching side, there are seven specialised graduate certificate programs, two graduate diploma programs and five master’s degrees, plus the elements of economics that are included in Master of Public Health programs. It is truly a growth industry.

**Achievements in health economics in Australia**

What has been achieved? I can really only comment as a user in the two decades to about 2001 when I was actively involved as: a first assistant secretary of the Department of Health division responsible for Medicare and the Pharmaceutical Benefits Scheme (PBS) when the mandatory cost-effectiveness analysis of all new PBS drugs was first developed; chairman of the Australian Health Technology Advisory Committee for five years; and a commissioner of the Health Insurance Commission for sixteen years. Others can better comment on current practices. My main impressions are as follows.

First, although politicians have increasingly called for full cost-benefit analyses of major public programs, including health programs, whether they really understand the concept is very doubtful indeed. Governments have generally resisted it, partly because of genuine doubts about expressing human experience in purely monetary terms but also because they prefer packages that hide the trade-offs that they make. As one eminent political scientist has put it, politics is all about ‘who gets what, where and when’ and that is very unlikely to change.
Nor will the basic structure of health care delivery change. There is an Australian debate about whether governments should provide personal services directly or whether they should simply subsidise and regulate private sector activity. There is also a small but vocal movement pushing for more direct consumer involvement in both the public and private systems but no real consideration of how the information inequalities between patients and providers might be addressed and at what cost. There may be some trimming at the edges but I would not expect any major change.

In contrast, cost effectiveness/cost utility calculations have been much more frequently used particularly in public health where the product is relatively clear – a potential reduction in the risk of illness - and equity issues are not so immediately obvious. But they have also been applied to publicly-funded pharmaceuticals and higher technology medical interventions. The recently published ACE-Prevention Report (from a Victorian five-year NHMRC-supported study of preventive programs) is the most recent example of the former; the 2005 Productivity Commission report on medical technology describes the latter in detail. Quality-adjusted life year (QALY) gains are the usual measure of benefit although there are elements of a ‘capacity to benefit’ criterion in the public health work’s emphasis on the special needs of Indigenous people.

There are of course, deficiencies in the main mechanisms via which the Government subsidises the cost of medications and Medicare services used by the community. Assessments are limited to new items only, which in the pharmaceutical case amounts to about half of the whole list, but for medical procedures it covers only about 15% of current procedures. Neither process is especially transparent. The Pharmaceutical Benefits Advisory Committee (PBAC) relies partly on already published work – often from overseas – but mainly on the data provided by drug companies, which it is then prohibited by law from disclosing under ‘commercial in confidence’ provisions. It does not disclose what drugs have been assessed but not approved or the reasons for its decisions.

The Medicare Services Advisory Committee (MSAC) is required to consider cost-effectiveness in approving new services for Medicare benefit and it conducts its own investigations. It does disclose all the procedures listed for evaluation and the approach which it intends to take. However, it finally releases only a summary of its findings, and like PBAC, tends to publish them only after the Minister, on Departmental advice, has made a final decision. There is a minimal representation of consumer interests on the MSAC but none on the PBS one. Provider interests dominate. Neither group gives any clear indication of what their judgement of an acceptable QALY cost might be, but as Chapter 2 in *Applied Methods of Cost-effectiveness Analysis* in Healthcare remarks, for drugs at least the range appears to be quite large. There can be no real defence of this excessive secrecy. The US Food and Drug administration processes are much more open, as are those of the UK’s National Institute for Clinical Excellence.
Nevertheless, progress been made and not only in the evaluation area. Much of the current debate over health care ‘reform’ is actually about the economics of the system and the search for both technical and allocative efficiency. On the technical side it has been mainly concerned with the hospital component, giving the public hospitals somewhat more autonomy and, for in-patients at least, creating a limited internal market in which they are supposed to compete for resources on the basis of ‘efficient’ prices fixed on a Diagnosis-related group (DRG) basis. DRGs are a system used to classify hospital cases. Their costing is relatively simple – full absorption cost-accounting – but estimating an ‘efficient’ price involves sophisticated stochastic frontier and data envelope analysis. Neither technique is new and their hospital application was critically reviewed by a formerly-Australian health economist eight years ago (Andrew Street). However, data were a problem and their limited availability at the national level has meant that subsequent development has occurred outside the formal health care sector. How it will be used remains to be seen. No-one knows what an efficient price is supposed to mean and I very much doubt if it will diverge much from the average for quite a long time. Our measures of quality are far too imprecise.

Public debate on allocative efficiency has been largely limited to the substitution of community care for institutional treatment but in many ways that has been what much of the non-government research in cost-effectiveness has been about.

**Conclusion**

The outlook for Australian health economics is therefore rosy! There will be no shortage of clients and the ability to satisfy their demands is steadily increasing. Much of it will probably be quite narrow in scope but there is still room for fundamental work – in particular, on how the community’s generalised desire for health protection and the relief of suffering can be translated into a framework that economists are familiar with and non-economists can both understand and accept. Talking to ourselves is not enough. We have made a start but we have not quite got there yet.
Book Launch

*Applied Methods of Cost-effectiveness Analysis in Healthcare* and *Applied Methods of Cost-benefit Analysis in Health Care*

The Menzies Centre for Health Policy is a collaborative Centre between The Australian National University and the University of Sydney. It aims to provide the Australian people with a better understanding of their health system and what it provides for them. The Centre encourages informed debate about how Australians can influence health policy to ensure that it is consistent with their values and priorities and is able to deliver safe, high quality health care that is sustainable in the long term.

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For more information
Menzies Centre for Health Policy
D02 Victor Coppleson Building
University of Sydney
Phone: +61 2 9036 5412
Fax:+61 2 9351 5204
Email: mchp@sydney.edu.au
Website: http://www.menzieshealthpolicy.edu.au/