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Foundational Health Economics: Greatest Achievements

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Unveiling Health Economics: Landmark Achievements and Transformative Contributions

Introduction

The article "Health Economics - Greatest Achievements" explores the most impactful contributions made by health economists, marking the 60th anniversary of the Office of Health Economics (OHE). Featuring insights from 18 esteemed health economists*, the piece sheds light on the discipline's standout milestones. Highlighting significant advancements such as NICE (National Institute for Health and Care Excellence), health technology appraisals (HTAs), quality-adjusted life years (QALYs), and resource allocation techniques, the article delves into how these applications have transformed healthcare planning. Esteemed figures in health economics, including Virginia Acha, David Parkin, Paul Nightingale, and others, offer their perspectives on the profound influence of economic evaluation, evidence-based decision-making, and innovative methodologies in shaping the healthcare landscape. The article offers a comprehensive overview of these pivotal achievements, demonstrating their global impact and enduring relevance in healthcare policy and practice.

What are the most significant contributions that health economists have brought to the world?

As part of a series to mark the 60th anniversary of the OHE, we invited a group of senior health economists to share their views on the discipline's greatest achievements.

Their most popular answers were NICE, health technology appraisals, QALYs, and resource allocation – in other words applications that help healthcare planners to assess the effectiveness or benefit of healthcare treatments, their cost effectiveness and their fair allocation across a healthcare system.

Most consider the introduction of an official body to determine the clinical effectiveness of healthcare interventions — NICE — through carrying out health technology appraisals (HTAs) as a significant gamechanger in the UK.

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"If we take medicines, historically, they would have been up to the individual doctor to decide when and where these resources should be used. What health economics has done is to open the opportunity, to think about different perspectives beyond clinical and regulatory evidence to arrive at more effective, or smarter choices," says **Virginia Acha, Associate Vice President of Global Regulatory Policy at MSD and former senior spokesperson for The Association of the British Pharmaceutical Industry (ABPI)**.

"There are some, I'm sure, who would argue that introducing HTA was a Pandora's box and we should have never opened it, but I think it was inevitable. It's a maturity of decision making that we apply in other areas of economic life, after all, and it was very much a needed contribution to health care."

David Parkin, Senior Visiting Fellow at The OHE and Honorary Visiting Professor at City St George's, University London, agrees that the economic evaluation of health care treatments, or the economic appraisal agenda more broadly, was a significant development.

"I'm very much biased towards UK knowledge on this, so I can't really comment globally, but I would put the number one as the economic evaluation or economic appraisal agenda — basically the way that that has become mainstream, part of the health technology assessment."

"I think that's admirable because it has focused us not just on costs. I think economists have been very good at promoting the idea that you should measure health — the benefits as well as costs."

This evidence-based approach to reviewing decision making about treatments also wins praise as a key contribution by health economics by **Paul Nightingale, Associate Dean of Research at the University of Sussex Business School.**

"An organisation like NICE has been a fantastic innovation in making sure that as far as possible decisions are evidence-based. It has opened up and provided a space in which evidence can be debated," he says.

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"I think that's been very, very beneficial for the UK and has been challenging for industry too — to say, 'we're not going to pay for things unless you can show us that they're worth it'. The extent to which those decisions are copied and modelled around the world also shows their value."

"And the pharmaceutical industry has risen to that challenge, which is a good thing...that expertise to make policy-making and strategy more evidence-based has been very, very beneficial."

Jon Sussex, Chief Economist at Rand Europe and former deputy director of the OHE, goes further, citing the creation of NICE by the Labour government in 1999 as "fundamental" to the success and currency of health economics, as a discipline in the UK.

"If NICE was abandoned tomorrow by the government, then the use of health economics in the UK would drop through the floor. I would confidently predict that — so hopefully it's not going to happen."

The importance of economic evaluation of health treatments is recognised internationally too. **Nancy Devlin, Professor of Health Economics at the University of Melbourne and Senior Fellow at the OHE**, says: *"One of the most remarkable achievements of health economics has been the widespread use of economic evaluation and, particularly, getting cost-effectiveness analysis embedded routinely into decision making about new drugs and medicines,"* she says.

"It's difficult to point to any other area of applied microeconomics that's had such a large impact on the way that decisions are made. Cost-effectiveness analysis has become central to health technology appraisal both in the UK and around the world."

Another significant achievement for health economics is the quality-adjusted life year (QALY) measure. Used to economically evaluate the value of medical interventions, it provides a measure of health gain, factoring in the quality and quantity of life lived.

For **Martin Buxton, Emeritus Professor of Health Economics at Brunel University London, and founder of Brunel's Health Economics Research Group**, QALYs are perhaps the most important development.

"We wouldn't have NICE, as we know it, without QALYs," he says. "If we had not had the rather neutral health focused concept of QALYs, I don't think we would be where we are with NICE, and I think the public would have found it (the organisation) more difficult to accept."

He says QALYs introduced a neat currency to compare the relative value of healthcare treatments and approaches. *"The great advantage of talking about opportunity cost is that you trade health against health. If you hear people talking, they're simply not prepared to trade health directly against money or they'll judge a health change to be worth spending millions of pounds, without considering what is forgone elsewhere."*

Sussex agrees. *"Top of the list is the QALY and the consequential health technology appraisal that comes out of that, which you couldn't do sensibly without something like a QALY. The notion of the QALY as an outcome measure for comparing treatments and other health care interventions has been significant,"* he says.

Peter Smith, Emeritus Professor of Health Policy at Imperial College London, also views health related quality of life metrics as "terrifically important," and "not exhausted by any means yet".

"It has led to the development of a suite of metrics that enables us to add quality of life to the traditional outcome metrics of mortality in a very important way. It's enabled us then to move on to my second big issue, health technology assessment, which is to compare benefits gained from interventions across entirely different health conditions and different settings."

Richard Murray, Chief Executive Officer at The King's Fund, agrees, also selecting HTA and QALYs as chief successes.

"To be honest, within government and with what I did, they're much the same. The QALY was the best, but if you couldn't do that, you couldn't do life years, you did other elements — using some attempt to measure the impact of care and treatment in a quantifiable and comparable way. Particularly with NICE around it, this approach became day to day business."

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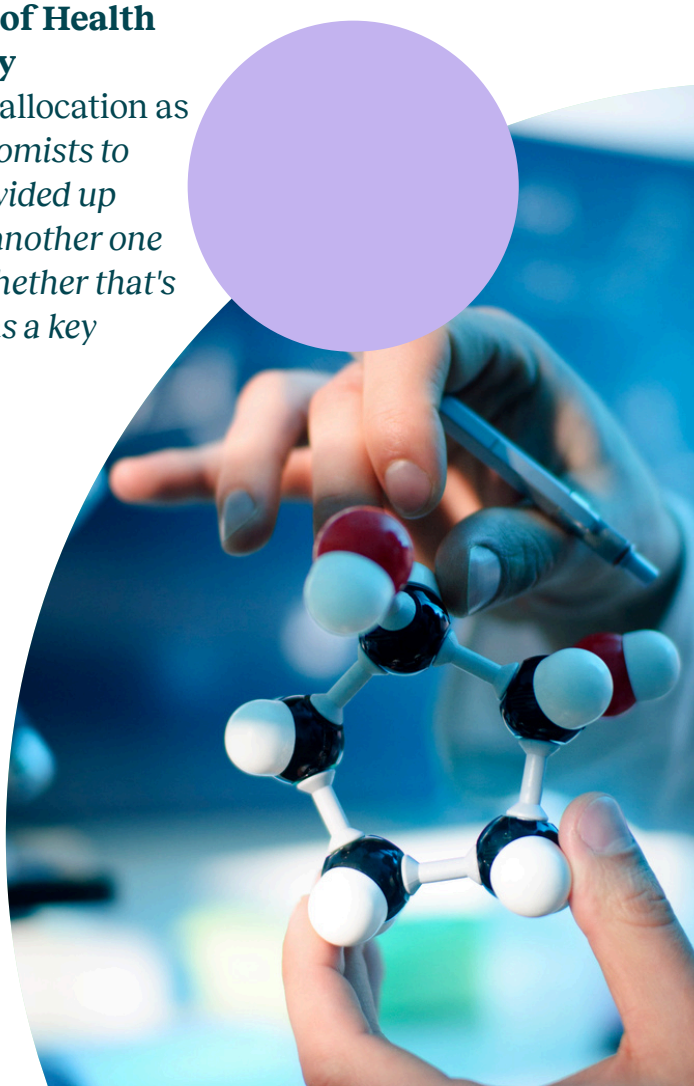
Comparing treatment is one thing, but ensuring they are fairly allocated is another and for **Anita Charlesworth**, it is this need to ensure resources are allocated fairly or to where they are needed — resource allocation — is one of health economists' greatest achievements.

"The issue of allocating resources based on need has been a very big theme of system-orientated policy for the best part of 50 years,' she says. "We've progressively tried to shift resources to where they are needed, recognising that money is spent where care facilities are located, which is a matter of historical legacy and charitable infrastructure rather than any empirical assessment of need."

As econometrics and data had improved significantly, the robustness of this analysis had made a huge difference so that now resource allocation had now become *"one of the biggest levers in the policymaker's toolkit"*, she said.

Nigel Edwards, Chief Executive of the Nuffield Trust, agrees, naming *"the development of needs-based resource allocation methods, using techniques to allocate money to areas based on estimations of need rather than an historical basis using econometrics"* as a key gamechanger. *"It's not been copied so much elsewhere, but certainly in the UK that's been an important and powerful driver of the shape of the health system."*

David Parkin, Senior Visiting Fellow at The Office of Health Economics and Honorary Visiting Professor at City University London, also views system-wide resource allocation as a critical achievement. *"I think the contribution of economists to things like resource allocation in the UK, how they are divided up between different areas, taking into account equality, is another one that's had an impact in the UK,"* he says. *"I don't know whether that's extended outside, but certainly, in the UK, I think that was a key development."*



Acha credits health economists for constructing a methodology to make decisions about investment in health care. *"There is an important question about allocation and what is the right allocation of investment in health to be economically productive and valuable. The first impact that health economics has made is to at least try and circumscribe what goes in that basket, how do you assess that, and how would you consider that regarding other outcomes in economic activity?"*

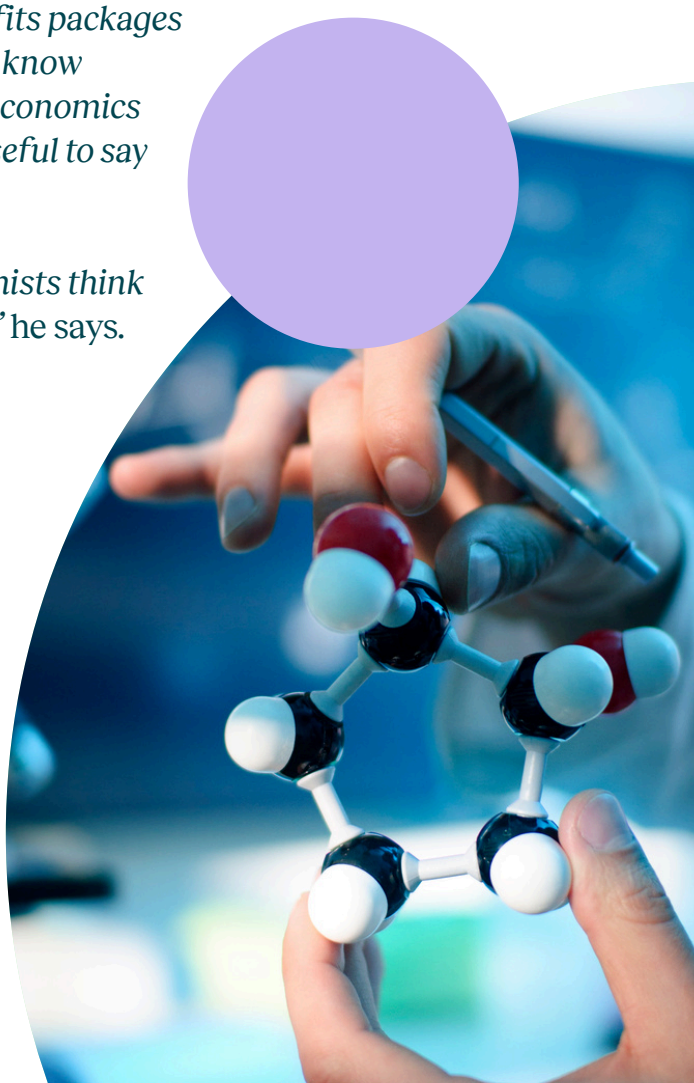
Other specific or microeconomic applications credited by health economists include the weighted capitation formula, payment provider systems and patient reported outcomes. Broader concepts include the link between the health of individuals and household incomes and national income (Anne Mills) as well as the theory that "economic formulas can save lives" (Charlesworth).

Parkin credits health economics with helping to "build alliances" and turn hostile views around to embrace health economic approaches. *"In the UK we've had a good dialogue with health professionals and, I suppose, the most powerful group being doctors. The dialogue we've had with them has seen them move from not being interested or being hostile to our ideas to now recognising them. I don't think we've changed the way the public or politicians think about health economics, but I think with healthcare professionals, it has changed."*

Many health economists interviewed for this series struggled to limit themselves when selecting the greatest achievements by health economists. **Edwards** credits them with developing a range of useful and influential tools and approaches.

"*Ideas like cost-effectiveness and resource allocation, doing better investment appraisal, HRGs and case mix, understanding the impact of co-payment and the design of insurance benefits packages — all of these things at some point policymakers want to know answers for, and at that point, in my experience, health economics literature and health economists have had something useful to say that does definitely influence policy,"* he says.

"The big issues might be only 10% of what health economists think about, but where there is a crossover, it is very powerful," he says.



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* We interviewed 18 prominent health economists to collect the insights for this article:

1. Alistair McGuire, Head of Department, Professor of Health Economics, Department of Health Policy, LSE
2. Anita Charlesworth, Chief Economist, The Health Foundation
3. Anne Mills, Professor of Health Economics and Policy, London School of Hygiene & Tropical Medicine
4. Bruce Hollingworth, Professor of Health Economics, Director, Health Economics, Lancaster
5. Dave Parkin, Honorary Visiting Professor at City, University of London, and Senior Visiting Fellow, Office of Health Economics
6. Elaine Kelly, Assistant Director, REAL Centre team, The Health Foundation
7. Ginnie Acha, Associate Vice President - Global Regulatory Policy, MSD
8. John Cairns, Professor of Health Economics, London School of Hygiene & Tropical Medicine
9. Jon Sussex, Chief Economist, RAND Europe
10. Martin Buxton, Honorary Professor of Life Sciences, Brunel University London
11. Mike Drummond, Emeritus Professor of Health Economics, Centre for Health Economics, University of York
12. Nancy Devlin, Professor of Health Economics, University of Melbourne, and Senior Visiting Fellow, Office of Health Economics
13. Nigel Edwards, Senior Associate, Nuffield Trust
14. Patricia Danzon, Celia Moh Professor, The Wharton School, University of Pennsylvania
15. Paul Nightingale , Professor, Deputy Director, SPRU, University of Sussex
16. Peter Smith, Emeritus Professor of Health Policy, Imperial College Business School
17. Richard Murray, Chief Executive Officer, The King's Fund
18. Tony Culyer, Emeritus Professor of Health Economics, University of York, and Senior Visiting Fellow, Office of Health Economics

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