BMJ creates an editorial board

Richard Smith

Richard Smith, *Editor*

BMJ, London WC1H 9JR, email:100336.3120@compuserve.com

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The *BMJ* has been unusual, possibly unique, in not having an editorial board. Over a year ago we began a debate on whether we should create a board, and we decided that we should. Now we have one, and its members are described below and listed at the front of the redesigned journal. There are 35 members from 18 countries, and the members come from all parts of clinical medicine as well as from basic science, statistics, nursing, ethics, health policy, and economics. And, very importantly, we have a patient representative.

Why have an editorial board?

The main purpose for developing a board is to help us to prepare the journal for the next century. The members will ensure a steady flow of new ideas from a wide range of specialties, countries, and disciplines. For many years the *BMJ* has had editorial advisers, who come into our offices every week and help us to decide which papers to publish and how to get them into the best possible form. The advisers are mostly practising doctors or statisticians but also include a health policy expert and a sociologist. We also have a team of medical students, who help us with the *Student BMJ*. Because they come regularly to our offices we have selected advisers mostly from Britain. In contrast, about three quarters of the editorial board live outside Britain.

We look to the editorial board as well for frank criticism of the *BMJ* and advice on how it can develop in both the short and the long term. Our board members are increasing our range of contacts, helping us find new writers and reviewers, writing and reviewing for us themselves, and representing us in their countries and disciplines. If you would like to learn more about the *BMJ* you might care to contact members of the board or invite them to speak in your hospitals, clinics, and universities.

How did we select the editorial board?

We began our selection process by writing to a great many people whom we respected, asking if they would be willing to be considered for the board and if they had other people to recommend. The box lists the characteristics we asked for. Through this we developed a list of about 300 people from all around the world. We then asked each to write on the strengths and weaknesses of the *BMJ* and to produce ideas on how we could develop the journal. We were very grateful for the torrent of ideas that flowed into our offices. Five of us, including our then North American editor, John Roberts, and one outside adviser, Iain Chalmers, then selected people on the strength of their ideas, making sure that we had people from many disciplines and countries. We thank the many people who produced excellent ideas but whom we could not select for the board this time. We hope that they may be able to join us in the future.

Characteristics looked for in editorial board members

- Internationally known
- Distinguished academically or in other ways
- A broad view of health and medicine
- Creative thinkers
- Internationally minded
- Willing and able to devote time to the job
- Agreeable and flexible
- Keen on team working
- Some knowledge of journals

How does the board work?

The board has already met once for two days, and we plan annual meetings. In addition, we hope to hold regional meetings. The first meeting was compellingly creative, and we learnt a great deal. The members of the board are linked electronically, and we regularly ask the board for ideas on particular subjects and on strategic issues.

The members of the board serve for three years initially, with a possible extension for two further years. Anybody interested to join the board in the future should let us know.

George Alberti, UK
Professor of medicine and dean of the medical school, Newcastle upon Tyne

From 1992-5 he was director of research and development for the Northern and Yorkshire Regional Health Authority. Previously he was professor of clinical biochemistry in the universities of Newcastle and Southampton. Currently he is also director of the university human diabetes and metabolic research centre and of a World Health Organisation collaborating centre in diabetes. He manages the NHS research and development programme on cardiovascular disease

and stroke and is chairman of the Department of Health nutrition programme committee. He has published more than 800 papers and books.

Jeremy Anderson, Australia
Director of adult psychiatry, Monash Medical Centre, and associate professor in the department of psychological medicine, Monash University

A psychiatrist, an epidemiologist, and a New Zealander, not necessarily in that order, he tries to balance managing a busy clinical service with research interests in social psychiatry.

Hirokuni Beppu, Japan
Editor and founder of "The Informed Prescriber" (TIP), the first and only independent drug bulletin in Japan

After graduating from Tokyo University's faculty of medicine, he worked for 18 years in the Tokyo Metropolitan Neurological Hospital. For the past four years he has been vice director of Tokyo Metropolitan Kita Medical and Rehabilitation Centre for people with physical and learning disabilities. Dr Beppu also serves on the steering committee of the editorial board of *Risk and Safety in Medicine*.

Lisa Bero, US
Assistant professor of clinical pharmacy and health policy, University of California, San Francisco

After receiving her PhD in pharmacology from Duke University, she completed a Pew fellowship in health policy. She studies how research is translated into practice and policy. She has published peer reviewed journal articles examining influences on the quality of research and publication, the dissemination of research, and the impact of research on policy. As an active member of the Cochrane Collaboration (an international collaboration to summarise all randomised trials of health care interventions), Lisa believes that international communication and cooperation are essential to conducting sound and policy relevant research.

Don Berwick, US
President and chief executive officer of the Institute for Healthcare Improvement, Boston, associate clinical professor of paediatrics at Harvard Medical School, and adjunct professor of health policy and management at the Harvard School of Public Health

He practises paediatrics at the Harvard Community Health Plan. A leader in quality improvement in health care, he teaches widely throughout the United States and Canada—and beyond. In 1995 he became chairman of the health services research review subcommittee of the Agency for Health Care Policy and Research and also joined the board of trustees of the American Hospital Association. He lives in Anchorage, Alaska, with his wife, Ann, an environmental lawyer who is working on projects for the Alaska Attorney General, and his four children. He loves hiking and would rather be on a mountain trail than anywhere else.

Tony Culyer, UK
Professor of economics and head of the department of economics and related studies, University of York; currently deputy vice chancellor of the university

His speciality is health economics, and he has published widely on many aspects of it. He is coeditor of the *Journal of Health Economics*. In Britain he is most widely known in the NHS for having chaired the taskforce on research and development in the NHS. A member of the NHS central research and development committee since its inception, Tony is also a member of the North Yorkshire Health Authority. In what he laughingly calls his spare time he is organist and choir trainer in a rural Church of England parish church.

Alba DiCenso, Canada
Associate professor in the School of Nursing and an associate member of the department of clinical epidemiology and biostatistics at McMaster University

She is a clinical nurse consultant with the Hamilton-Wentworth department of public health services teaching health unit and a career scientist of the Ontario Ministry of Health. Her major areas of research have related to nurse practitioners in primary and tertiary care settings, high risk behaviour

in adolescents, and evidence based health care. She coordinates a graduate course in public health.

Michael Dixon, UK
Consultant surgeon at the Edinburgh breast unit, honorary senior lecturer in the university department of surgery, Royal Infirmary, Edinburgh, and editor of "Breast"

He has published numerous articles on breast disease and was editor of the *BMJ*'s *ABC of Breast Diseases*. As a former disc jockey, he continues to like the sound of his own voice and operates to loud pop music delivered through four speakers placed around the operating table.

Paul Glasziou, Australia
Reader in clinical epidemiology, University of Queensland, and general practitioner, University General Practice, Inala

He has had a circular career: after graduating in medicine, out of curiosity he did a doctorate in medical decision theory, then took up positions in clinical trials and epidemiology, and finally returned to medical practice. His ambition is to have no ambitions.

Heather Goodare, UK
Counsellor

She read English at Oxford and has spent most of her professional life in academic publishing. After her diagnosis of breast cancer in 1986 her career took a new turn: she trained as a counsellor and now practises privately. She does voluntary work for several cancer charities and is particularly concerned with the issue of research ethics; other interests are psycho-oncology and complementary medicine. She has written and spoken mainly on topics of patient advocacy in cancer.

Peter Gotzsche, Denmark
Director of the Nordic Cochrane Centre, editor of "Bibliotek for Loger," specialist in internal medicine, and lecturer in theory of medicine

A graduate in biology, he worked in the pharmaceutical industry; thereafter he graduated in medicine from Copenhagen and worked in hospitals in Copenhagen. His interest in biology has metamorphosed into a lifelong interest in bias eradication, since he considers it to be one the major threats to health care. He has defended the thesis: bias in double blind trials.

Tony Grabham, UK
A retired surgeon, chairman of the journal committee of the BMA and former chairman of the council of the BMA and of the joint consultants committee

One of the wisest heads in the BMA, he is best known for being chairman of the BMA council during 1979-84 and chairman of the joint consultants committee 1984-90. Currently chairman of the registration committee of the General Medical Council, he also employs his considerable financial and business skills as chairman of BMA Services and vice chairman of Private Patients Plan. He is a strong supporter of both the NHS and a small private sector.

Brian Haynes, Canada
Professor of clinical epidemiology and medicine and chief of the health information research unit, McMaster University; editor of "ACP Journal Club" and "Best Evidence"; and coeditor of "Evidence-Based Medicine"

He practises internal medicine at Hamilton Health Sciences Corporation in Ontario. His research interests are in clinical trials and studies of ways to bridge the gap between research evidence and clinical practice. He belongs to the Cochrane Collaboration.

Carl Kjellstrand, Canada
Professor of medicine and bioethics at University of Alberta

He is a staff nephrologist at University Hospital. Trained in Lund, Sweden, he has practised in Sweden, the United States, Egypt, and Canada. He has written in many areas, mainly in clinical nephrology focusing on dialysis and transplantation and in medical ethics. In the latter area he is particularly interested in rationing and how doctors have not fulfilled well their role as advocates for patients, and in the problem of withdrawing life support. His main interest in clinical research is in the understanding of the new exciting statistical tools available to anyone with a computer.

Andre Knottnerus, the Netherlands
Professor of general practice and scientific director of the research institute of extramural and transmural health care (ExTra) at the University of Limburg, Maastricht, and vice president of the Health Council of the Netherlands

He graduated in medicine and general practice in Amsterdam and trained as an epidemiologist in Maastricht. He has published on a range of topics in general practice and clinical epidemiology. In his view, it is essential to consider individual clinical expertise and the more formalised aggregated body of knowledge to be a continuum both in practice and in research.

Christian Koeck, Austria
President of Koeck, Ebner, and Partner, a consulting firm specialising in quality improvement and organisational development, and faculty member of Harvard School of Public Health and University of Vienna Business School

After graduating from the University of Vienna, he trained in primary care medicine and psychotherapy. He is also a graduate of Harvard University, where he received a masters degree in public health and a doctorate in health policy and management. He has conducted and published research on international comparisons of healthcare systems and quality management. For the last five years he has been responsible for the organisational change and quality improvement programmes at the Vienna City Hospital Association. He is proud to be the father of his 7 year old son.

Cindy Lam, Hong Kong
Associate professor in the general practice unit, University of Hong Kong, and member of the editorial boards of "Family Practice" and "Asian Medical News"

A graduate in medicine of the University of Hong Kong, she obtained her fellowship of the Royal College of General Practitioners and of the Hong Kong Academy of Medicine in 1993. Her connections with both Asian and Western cultures make her committed to bringing the South East Asian populations closer to those of the West and to encouraging better development of health care in Asian countries. She believes that good information should lead to development from within rather than change from without.

Alessandro Liberati, Italy
Head of the laboratory of clinical epidemiology, Mario Negri Institute, Milan and director of the Italian Cochrane Centre

After qualifying in medicine in Milan, he did a postdoctoral degree in hygiene and preventive medicine. He spent two years at the Harvard School of Public Health working on the impact of research results on clinical practice. His particular interests are the methodology of systematic reviews and the impact of practice guidelines on clinical practice
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Dennis Lincoln, Australia
Deputy vice chancellor research, Griffiths University, Queensland

He works on improving reproductive health worldwide through both basic and clinical research. A science graduate of Nottingham, Cambridge, and Bristol, his experience in research, management, and teaching extends from agriculture to human medicine. His work involves the developing world, international agencies, medical charities, and industry.

Pisake Lumbiganon, Thailand
Associate dean for research and an associate professor in the department of obstetrics and gynaecology, faculty of medicine, Khon Kaen University

He graduated in medicine and became certified in obstetrics and gynaecology at Ramathibodi Hospital, Mahidol University, Thailand. He obtained a masters degree in clinical epidemiology from the University of Pennsylvania. Since 1987 he has been actively involved with the activities of the WHO Special Programme for Research, Development, and Research Training in Human Reproduction.

Donald McLarty, Tanzania (deceased)
Previously professor of medicine, University of Dar es Salaam

He attended the first editorial board meeting, knowing that he had metastatic malignant melanoma, and made an important contribution.

David Mant, UK
Professor of primary care epidemiology, University of Southampton, and director of research and development for the South and West Region

He began his academic career as an economics and politics student at Cambridge University before studying medicine in Birmingham and public health in London and Oxford. His clinical career has been mainly in general practice, although his last weekend on call was in 1993. His current aspiration is to survive teaching his 17 year old daughter to drive.

Jean Claude Mbanya, Cameroon
Senior lecturer, department of internal medicine, faculty of medicine and biomedical sciences, University of Yaounde; consultant endocrinologist in the University Teaching Hospital, Yaounde; and editor in chief of the medical faculty's medical journal

He is currently chairman of the African region and member of the board of management of the International Diabetes Federation and has served as vice president of the PanAfrican Diabetes Study Group for the past six years. He loves listening to good music, especially classical, and is a football addict. Above all, he loves spending time with his wife and four children.

Joel Menard, France
Professor of internal medicine, faculty of medicine, Broussais-Hôtel Dieu (Paris VI University), and head of the Broussais Hospital's cardiovascular preventive medicine centre

A long time researcher in hypertension, he has worked in France, Canada, Germany, and the United States. For three years he was head of international clinical research and development with Ciba-Geigy in Switzerland. For five years he was the president of the scientific council of ANDEM (Agence Nationale pour le Développement de l'Evolution Médicale).

Indraneel Mittra, India
Surgeon and scientist at the Tata Memorial Cancer Centre, Bombay

He received his postgraduate training in Britain, is a fellow of the Royal College of Surgeons of England, and has a PhD from the University of London. His primary interests are the clinical, molecular, and preventive aspects of breast cancer, and he is deeply involved in problems of cancer control in countries with limited resources.

Cynthia Mulrow, US
Professor of medicine, University of Texas Health Science Center at San Antonio, and a senior Veterans Affairs research scientist

Director of the San Antonio Cochrane Center, she is a general internist with particular interests in primary care, systematic reviews, and translating research findings to actual practice.

David Naylor, Canada
Chief executive officer, Institute for Clinical Evaluative Sciences in Ontario, professor of medicine, University of Toronto, and internist at Toronto's Sunnybrook Health Science Centre

His academic background includes training in clinical epidemiology as well as a DPhil in social and administrative studies from Oxford. His research interests are diverse but primarily centre on cardiovascular medicine.

Fred Paccaud, Switzerland
Professor, school of medicine of Lausanne, and chairman of the department of social and preventive medicine

A graduate in medicine from Lausanne, he has worked in various clinical and public health institutions in Switzerland and abroad. His main field of interest is

health services research and epidemiology of medical practice; other main topics covered in his department are epidemiology and prevention of chronic diseases (cancer and cardiovascular diseases), robust statistics applied to health sciences, and health transition in developing countries.

Lois Quam, US
Chief executive officer, American Association of Retired Persons division for United HealthCare, a health care company based in Minnesota

She was a Rhodes scholar at Oxford University and served as a senior adviser to the White House Task Force on National Health Reform in 1993. She served as chair of the Minnesota Health Care Access Commission during 1989-91 under appointment from the governor of Minnesota. Landmark healthcare reform based on the commission's work was enacted in 1992. She has written on a wide range of health matters in Britain and the United States.

John Roberts, US
Primary care physician practising in York, Pennsylvania

Before entering medicine, he served as a newspaper editor for eight years. He completed medical school at the University of Minnesota and postgraduate training at Abbott-Northwestern Hospital in Minneapolis. He then served as a Robert Wood Johnson clinical scholar, when he focused on how doctors in primary care make clinical decisions and obtain information. In 1992 he joined the faculty at the Johns Hopkins University School of Medicine, where he maintains a rank of assistant professor of medicine. For three years, he served as North American editor of the *BMJ*, a position he recently resigned to devote more time to clinical practice and his wife and two preschool daughters.

Paula Rochon, Canada
Geriatrician, Baycrest Centre for Geriatric Care, Toronto, and assistant professor in the departments of medicine and preventive medicine and biostatistics at the University of Toronto

She trained in internal medicine in Toronto and then did subspecialty training in Toronto, London, and Boston. While completing her masters of public health at Harvard, she developed her interest in meta-analysis.

John Savill, UK
Professor in medicine, Nottingham

He practises and teaches both renal and general medicine, but his major activity is research into the molecular cell biology of inflammation. Having benefited from fellowships from both the Medical Research Council and the Wellcome Trust, he has a particular interest in fostering recruitment of research minded young doctors into academic medicine. He believes that research is indivisible from the practice and teaching of medicine

Jaime Sepulveda, Mexico
Director General, National Institute of Public Health, Mexico

He served as vice minister of health in charge of planning and implementing priority health programmes. Formerly chief epidemiologist in Mexico, he founded the Mexican AIDS Council and the National Vaccination Council. With a degree from the Harvard School of Public Health, he has been a member of various expert committees of the WHO and is a former chairman of the Council on Health Research for Development based in Geneva. He has edited and coauthored various books and is now director of the *Journal Salud Publica de Mexico.*

Fiona Stanley, Australia
Foundation director of the TVW Telethon Institute for Child Health Research in Perth, Western Australia

The institute is relatively new and was established to encourage research excellence in maternal and child health, bringing together various disciplines to address major and burdensome problems, with the ultimate aim of prevention. Her own research was in the epidemiology of perinatal problems, including cerebral palsy, birth defects, and Aboriginal health, but has now expanded into childhood respiratory disease. Her other interests include record linkage in public health research, evidence based medicine, childhood immunisation, and the translation of research into practice. She is a

typical guilty working mother who appreciates Posy Simmonds cartoons.

Tessa Tan Torres-Edejer, Philippines
Infectious diseases specialist, University of the Philippines College of Medicine, and director of the clinical epidemiology unit

Her research interests include tuberculosis, pneumonia, economic evaluations, and technology assessment. She is married with five children.

Steinar Westin, Norway
Professor, department of community medicine and general practice, Norwegian University of Science and Technology, Trondheim

A medical graduate from Bergen and a former Fulbright/Wien scholar to Brandeis University, Massachusetts, he abandoned plans of a career in biochemistry to become a district physician practising in an island community on the west coast of Norway. Research on unemployment and health led him to academia and a lasting commitment to the improvement of research and education in general practice. He was recently a visiting professor of the Royal Australian College of General Practitioners.

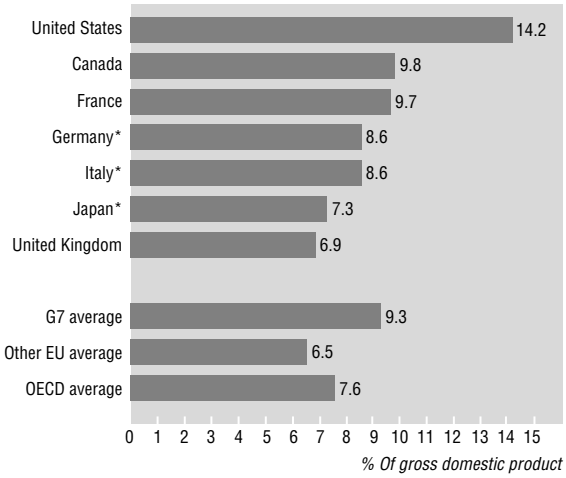
Series: Funding the NHS

Is the NHS underfunded?

Jennifer Dixon, Anthony Harrison, Bill New

Abstract

Since 1948 there has been constant debate over whether the NHS is underfunded. The debate heats up when crises in the NHS hit the headlines as occurred last year. Various groups, of all shades of the political spectrum, have argued that the NHS is unsustainable with current funding increases because of demands from demographic change, new technology, and increasing expectations. The government is almost a lone voice in arguing that the NHS is sustainable but may not be doing enough to ensure that it remains so in future. This article examines seven broad approaches used to support the case that the NHS is underfunded and concludes that all have flaws. There is no satisfactory answer to the question of whether the NHS is underfunded because the answer requires value judgments that will inevitably give rise to disagreements.



Percentage of gross domestic product spent on health, 1994 (* data for 1993)

This is the first in a series of articles discussing how the NHS is funded

Policy Institute, King's Fund, London W1M 0AN
Jennifer Dixon, *fellow in policy analysis*
Anthony Harrison, *fellow in policy analysis*
Bill New, *senior research officer*

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Introduction

The level of funding of the NHS has attracted comment and controversy since its inception in 1948. Recently, funding has again been thrust into the media spotlight by the flurry of news about, for example, rationing, financial "meltdown," rising emergency admissions, and difficulties in finding intensive care beds and by the contributions of partisan or other groups who describe the NHS as unsustainable or in crisis.[1-5]

But is the NHS underfunded? How can we tell? What are local and national pressures on NHS funding? Even if the NHS can cope now will it be able to do so in future? What should the government do to reduce both real and perceived pressures on the NHS if the NHS is to be preserved? These questions will be explored in this series of articles on pressures on funding the NHS. In this article we review published literature and address the question: what broad approaches have been used to assess whether the NHS is underfunded and what can be concluded from them?

Approaches used

Many have noted that each year the NHS has a fixed level of resources and therefore cannot meet every

conceivable demand for care. From this perspective there has always been a gap between supply and demand. Most would accept that the NHS could use more funds, but the question is about the "right" level of funding for the NHS. Several approaches have been used to attempt to throw light on this question[6 7]: the economic approach; the needs approach; the rationing approach; the international perspective approach; the public opinion approach; the affordability approach; and the incremental approach. We examine each below.

Economic approach

The economic approach suggests that the optimal level of funding would, in theory, be a point at which the marginal cost of producing one extra unit of health care is equal to the marginal benefit derived from it. Under such circumstances any additional public funds spent on health care would result in less benefit than would be gained from using those resources in other ways. However, we cannot apply this economic criterion until much more is known about the costs and benefits of current expenditure. Thus the economic approach does not currently provide a practical way of defining the optimal amount to be spent. It does, however, make clear a fundamental point: that the ability to do more good in terms of health benefits does not necessarily imply that more good ought to be done. This insight has implications for the next two approaches.

The needs approach

The needs approach has been used to try to show empirically a gap between the estimated expenditure required to cope with the need for health care and the actual or future likely expenditure on the NHS. This evidence is then used to argue that the NHS is underfunded and that more ought to be spent to close the gap.

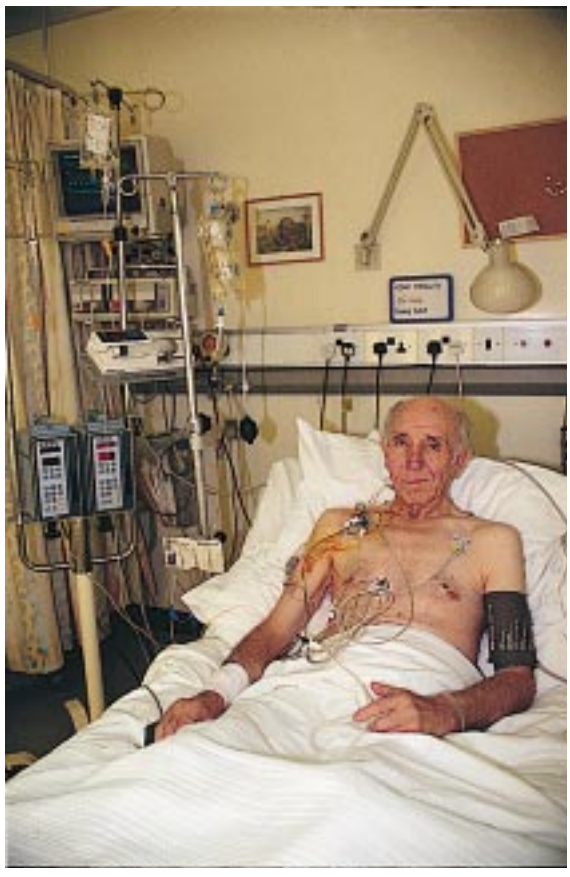
At its simplest, such work has extrapolated past trends of expenditure and noted that, despite increases in real expenditure on the NHS, there is a difference between extrapolated trends and current actual expenditure and likely future expenditure.[8] More sophisticated work has attempted to estimate the funding required by the NHS to cope with future need (usually defined as ability to benefit from treatment). The needs usually considered have been those resulting from the changing population structure, likely new medical advances, and changing expectations.[9-11] However, these last two needs, and the resources required to meet them, are particularly difficult to estimate. Furthermore none of this work has ever attempted a global estimate; all have taken current levels of expenditure as a starting point and estimated increments of expenditure required to meet additional needs—for example, by calculating the extra costs required to meet demographic change.

But even if an accurate objective estimate of overall need could be made and the resources required to meet that need calculated, it may not be appropriate to fund the NHS on this basis. Firstly, meeting need irrespective of the resulting benefits or costs may be an inefficient use of resources, as argued in the economic approach. Secondly, meeting need may encourage new needs or demands as expectations change. In this sense the gap is a movable concept and closing it will be impossible. Even with the high expenditure in the United States consumers and providers demand that more should be spent.[12] Finally, even if the costs and benefits of meeting needs were known, and closing the gap were possible, the question remains of which services should be funded. Answering this question requires value judgments to be made. Therefore empirical approaches like the needs approach can provide a useful benchmark for assessing expenditure on the NHS over time,[10] but they cannot supply an uncontroversial answer to what the expenditure ought to be.

Rationing approach

This approach also rests on the same principle—that there is unmet need which ought to be met. For example, some have pointed to cases where patients have been denied treatments and cited this rationing as evidence that the NHS is underfunded.[1 13] But others point out that rationing is an inevitable feature of all health systems and does not in itself signify underfunding.[14]

Debates about rationing are often confused with issues concerning the withdrawal of ineffective treatments. In some cases treatments which are demanded may be denied because they are thought ineffective. A review of the recent purchasing intentions of health authorities shows that while some health authorities state that they plan to curtail certain



PREUSS/SOUTHAMPTON UNIVERSITY TRUST

When funding becomes tight elderly people may be the first to have treatment rationed

treatments to all patients, a larger number intended to curtail other treatments to patients unless specific criteria are met based on effectiveness of those treatments—for example, removing wisdom teeth only in patients with symptoms and conducting dilatation and curettage only in women over 40 years.[15] We argue that withdrawal of ineffective treatments should not be called rationing and that it does not follow from the existence of such limits that the NHS ought to receive more funds to purchase these ineffective services.

In other cases the effectiveness of a rationed treatment is likely to be low. For example, there may be a very small chance of highly effective treatment (such as chemotherapy in a child with leukaemia and a history of multiple relapses) or a large chance of less effective treatment (such as vascular surgery in smokers compared with non-smokers). In a limited budget it may be more desirable to deny these patients care (especially where treatments are costly) and instead to spend resources on more effective treatments for other patients. This is rationing but it does not necessarily follow that more funds should be made available to the NHS to buy these relatively ineffective treatments because, as argued in the economic approach, the costs of these treatments may be greater than the benefits derived from them.

Finally, there is rationing of treatment which is likely to be highly effective. Low cost highly effective treatments (such as immunisations) are unlikely to be denied to patients, but high cost and highly effective ones may be—for example, renal dialysis. Again, it does not automatically follow that more funds should be available to the NHS to pay for these services. It may be that such treatments are judged to be a low priority and should not be funded. If the reverse is true and treatments such as renal dialysis are deemed to be a high priority it may be more appropriate to reorganise priorities and ration lower priority treatments rather than to argue for more funds.

At present there is some evidence that more effort is being made in the NHS to set priorities more rationally by assessing the costs and benefits of treatments.[15] However, continuing evidence of large variations in treatment rates,[16] inappropriate admissions,[17] ineffective treatments being offered,[18] and poor prioritising of people on waiting lists [19 20] indicate that there is a long way to go. There is therefore scope for eliminating either wasteful or less cost effective expenditure before additional funding is justified.

Even if the costs and effects of treatments were known with certainty, considerations of fairness and humanity may be just as important in deciding the priorities for treatment and therefore appropriate funding. Some groups have called for more democratic and well informed methods to do this.[21]

International perspective

Britain devotes a lower proportion of its gross domestic product to health care than most other countries in the Organisation for Economic Cooperation and Development (OECD),[11 22] and the growth in real expenditure (allowing for economy-wide inflation) on health care in Britain between 1960 and 1993 has been significantly lower than the OECD average.[23 24] Although this shows the success of the NHS in containing healthcare expenditure, these figures have also been used to argue that more ought to be spent on NHS.[25 26]

But these data do not automatically indicate that more should be spent on the NHS, partly because comparisons across countries are not straightforward, and partly because there is no obvious association between the amount spent on health care and population based indicators of health.[7 27] Britain is also a relatively poor OECD country and therefore simply does not have the same level of national resources to devote to health care. In general it is just as valid to argue that others spend too much as that Britain spends too little.

Public opinion approach

Evidence from surveys shows that the public consistently agrees that more should be spent on the NHS and says it is willing to pay more tax for it.[28] But it is not always clear how far most people understand what would be gained by spending more on health care compared with spending the same amount on other areas of the public sector or private consumption. Nor is it clear whether their declared readiness to pay higher taxes would be followed through to voting for parties which proposed them. In fact, in the last four general elections it is the promise of lower taxation that seems to have been more popular with the electorate. It has been argued that the public may be more inclined to vote for higher taxes if it were sure that any increases would be spent on the NHS—for example, through a hypothecated tax with its own voting system.[29] But at present this is not possible and therefore the public opinion approach is limited in its usefulness as a guide to levels of NHS funding.

Affordability approach

Some commentators suggest that any increases in NHS expenditure should be similar to the growth in national income or some other indicator of wealth.[30] But this approach is not helpful in deciding the right level of funding for the NHS because it implies that allocations could be reduced in a recession (when demand and need for health care may be higher) and because the government would have less control over NHS expenditure than is likely to be politically acceptable. In fact the average annual growth in real expenditure on the NHS from 1970-90 was 3.9% compared with 2.2% for the average annual growth rate in gross domestic product.[31] So the affordability approach could be used to argue that the NHS was overfunded during this period.

Incremental approach

In the past the rule of thumb has been to increase real expenditure annually by about 1% to fund demographic change and by 0.5% to go towards meeting the costs of technological change and implementing central government policies. But these estimates are not necessarily helpful because, like the needs approach, they take as their starting point existing levels of NHS expenditure which reflect historical demand and political judgment rather than any direct estimate of need. Nor does establishing need, as we

have seen, ultimately resolve the question of funding. Furthermore, the rules of thumb are based on broad and questionable assumptions—for example, about levels of throughput and efficiency.[32]

More recently the government has made the link between funding and productivity (or the number of outputs relative to inputs) in the NHS more explicit using the purchaser efficiency index. This index essentially requires the NHS to achieve more activity (outputs) for the same expenditure (inputs) each year.[33] But this method, as currently implemented, is problematic because there is no accurate measure of productivity in the NHS (each measure has drawbacks[34]) and, as we will argue in a future article, may actually reduce efficiency.

Inevitably, funding decisions will be incremental in the sense that next year's settlement will not be markedly different from this year's. But the question is how to improve the process of determining the increments. We will return to this in our final article.

Conclusion

Several broad approaches have been adopted to try to determine whether the NHS is underfunded and what the right level of funding is. Each approach can offer some contribution to the debate, although approaches which imply "ought" judgments from empirical observations, as the needs, rationing, and international approaches do, can be highly misleading.

For example, the group Healthcare 2000[1] made the much publicised judgment that "a combination of international comparisons, the explicit rationing of some health services and public opinion lead us to conclude that there is a gap between resources and demand" and suggested that radical action and extra finance (public and private) would be needed. This prognosis was heavily criticised partly because of how the data were interpreted but also because of the conclusions that private finance would be needed and that the gap between resources and demand could and should be closed.[35-37] One important conclusion of this article is the central insight of the economic approach—that the ability to do more beneficial things does not necessarily justify the cost—is important.

No single approach can determine the right level of funding uncontroversially because the decision requires value judgments as well as empirical evidence.[38] Since these value judgments are currently made by government, there is unlikely to be consensus over the result. Nevertheless, the ultimate test of NHS funding will be the expression of satisfaction in opinion surveys, and by continued use of NHS funded care by the majority of the population.

It may be more helpful to ask two different questions instead. Firstly, what is an acceptable level of funding for the NHS given current resource constraints and the costs of greater NHS expenditure for the rest of the economy and public sector? Secondly, is there a better way of deciding an acceptable level—for example, by involving the public more, or giving people a chance to vote on specific taxes for the NHS at national or local level? We will return to these questions in the final article in the series.

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