Statistics about the NHS - setting the record straight

Radical Statistics Health Group

The government repeatedly claims that the introduction of the internal market and the other changes to the NHS are a success. What evidence is there for this? There has been no rigorous evaluation of the changes. Instead government politicians keep quoting statistics to support their views. For example, Virginia Bottomley's speech to the 1994 Conservative Party conference and the 1993-94 annual report of the NHS Executive made the usual allusions to record numbers of 'patients treated', shorter waiting times for hospital treatment and more and more children being immunised against the major childhood diseases.[1,2] This report takes a closer look at the statistics about the NHS to see whether these claims are justified. It then recommends ways in which the data could be improved to make them more informative.

More patients treated?

' ... new figures from the Government's statistical service show that in the past year alone, NHS hospitals treated an extra 455,000 patients. That is a 4.7 per cent increase'[3]

Ministers' speeches frequently quote figures about the activity in NHS hospitals as if they referred to the actual numbers of people

treated.[2,3] A look at the statistics themselves shows that this is not the case. For example the explanations in the statistical bulletin which Virginia Bottomley mentioned[4] make it clear that the statistics are not based on individual people. Instead, the quotation above refers to numbers of day case admissions to hospital and numbers of in-patient 'finished consultant episodes'. On other occasions, attendances at out-patient and accident and emergency departments are also included.

In England, there are no national data about successive in-patient stays in hospital and out-patient attendances by the same person. At a local level, computer systems are capable of linking data about the same person's episodes of care and readmissions to hospital. At a national level, this is not done. Statistics are not presented in terms of numbers of people treated nor are there data about readmissions.

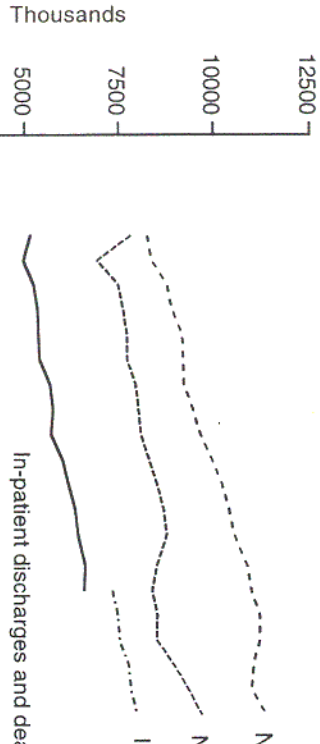
The numbers of admissions to hospital as in-patients and day cases and the numbers of outpatient attendances have been increasing for many years, as Figure 1 shows. This would be expected given the changing age structure of the population, developments and improvements in medical and surgical techniques and the increasing tendency to operate on older people. The numbers of people aged 75 or more, who make the heaviest use of the health service, is increasing. In the financial year 1992-93, 13 per cent of in-patient and day case consultant episodes in the acute sector involved people aged 75 or more. A further 14 per cent involved people aged 65-74.[4] Other changes, such as shorter lengths of hospital stay may well have increased the rates of both planned and unplanned readmission.

Up to the financial year 1987-88, people were counted each time they were discharged from an in-patient stay in hospital and the statistics were expressed in terms of `discharges and deaths'. Since the financial year 1988-89, in-patients have also been counted each time they change consultant or specialty within a hospital stay and figures are expressed in terms of `finished consultant episodes'. For example, someone could be admitted to the observation ward of an accident and emergency department, be transferred to an orthopaedic department for treatment of fractures, subsequently develop cardiovascular problems and be referred to a cardiologist, and finally be transferred to a rehabilitation ward under the care of a geriatrician before being discharged.

This single hospital stay would have contributed four `consultant episodes' to the overall total, instead of being considered as one `discharge' or `hospital spell'. Figures about hospital in-patient stays are now expressed in terms of these `finished consultant episodes'.[4]

Thus the figures to which Virginia Bottomley alluded really showed that the numbers of day cases and in-patient finished consultant episodes rose by 455,000 or 4.7 per cent between the financial years 1992-93 and 1993-94.[4] Similarly, statements about `our new health service where 3,000 extra patients are treated every day'[2] appear to be based on the increase, between the financial years 1990-91 and 1993-94, in what are now described as `general and acute' finished consultant episodes. This category includes episodes with geriatric as well as acute specialties.

Figure 1 NHS hospital activity, all specialties, England 1974-1993/94



Source: DHSS and DH Statistical bulletins 5/85, 10/93 and12/94

Counting consultant episodes

In the internal market, hospitals are paid by the episode, rather than according to the number of people they treat. One research study suggested that this may have increased the incentive to ensure that all finished consultant episodes, however short, are recorded.[5] When questioned about this by the House of Commons Health Committee, the Department of Health mentioned a comparison made in 1988-89 when both the numbers of consultant episodes and the numbers of discharges and deaths were counted. This showed that the number of finished consultant episodes was 2.0 per cent higher than the number of discharges and deaths.[6]

The Committee was also told about checks made in later years, using more detailed data from a different statistical system, the Hospital Episode Statistics. This is based on individual records and it is possible to identify and count the episodes which are the last episode in a 'hospital spell' in an in-patient stay. The Department reported that, at a national level, the numbers of finished consultant episodes was 3.5 per cent higher than the number of 'hospital spells' in each of the years 1990-91, 1991-92 and 1992-93.[6] Thus there had been an increase in the ratio since 1988-89, but apparently no further trends upwards.

The difference between consultant episodes and discharges and deaths is wider in Figure 1, where the finished consultant episodes include the new category of 'well babies', which was introduced in 1988-89. These are healthy babies born in hospital.

Are needs being met?

More patient episodes are being counted, but does this mean that the needs of the population are being met? As the statistics shown above do not even count people, they cannot answer this question. Some information is available from another source, the General Household Survey, an annual survey of a sample of the population. In this, the proportion of people who had been admitted to hospital overnight in the twelve months before they were interviewed remained at the same level from 1982 to 1992.[7] This might suggest that the NHS was just managing to keep up, but is still difficult to interpret in the absence of data about the health care needs of the population or the effectiveness of the care they receive.

Waiting lists and waiting times

'There was good progress during the year on reducing waiting times for in-patient and day case treatment'[1]

The numbers of people on waiting lists have been rising over the past few years, as Figure 2 shows. In the face of this, the government has shifted its agenda to waiting times.[8] Waiting times are measured from the date the clinician decides to admit the patient. Delays in making such decisions can make recorded waiting times shorter. In addition, patients already on the waiting list who are subsequently offered a date but are unable to attend have their waiting times calculated from the most recent date offered. These are known as self deferred cases.

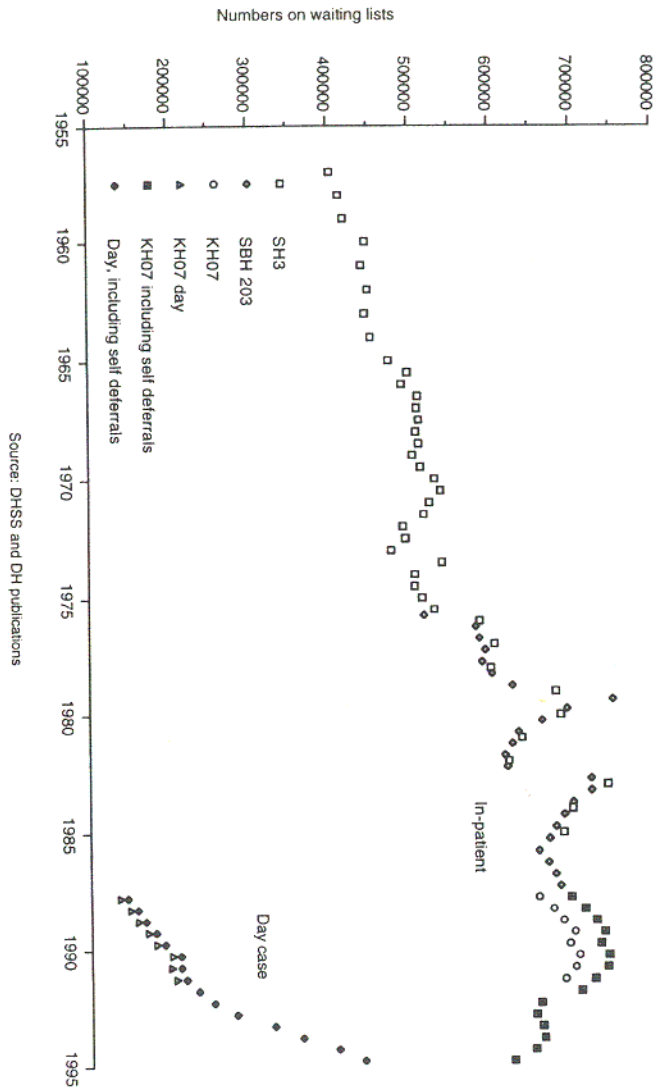


Figure 2 Numbers of people on in-patient and day surgery waiting lists, England, 1957-1994

Source: DHSS and DH publications

The numbers of self deferred cases are no longer published in the Department of Health's six monthly statistical bulletin on waiting times. This item was removed when its format was simplified.[8] Data requested by the House of Commons Health Committee show that self deferrals rose from 48,343 over the period March to June 1988 to 66,901 over the period September to December 1993.[6]

Waiting lists have always contained names of people who have died or who no longer require treatment. In most places, the lists are reviewed periodically to remove them. The numbers of such people removed for reasons other than treatment have also been removed from the Department of Health statistical bulletins. They too are no longer routinely published. The House of Commons Health Committee was told that their numbers rose from 90,931 over the period March to June 1988 to 219,564 over the period September to December 1993.[6]

A dramatic reduction in numbers of people waiting over 18 months is illustrated in the graph shown on page 23 of the Annual Report of the NHS.[1] On the other hand, a graph provided to the House of Commons Health Committee shows that the median, or middle value of waiting times decreased very little between 1988 and 1993.[6]

Keeping ahead of the times

`Since the NHS reforms there has been a spectacular increase in the numbers of patients treated - 121 now for every 100 then'[9]

This statement from Virginia Bottomley in0November 1994 is not only unreliable statistically, as we have shown above. It also raises other questions. At the time it was made there were no published statistics for the current financial year, 1994-95. This is not surprising, as it had not yet finished. An enquiry to the NHS Executive revealed that the figures were based on the planned numbers of finished consultant episodes given in purchasers' plans for 1994-95 rather than actual numbers.

Although the purchasers' plans can be obtained from NHS regional offices and are thus technically in the public domain, the figures they contain are not readily accessible. Other figures quoted in ministers' press releases[10] or documents[11] have been based on unpublished data from the NHS Executive's unpublished `fast track' monitoring returns. The possibility of publishing these data has been discussed, but no decision has yet been made.

Even if these data were readily accessible, the comparisons with other data for previous years would be open to question. If data are collected in different ways in different statistical systems comparisons between them may reflect differences between the systems rather than real differences in what the data purport to measure.[12]

More money?

`Under the Government, NHS spending has risen from £7 billion to £37 billion, a 64 per cent increase'[3]

It is unclear how a comparison of the £7 billion spent on the NHS and social services in England in 1978-79 with the £37 billion being spent in 1993-94 amounted to a 64 per cent increase. The spending figures are in cash terms which take no account of inflation. The government usually does this by quoting figures in `real terms', which compare NHS spending with general inflation as measured by the `Gross Domestic Product deflator'. Spending may have increased by 64 per cent in these terms.

This ignores the way that the costs of goods and services bought by the NHS have been rising ahead of general inflation, along with the pay of nurses, midwives and doctors. This means that when NHS spending figures are adjusted for changes in NHS pay and prices, apparent increases in spending are much more modest.[12] At the time of writing, it is almost impossible to make comparisons of NHS spending since 1979, adjusted in these two ways. This is because of successive changes in NHS accounting systems, culminating in the major changes which accompanied the introduction of the NHS internal market.

Nevertheless, information given to the House of Commons Health Committee show that statistics about increases in `real terms' still give too optimistic a picture. Between 1989-90 and 1992-93, current spending on the hospital and community health services rose by 17.7 per cent ahead of general inflation, but only 10.1 per cent ahead of hospital and community health services pay and prices.[6] In the light of this, it is difficult to interpret the statement in the NHS annual report that `Total NHS spending during 1993/94 was 0.2 per

cent more in real terms than in 1992/93.'[1]

Is this a real increase?

The figures quoted above do not allow for changes in the age structure of the population, particularly the increases in the numbers of people in the 75+ age group who make the heaviest use of the NHS. The estimated increase in spending needed to allow for this is an average of 0.8 per cent per year.[6] In addition, the NHS is now using techniques and equipment which did not exist in 1978. The Department of Health estimates that a growth in spending of about 0.5 per cent per year is needed to allow for this. In addition, other factors are likely to increase NHS spending. These include the reorganisation of nursing education, the AIDS epidemic, the impact of unemployment on health and the successive reorganisations of the NHS. Furthermore, quoting statistics for England as a whole masks differences between regions and districts which have resulted from reallocation of resources.

Greater efficiency?

'Hospital and community health services again provided care more efficiently in 1993/94, for example by the greater use of day case surgery enabling more patients to be treated.'[1]

As in previous years, the government is responding to criticisms of the failure of spending to keep keeping pace with what is required by claiming that the money is being spent more efficiently. It says

that more work being done with less money.

The move to shorter lengths of stay and to day case surgery is frequently cited as a sign of increased efficiency. This move is a long term trend as Figure 1 shows. It results from developments in surgery, including the use of less invasive techniques, rather than changes in government or the structure of the NHS.

On the other hand, it is assumed that further increases in the proportions of operations done as day case surgery are inevitably beneficial. It is impossible to judge whether this is so without information about people's preferences or the availability of care at home from relatives, friends and the community nursing services. Data about readmissions to hospital and the outcome of treatment are also needed. The General Household Survey, which was mentioned earlier, did not include a question about day case admissions until 1992. This makes it impossible to use data from this source to monitor their impact on the population over time.

How is efficiency measured?

'Provisional figures suggest the target "efficiency gain" of 2 per cent was comfortably exceeded - that is patient activity increased by over 2 per cent more than the increased amount spent on services'[1]

No details are given in the 1993/94 NHS annual report about how patient activity or the increase in spending was measured, and no references are given to explanations elsewhere. This makes it difficult for the reader to know whether this claim of increased

efficiency is justified.

It would appear that the claims are based on the controversial 'purchaser efficiency index'.[13,14] This was designed by the Department of Health for comparisons between districts and is derived by dividing a measure known as the 'cost weighted activity index' by the amount of money spent. The 'cost weighted activity index' is calculated by adding together numbers of in-patient and day case consultant episodes, out-patient and accident and emergency attendances, day care attendances, contacts with community nursing services and ambulance journeys. Each of these is 'weighted' by multiplying it by the share of the hospital and community service budget devoted to each type of service.

This begs many questions over and above those of the accuracy of the data and the appropriateness of measuring finished consultant episodes. The first is the assumption that more activity means better care. This contradicts the Department's stated aims in the section on research and development. If the welcome initiatives to review and disseminate the results of research lead to the desired aim of increasing the effectiveness of health care, this may mean that people have fewer episodes of effective care rather than more episodes of ineffective care. Nevertheless, given that much of health care has yet to be evaluated, the impact of this may be relatively small in the short term.[14]

There are also problems in comparing spending. In addition to the questions of how to compare year to year changes, which were

described above, there is also the question of what types of spending are included in the index.

More detailed explanations given to the House of Commons Health Committee show that the way the Department of Health constructs its efficiency index is continually being revised.[6] This confirms the views expressed elsewhere that its interpretation is open to question.[13,14] Any statements based on it should therefore be treated with extreme scepticism.

Is the NHS shrinking?

Statements from government politicians suggest the NHS is expanding. What story do the data tell?

More building schemes?

'During the year 100 major schemes each costing over £1 million, were completed and 206 schemes totalling over £1.2 billion were in progress.'[1]

This is not quite as impressive as it may seem, as there is often more than one such scheme in each successive phase of a development on the same site. In contrast, the average numbers of acute beds available daily decreased by 37,000 from 147,000 in 1979[15] to 110,000 in 1993-94,[4] as Figure 3 shows. Although a reduction in capacity would be expected with the move to day case surgery and shorter lengths of stay, this also represents hospital

closures which mean people have to travel longer distances for care. Between 1979 and 1994, the numbers of acute beds in the private sector in England rose by 4476.[16]

It is difficult to monitor the extent of the decrease in availability of NHS beds. Since the introduction of the internal market, the Department of Health knows less than before about the location of about NHS facilities in England. Written replies to questions in the House of Commons written questions show that the Department does not know which hospitals and health authorities have ceased non-urgent surgery[17] or the date of closure of NHS hospitals closed since 1986 and their current use.[18]

In the past, the Department held lists of NHS hospitals and the numbers of beds in them, but it no longer does so, making it impossible to assess the geographical distribution of facilities. For example, when asked about the numbers of accident and emergency departments contained within NHS hospitals in England, it replied 'The information is not collected in the form requested. Data are collected for national health service trusts and directly managed units with accident and emergency departments. An NHS trust comprising two or more hospitals, each with its own accident and emergency service, is recorded as having one accident and emergency department.'[19]

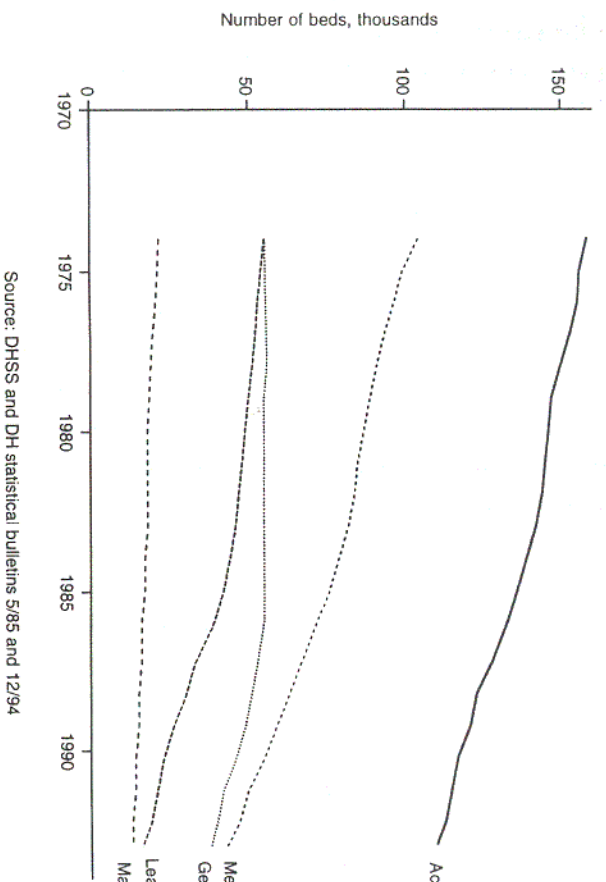


Figure 3 Average number of beds available daily, England 1974 - 1993/94

Source: DHSS and DH statistical bulletins 5/85 and 12/94

Despite this absence of detail, the government does admit a contraction. In response to a parliamentary question about the backlog of maintenance costs, it admitted that `A substantial reduction in the size of the NHS estate is anticipated over coming years, along with a continuing ambitious programme of capital investment.'[20]

Staff

Because so many NHS staff work part time, statistics about them are expressed as `whole-time equivalents'. Each employee is counted according to the proportion of the full time hours she or he works. The numbers of whole-time equivalent NHS non-medical staff working in the hospital and community services in England decreased by 64,400 or 8 per cent between 1983 and 1993.[21] Many of these were ancillary staff who were replaced by staff employed by private contractors. There are no data about the number of staff these firms employ on NHS work, nor about the extent to which nursing and other staff may have had to take on some of the duties of ancillary staff in addition to their own.

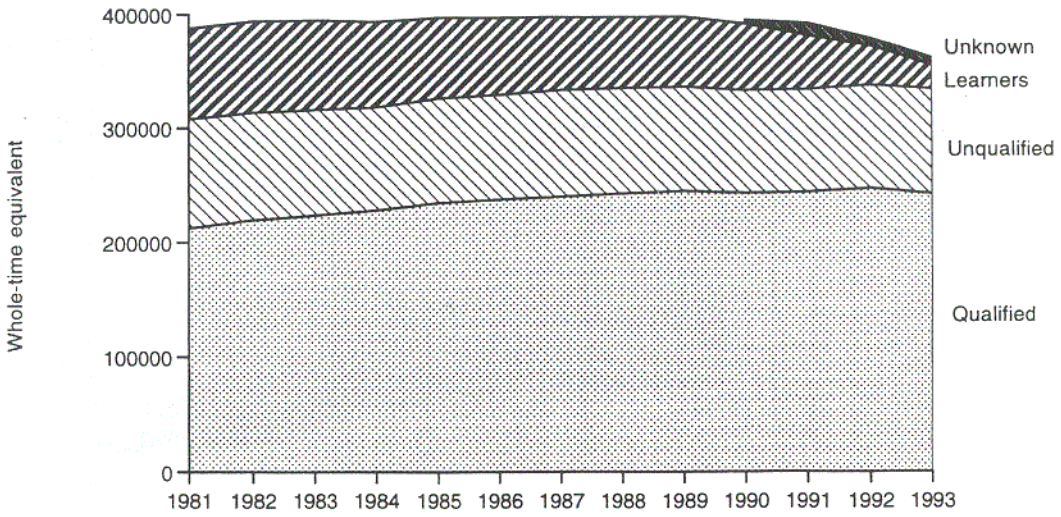
The most marked feature since the introduction of general management and particularly the introduction of the internal market has been the increase in the numbers of whole-time equivalent managers. As Figure 4 shows, the numbers on general management grades increased from 0 in 1984 to 9680 in 1990 and 20,010 in 1993.[21,22] This does not mean, of course, that there were no managers

of any sort before 1984, but that they were on senior administrative grades and thus included in the very much larger category of administrative staff. There was a parallel increase by 21,810 over the same period in administrative and clerical staff, although the numbers decreased in 1993. This came at a time when numbers of senior nurses were decreasing. Some of the managers had been previously employed on senior nursing grades.

There are no data about the number of nurses who transferred and became managers, but it is has been estimated that this accounted for up to 45 per cent of the increase between 1992 and 1993.[21] Reductions in the numbers of people counted as managers can be expected in the future. A new classification to be introduced in April 1995 will put people with clinical qualifications who are currently counted as managers back into the category of nurses, midwives and doctors. There are perfectly appropriate reasons for changing the classification, but the timing of the change and the possible lack of continuity with past data is politically convenient for the government. It is therefore likely to fuel further distrust in the data.

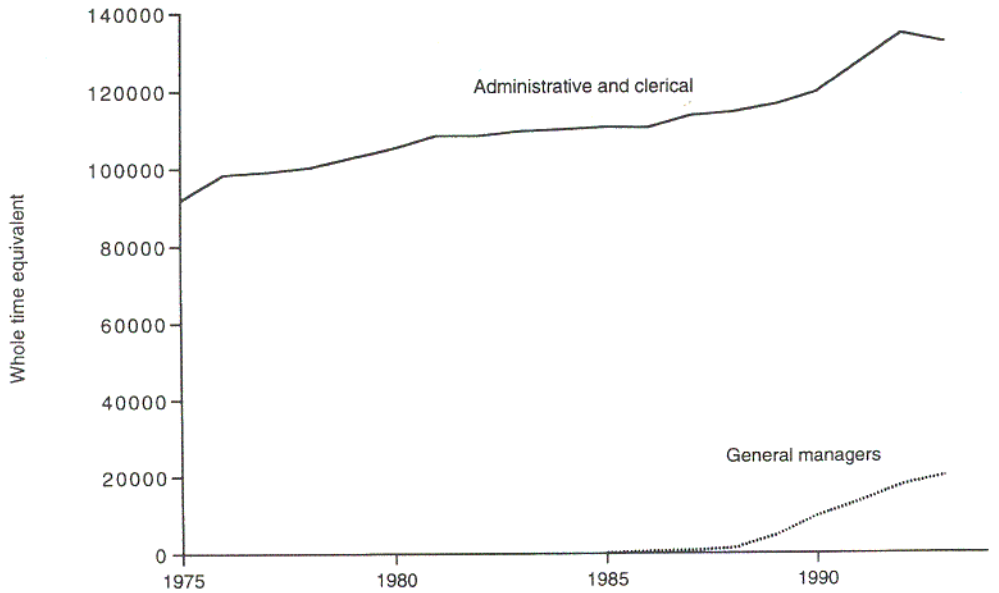
The numbers of whole-time equivalent nurses and midwives working in the NHS hospital and community health services decreased by 17,330 from 378,790 in 1992 to 361,460 in 1993, as Figure 5 shows. There was a decrease of 4720 in whole time equivalent qualified nurses and midwives in the hospital and community health services and an increase of 480 working as practice

Figure 5 Whole-time equivalent nursing and midwifery staff, by level of qualification, in post on September 30, England, 1981-93



Source: DH PD(Stats)B Non-medical workforce census

Figure 4 General managers and administrative and clerical staff in the hospital and community health services, England, 1975-93



Source: Department of Health

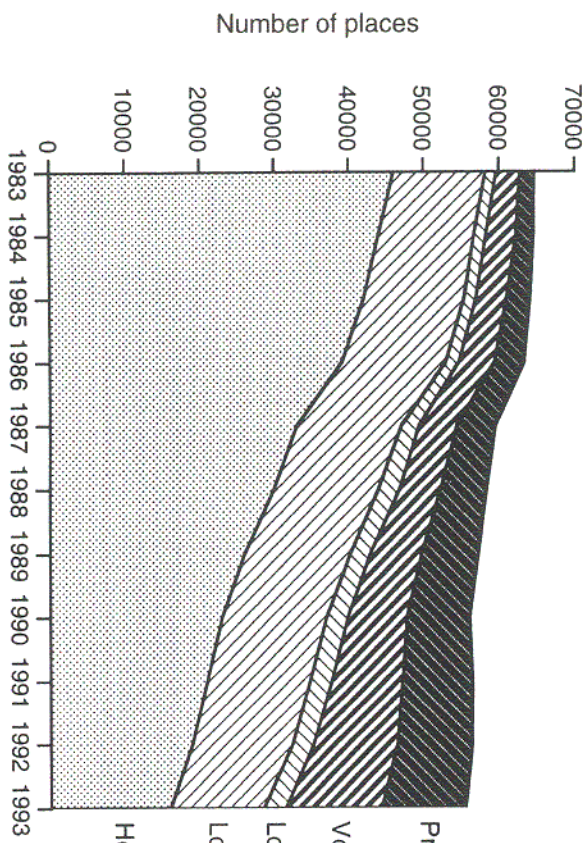
These changes from NHS to social services taking place under the NHS and Community Care Act are not only part of a move out of long stay institutions, some of which are very old and run down. They are also a move from a service which is free at the point of use to one which is means tested.

Measuring the quality of care

The publication of a small set of statistical data about the NHS in the form of league tables under the Patients' Charter[24] has been cited as evidence that NHS data are becoming increasingly accessible[25] This limited set of data relates largely to waiting times rather than to the quality of care for which people were waiting. It also emphasises admissions for elective surgery rather than emergency admissions or admissions for investigation or other forms of care.

Data in the health service indicator package have been used informally for league tables for a number of years, despite warnings that they should not be used in this way.[26] These data are drawn from a variety of NHS information systems and are of variable quality. Furthermore, some of the indicators are based on very small numbers of events. To interpret them, it is necessary to have the numbers on which they are based, and this also allows the calculation of confidence intervals to assess whether differences are greater than would be expected by chance, but raw data for the most recent set of data were not published. This is an apparent contrast with initiatives

Figure 6 Numbers of places in accomodation for people with learning disabilities, England, 1983-93



to promote greater 'openness' in the availability of NHS data.

Measuring the outcome of care

In the absence of more appropriate measures of outcome, it has been suggested that league tables of hospital mortality rates should be published. In fact hospital mortality rates have been included in the health service indicator package for some time, but have been rightly ignored. The fallacies of such data have been pointed out by innumerable statisticians from Florence Nightingale onwards[27], and publishing them without background information is likely to lead to misunderstanding.

Hospitals which are 'centres of excellence' and thus admit a higher proportion of high risk cases may well have higher mortality rates, as will hospitals with facilities for people with terminal illnesses. The percentage of acute in-patient episodes which ended in death decreased from 3.0 per cent in 1988-89 to 2.7 in 1992-93.[4] Further data are needed to assess whether this may reflect changes in extent to which people with terminal illness chose to spend the last days of their lives either in their own homes or in hospices and nursing homes outside the NHS.

Rather than using crude mortality rates or other routine indicators, it would be more much more constructive to investigate deaths in hospital through the focused approach used in the Confidential Enquiry into Perioperative Deaths. For the vast majority, who are discharged from hospital alive, better measures of outcome

are needed.

In addition, as with schools and their examination results, the socio-economic composition of population from which people are admitted to a hospital is likely to influence its mortality rates. There is therefore a need to include socio-economic data in NHS information systems.

The league tables published for Scotland are being cited as a precedent. Although many of the criticisms apply to them, they are at least derived from a much more sophisticated national statistical system.[28] In Scotland, there is extensive linkage between statistical records and it is possible to link successive episodes of care received by the same person.

Primary care

'Labour said doctors would never meet targets for immunising more children. Well they have.'[2]

Despite the increasing prominence of primary care, relatively few data are routinely collected from general practice and published on a national level. This is probably a reflection of general practitioners' status as independent contractors. Immunisation rates are among the few items of data collected, so it is not surprising that these are frequently quoted by politicians. Government statements usually highlight increases in immunisation rates since the changes it introduced into general practice in 1990. In fact these increases are

part of a longer term trend,[22] as Figure 7 shows. Immunisation rates have been rising steadily since the mid 1970s when concern about possible side effects of whooping cough vaccine led to a major fall in vaccination against whooping cough and a minor fall in others.

Growing satisfaction with the NHS?

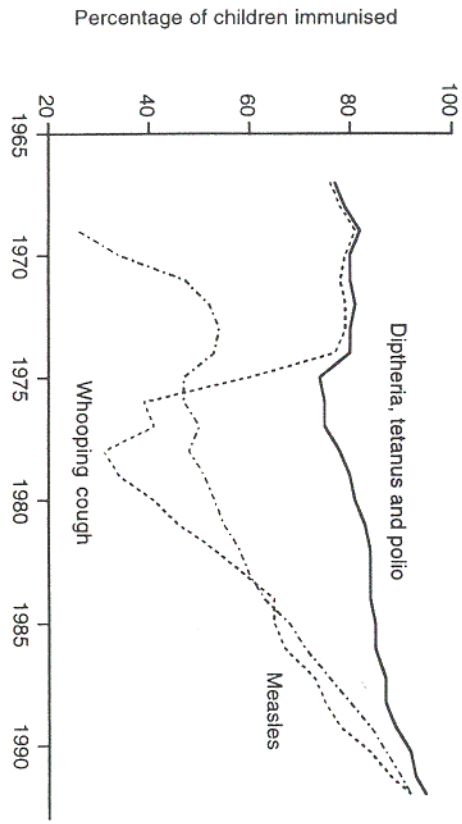
`Increased public satisfaction with the NHS is an encouraging sign that the benefits of the government's reforms are showing through.'[29]

In welcoming the findings of the British Social Attitudes Survey Virginia Bottomley commented that *`the proportion of the public satisfied with the NHS has grown steadily since 1990, by seven percentage points, with a corresponding drop in public dissatisfaction'*.[29]

Her statements carefully avoid mentioning the levels of satisfaction and dissatisfaction. In 1993, 44 per cent of people questioned said they were very or quite satisfied with the NHS, compared with 37 per cent in 1990 but 55 per cent in 1983. Although proportion who reported that they were very or quite dissatisfied with the NHS decreased from 47 per cent in 1990 to 38 per cent in 1993 this is well above the figure of 26 per cent for 1983.[29]

In any case, the answers to general questions about dissatisfaction are of limited value and much less useful than replies to surveys which ask people more specific questions about how they view particular aspects of NHS care.[31,32]

Figure 7 Percentage of children immunised by their second birthday, England, 1967-1992/3



Source: DH Forms SBL607 and KC51

The need for better NHS statistics

Agenda for action

'If purchasing is the engine for improving NHS performance, then information is the fuel which will drive that engine. Information is the common currency of managers and an essential pre-requisite of all management processes....'[33]

This analysis has shown that the government has insufficient evidence to support its claims that the internal market has increased the efficiency of the NHS. This is because many of the statistics presented are flawed and were not intended for the purposes for which they have been used. In addition, there is a very real concern that the loss of the information function of NHS regions and the staff involved may lead to a deterioration in data quality.

We recommend key areas where improvements could be made, including some where regulation and further research is required, before concluding with comments about interpretation and publication of statistics.

1. Moving to measures of people rather than activity

The finished consultant episode is based on activity and not on patients treated. Person based data is essential if data are to be

meaningful. All NHS information systems, including those at national level, should link episodes within an admission and also link admissions and readmissions for individual patients. Person based data, as used in Scotland, would overcome artefactual errors which can inflate denominators. The new NHS number should be helpful in enabling this to be done in England.

The administrative registers being developed should allow for linkage between records in different data bases. The aim would be to identify further complications which may lead to care at a later stage, possibly by a different caregiver. Admission and treatment rates, case fatality rates and survival rates could then be calculated.

2. Improving waiting list measures.

The timing of the arrival of the referral letter to an outpatient department, the initial appointment and the time of appointment to admission should all be recorded. This would pick up delays within the system and monitor those waiting to get on the waiting list.

3. Better financial data

Data on spending on community care by both health and social services should be improved and related to each other. Better measures are required to assess the impact of inflation within the NHS on cash increases. Data are also required on the NHS private sector finance initiatives in both hospital and community care. Data should be collected about patients' contributions. The trend towards

using 'over the counter' drugs should also be monitored as should the growing trend for DHAs to introduce local payment policies for some investigations and treatments such as the triple test and infertility treatment.

4. Better data on staffing

Staff data should be collected by both professional group and by category of staff. For example the decision to recategorise nurse managers into nurses means that trends cannot be monitored. In addition, there are few data about the wide range of activities undertaken by staff categorised as 'administrative and clerical'. More detailed data are needed about staff working in medical and social care in the private sector data.

5. Better data about resources and facilities

Much fuller data should be collected about the location and nature of resources and facilities for health and social care in hospital and in the community.

6. Better data on primary care

Better data are required on resource allocation mechanisms to fundholders and comparative studies with non fundholding practices are required. This will become essential with the move to community, standard and total fundholding. More data are required on the demographic characteristics of patients, workload and staffing of

practices, so that comparisons can be made between practices and areas.

7. Private care

The private sector should be regulated and required to make central monitoring returns about the health and social care provided.

8. A commitment to data quality

Improved data quality monitoring is required and systematic analysis would contribute to this. More widespread availability would also facilitate this. For example, more data could be deposited in the ESRC Data Archive and greater use could be made of the Internet.

9. Patient outcomes

Improved measures of casemix and outcome measures are required and further research is needed here. Meanwhile, confidential enquiries linked to routine data may provide a better framework than flawed league tables.

10. A commitment to standardised patient/client based data in health and social care

It is very difficult to monitor the implementation of the legislation about community care and, in particular, the interface between health and social services. A common data set would

facilitate this process.

Interpreting statistics

Because of successive changes in data collection, it is often difficult to monitor trends over time in a consistent way and assess whether like is being compared with like.

In cases where this is possible, for example the continuing decline in the infant mortality rate, and in many of the death rates which are used as targets for 'The health of the nation', the government gives itself credit for changes which are part of much longer term trends which date back well before 1979.

Recent developments, particularly the introduction of the internal market, have decreased the availability of statistical information about the NHS. In particular, financial information is much less detailed than in the past, in order to protect the commercial interests of trusts. The information released tends to be selective good news rather than a wider selection of data.

Although government statisticians now produce their own press releases, they tend to receive less press attention than ministerial press releases which all too often use statistics in an undefined and misleading way. Steps should be taken to ensure that statisticians' press releases accompany ministerial press releases. If there is no separate press release, the sources and definitions of the data which

form the basis of ministerial statements should be appended as 'Notes to editors'.

Conclusions

The set of statistics quoted repeatedly by government politicians is far too limited to enable a proper assessment of the impact of the changes in the NHS. The statistics themselves do not even support the interpretations government politicians place on them. NHS statistics, like the Service itself, are still unsafe in their hands. Improvements are needed in the collection and publication of statistics.

References

1. NHS Executive. Annual Report 1993-94. Leeds: Department of Health, 1994.

2. Bottomley V. Patients are reaping the dividend of a stronger health service. Speech to 1994 Conservative Party Conference. Press release 751/94. London: Conservative Party, 1994.

3. Bottomley V. Speech in House of Commons Debate on the National Health Service. Hansard, October 25 1994.

4. Department of Health. NHS hospital activity statistics: England 1983 to 1993-94. Statistical bulletin 12/94. London: Department of Health, 1994.

5. Clarke A, McKee. The consultant episode: an unhelpful measure. BMJ 1992: 305: 1307-1308.

6. House of Commons Health Committee. Memorandum from the Department of Health on public expenditure on the health and personal social services. Session 1993-94. HC 617. London: HMSO, 1994.

7. Office of Population Censuses and Surveys. General Household Survey 1992. London: HMSO.

8. Department of Health. Elective admissions and patients waiting: England at 31 March 1994. Statistical bulletin 1993/94. London: Department of Health, 1994.

9. Department of Health. Second quarter waiting time figures published. Press release 94/529. London: Department of Health, 1994.

10. NHS Management Executive. NHS Chief Executive highlights achievements in the Health Service over the past year. Press release H93/828. London: Department of Health, 1993.

11. National Health Service Management Executive. The NHS reforms: the first six months. London: Department of Health, 1992.

12. Radical Statistics Health Group. Facing the figures. What really is happening to the NHS? London: Radical Statistics, 1987.

13. Appleby J, Little V. Health and efficiency. Health Service Journal 1993; May 6: 21-22.

14. Clarke A, McKee M, Appleby J, Sheldon T. Efficient purchasing. BMJ 1993; 307: 1436-1437.

15. Department of Health and Social Security., NHS hospital activity statistics for England 1974-1984. Bullet 5/85; London: DHSS, 1985.

16. Independent Healthcare Association. Acute hospitals in the independent sector. Survey 1994. London: Independent Healthcare Association 1994.

17. Written parliamentary reply. Hansard, December 14 1993, col 551.

18. Written parliamentary reply. Hansard December 16 1993, col 813.

19. Written parliamentary reply. Hansard December 1 1993, col 578.

20. Written parliamentary reply. Hansard December 8 1994, col 359-60.

21. Department of Health. NHS hospital and community health services, non-medical staff in England 1983-1993. Statistical Bulletin 1994/11. London: Department of Health, 1994.

22. Department of Health. Health and Personal Social Services Statistics for England. London: HMSO. Published annually.

23. Department of Health. Personal Social Services: Residential accommodation in England 1994. Statistical Bulletin 1994/13. London: Department of Health, 1994.

24. NHS Executive. The Patient's Charter. Hospital and ambulances comparative performance guide. London: Department of Health, 1994.

25. Written parliamentary reply. Hansard December 9 1993, col 333.

26. Department of Health. 1992/93 Health service indicators published. Press release 94/335. London: Department of Health, 1994.

27. Radical Statistics Health Group. Sifting the figures. Health Service Journal 1989; February 2: 142.

28. Dillner L. Scottish death rates published with health warning. BMJ 1994; 309: 1599-1600.

29. Department of Health. Virginia Bottomley welcomes evidence of growing satisfaction with the NHS. Press release 94/520. London: Department of Health, 1994.

30. McKie D. Will we pay for it all? Preview of British Social Attitudes Survey. Guardian Society November 16 1994, 4-5.

31. Bruster B, Jarman B, Bosanquet N, Weston D, Erens R, Delbanco TL. National survey of hospital patients. BMJ 1944; 309: 1542-1546.

32. Inpatient experiences. What do patients really think? Health Service Journal 1995' January 12: 18-20.