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An international look at health: Can nations do better?

by
Robert J Maxwell

OCCASIONAL
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INSTITUTE FOR HEALTH POLICY STUDIES
UNIVERSITY OF SOUTHAMPTON

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When I first started making international comparisons, nearly twenty years ago, the whole business was relatively novel. That is no longer the case. Most of what can be deduced from the international statistics is well documented, particularly in the OECD series of Social Policy Studies. I am still periodically surprised at what people do not know about how our own performance compares with that of other countries. But in this paper I do not intend simply to go over the old ground, in the hope that by doing so I will penetrate where other beers cannot reach. Instead I want briefly to summarise past trends and reflect on what they seem to imply; then consider future pressures; and finally suggest where we should concentrate our attention.

PAST TRENDS

Let us take expenditure patterns first. They tell us nothing important about what health care achieves, but a lot about inputs.

In the OECD countries, excluding Turkey, health care spending in 1987 ranged between US$300 and US$2,050 per head per year (Figure 1), with an average of US$934. For 1990 these figures would need to be increased by say 25 per cent to give an average figure around $1200 or £700. It is not a large sum to buy medical care when a day of in patient care costs say £200, and average OECD citizens use about

3 days of inpatient care. Nevertheless it represents between 5 and 11 per cent of Gross Domestic Product (Figure 2) and around twice that share of public expenditure, making health care in all OECD countries a leading service industry and one of the principal public spending programmes.

Expenditure trends since 1960 are summarised in Figure 3, which shows total health care spending as a percentage of GDP for the OECD countries. Until the late 1970s, health care increased its share of GDP substantially in each 5 year period. The oil crises of the mid 70s created economic turbulence, slowed economic growth and made the financing of public programmes like health care more difficult. In the main it was not a question of expenditure reductions in real terms, so much as a reduction in expectations. The modest annual growth that people had come to rely on, in order to develop programmes in real terms, became a thing of the past. Instead, the main health related preoccupation of Western Governments in the last 15 years seems to have been to cap health care spending. To be a Minister for Health in any Western Government in this period has been to play second fiddle to the Treasury - health has been an unpopular and unrewarding brief, a graveyard of political aspirations, as Ministers have been caught between the nether millstone of public expenditure limitations and the upper millstone of professional and public expectations.

The main determinant of what countries spend on their health care, explaining more than 90 per cent of the international variations in the OECD, appears to be their

relative wealth (Figure 4). Some countries are well above the trend line (most obviously the United States) and others below it (for example ourselves). Nevertheless, the broad pattern is clear. Health care expenditure does not behave as though health care is a subsistence good, necessary to survival, but as though it is highly discretionary, depending on how much we feel we can afford to spend.

What we obtain for our money can be fairly easily stated in terms (relative to population) of physicians, nurses, inpatient admissions and lengths of stay, average physician contacts per annum, and so on (Figure 5). The international variations in these indices are much smaller than the variations in the overall levels of spending, indicating that wealthier countries generally pay their health care professionals (and even their pharmaceutical companies) more generously. Nevertheless the variations are still surprisingly substantial at the micro level, not only between countries but also within countries, in (for example) physicians referral rates to hospital, or in rates of surgical intervention (Figure 6).

Interestingly the surgical variations do not appear to be random, but to be larger for more controversial interventions. Like many other health services research findings, this seems obvious enough once we have the evidence.

While each country's health system is unique, there are strong family resemblances, based on political and social history. For example, the notion of

collective insurance, based on Bismarck's 19th century reforms in Germany, has been very influential in countries that have come under German influence, including Austria, Denmark, the Netherlands, and Switzerland, and, further afield, in Japan and South America. Compared with our own tax based Government-run system, the German approach has distinctive merits and weaknesses. It is in general considerably more expensive, but more responsive to consumer opinion, and more transparent about the relationship between funding levels, priorities and entitlements to services.

Besides these family patterns of organisation and funding, there have also been common trends cutting across families. Everywhere, at least until very recently, the trend since the Second World War has been away from direct payment by users out of their own pockets at the time of use, towards some form of collective funding for healthcare, whether insurance or tax-based. with an increasing degree of state intervention in the delivery of services (Figure 7).

Finally, in terms of past trends, there has to be a big question about the impact of all this activity and expenditure. Standards of health have continued to improve throughout the Western World, regardless of the type of health system in place. Nobody has seriously faulted McKeown's view (McKeown The Role of Medicine Nuffield PHT, 1976) that this trend predated the rise of modern scientific medicine and that the latter's contribution has been relatively modest. Nevertheless we should not ignore the fact that in the last two decades our own rates of improvement in health

status have been slower than in many other countries, mostly notably Japan (Figures 8 and 9). We cannot afford to be complacent. Not can we afford to be complacent about customer satisfaction - or dissatisfaction - for by international standards the British are currently less satisfied with the health care system than most comparable nations, except Italy and the United States (Figure 10). My impression, for what it's worth, is that the British (or perhaps, more accurately, the English) level of satisfaction, has fallen in the last few years. It is important to remember, however, that satisfaction is not an objective, independent variable. It is heavily influenced by expectations (for satisfaction=expectations less experience) and by public controversy. If those working in the NHS lose confidence in it, and if the professions and the Government tell us much is profoundly wrong, it is not surprising that public confidence falls. The more so, of course, if our personal experience - for example of being summoned for an operation only to be sent home - is distressing.

FUTURE PRESSURES

While the last 10 years or so have been a difficult period in health services, there are several reasons for thinking that the pressures will be even worse in the future. These include population changes, advances in medical technology, public and environmental health issues, and public expenditure constraints. I will review each of these briefly before moving on, in the final section of the paper, to think about the implications.

DEMOGRAPHICS

Early in the Twentieth Century a profound population shift began in Europe and other relatively affluent parts of the world, with sharp declines in infant mortality and in the birth rate. The result has been gradually to transform the demographic profile from the pyramid that is still typical of poorer countries to a shape more like a bottle, with a foreshortened neck (Figure 11). Relatively few people now die in Britain below the biblical three score years and ten. Few on the other hand live much beyond ninety.

To a substantial degree this shift has now happened in Britain with major implications for health and healthcare, because healthcare expenditure is relatively low in middle life and then rises steeply with age. However, we still face the final step in the process, in the form of a further doubling in the number of the "old", "old", meaning those over 85. This moreover, is without any extension of the natural life span. Even marginal extensions would complicate the position further, unless (which is conceivable) extra years go hand in hand with added health and independence in old age.

There will also be quite a sharp reduction in the 15 to 29 age bracket from which we traditionally recruit nurses and others. It is simply not going to be feasible to continue to mismanage and lose trained nurses, because we will not be able to replace them by battalions of new students. The traditional, profligate approach to

nursing womanpower in the NHS has been about as unenlightened as that of First World War Generals sending regiment over regiment from the trenches "over the top" into a hail of machine-gun fire.

Thirdly, on the demographic front, Britain has become a nation of mixed race and the ethnic minorities will continue to rise for a long time to come from the current 5 per cent, because they are relatively young populations. They are concentrated in areas like the inner cities, and are disproportionately represented among the poorest section of society. Their needs are likely to be correspondingly above average, since health status is inversely related to income. Moreover, a multi-cultural, multi-ethnic society calls for the NHS to be responsive across a broader range of individual "world-views" and preferences than it has ever been before.

MEDICAL ADVANCES

We are living in a period of remarkable development in medical science and technology - potentially perhaps the most dynamic period ever, comparable in importance to the transformation of physics early in the century. The transformations are already apparent in diagnostic imaging, micro, laser and transplant surgery, information handling of large data-bases, fibre optics and lithotripsy, to mention only a few examples. Quite what will happen next, and when it will happen, are matters of guesswork in fields like genetic repair, the use of monoclonal antibodies in cancer treatment, or delaying the onset of degenerative diseases associated with age.

Nevertheless, while precise, specific forecasts are likely to be wrong, we can be sure that there will be further major medical advances. It is also more than likely (Figure 12) that in total they will tend to raise expenditure rather than to reduce them. With a few marked exceptions, such as the successful treatment of pulmonary tuberculosis with drugs, which removed a major burden from the NHS in the 1960s, medical advances have improved treatment and increased costs. In general, this pattern is likely to hold for the future.

PUBLIC AND ENVIRONMENTAL HEALTH

What I have said about demographics and medical advances is relatively uncontroversial. What I am going to say about public health is much less widely accepted.

I am nevertheless certain that a key factor of our time is a profound change in the balance of power between men and nature, posing major threats to the quality of life (including health) and indeed to the survival of life as we know it. The threat of nuclear war has, of course, been obvious. Equally, Chernobyl underlined the threat of nuclear accident. More broadly, there are whole sets of issues about pollution of air, land and sea; the impact of factory farming and food processing on nutrition; the pressure of further increases in human population, and of urban living and life-styles. In my opinion - controversial I admit - AIDS will not prove to be an isolated example of the potentially catastrophic impact of human behaviour on health. From the

viewpoint of human health, behaviour is not the sociological icing on a cake of hard science. It could even prove to be the heart of the matter.

PUBLIC EXPENDITURE CONSTRAINTS

Short of catastrophe, wealth as measured by GDP will continue to rise, and will do so faster in relatively affluent countries. So there will be more money to spend on health care. Indeed the formula adopted by a number of Western Governments, pegging health care spending at a fixed percentage of GDP, is probably more restrictive than necessary. As national income rises one would expect, on the historical and economic evidence, that health spending will increase, not merely in line, but also proportionally.

So there will be more money to spend. But (I have to tell you with total certainty) it will not be "enough more". Probably Governments of the Left will be more generous in the funding of health and other social expenditures than Governments of the Right, but both will have to be cautious about total public spending and tax rates if they want to be re-elected. Moreover, the 1990s look like being a difficult period in terms of global economy.

Taking account of the other pressures that I have already mentioned - continuing demographic shift, medical advances, and dangers to the environment and public health - the task of financing, managing and delivering health care is going to

be even more difficult in the future than it is now.

IMPLICATIONS FOR ACTION

The key to this dilemma of how to manage in the 1990s has to be to do with hard choices. For many Americans the notion of healthcare rationing remains anathema. They refuse to recognise that for less affluent Americans, healthcare is already harshly rationed. A strength of the design of the NHS has been that it has provided both an organisational structure and a global budgeting process for public choices within expenditure constraints. Nevertheless there is undoubted scope for improving the quality of our choosing, and the need to do this is going to rise as the pressures increase.

How, then can we do a better job of choosing? Here, however, are a few ideas to start us thinking:-

1. Concentrate on proven therapies with good cost/benefit ratios, plus innovative developments with high leverage. This is essentially a clinical and scientific agenda. We have a long way to go before we have convincing evidence about which treatments work, and which do not. Since we must ration treatment the only proper bases on which to do so are fairness and maximum benefit. It is wrong to offer treatment simply in the hope that it may do good, if other patients are thereby denied treatment of poorer value. There remains a place

for experiment but it should be a consciously chosen place, for experimental procedures that are judged to offer sufficiently valuable gains to be worth the investment, even at the cost of denying some immediate treatment in order to finance their development.

2. Focus on the individual, the household, the community - on supporting their actions rather than substituting professional skills and institutional provision for self-help. This is likely to mean giving most help to poorer communities and being highly flexible and adaptive in what the NHS provides. While the Welfare State had the best intentions it often made the damaging mistake of assuming that the professionals know best. The job of helping people who are sick, handicapped or confused is simply too big for the professions, for organised services, for the State. We have to do what we can for ourselves. Moreover that is actually in our own interest. Most people want to stay in their own homes for as long as possible, and exercise as much control as possible over their own lives.

3. Influence health promotion and disease prevention, not necessarily by the same, familiar cast of NHS "actors" nor from the same budgets. There is a case for health promotion, on grounds of potential opportunity, but it is at this stage essentially a venture of faith. Money spent on it has (at some level) to be weighed against money spent on treatment. Almost certainly health promotion,

however successfully it may prove to be, will not economise. Rather it may pay off in longer life spans (at least for some) and the delayed onset of handicap, but that has to be proved. The potential could be such that (in my opinion) it justifies experimental investment, with evaluation over a relatively long period, to try to assess its effects. However, the skills required really are likely to be different, and therefore call for conscious sustained development. It is not at all likely that the medical profession has a monopoly of the skills required, although scientific evidence about health benefit and harm from promotive interventions is indisputable.

4. Resolve that what the NHS sets out to do, which will not be everything, will be done well, and must change in line with changing needs and changing knowledge about impact. It would be a stark tragedy if the NHS settled for being in any sense a second-rate service, acknowledging that better care were available privately. For what the NHS elects to provide, within the (rationed) means available, it ought to aim to be the pace setter. In the treatment of accident and emergencies for example, or in developmental assessment of children, the NHS should in no sense be skimping, but should aim to be among the world leaders.

5. Put far more effort and skill than in the past into two-way communication with the public and with staff about what the NHS is trying to do and why. If the

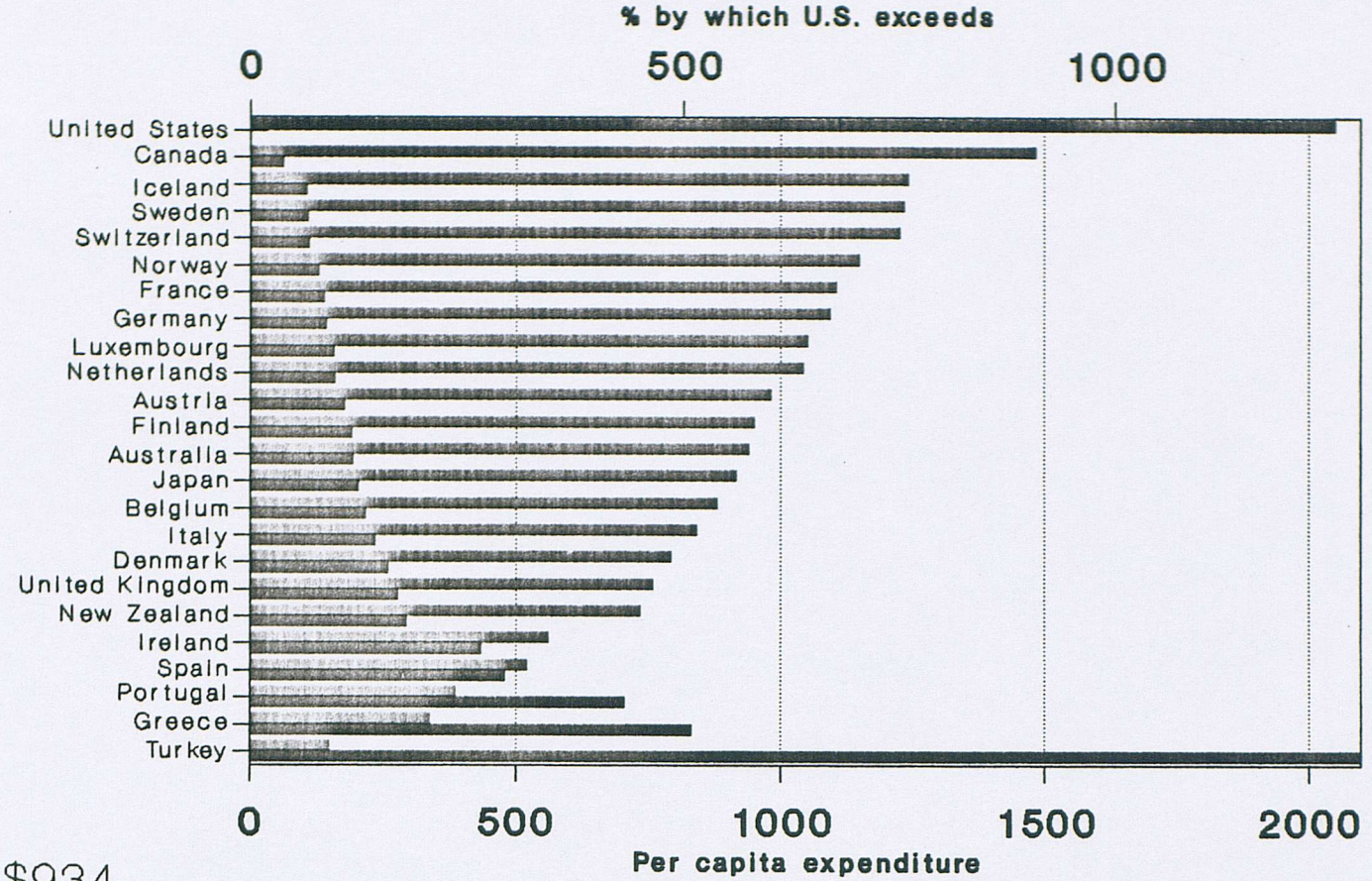
NHS could do everything that is required well - which perhaps used to be the position in the 1960s, before galloping medical development put paid to any sense that all we need to do is to organise the Service sensibly - the message to the staff and the public would be relatively simple. Today. communication is much more difficult, partly because the message itself is considerably more complicated. The latter should be that the NHS cannot do everything, but it is choosing carefully what it will do, and commits itself to doing well that which it undertakes. The test should be whether the public and the staff understand the specific service objectives of the NHS and why they have been selected and whether they believe that they are appropriate. Too often at the moment NHS staff know only too well that the Service has failings, yet the weaknesses seem arbitrary rather than the result of sensible economics. Meanwhile, the Great British Public puts up with more than it should, and is amazingly forbearing about the failures of the NHS to project what it is trying to do.

In no sense is this paper intended as a blueprint for the NHS. However, I stand by several of the notions in it, particularly the increasingly sharp inevitability of rationing in healthcare. The NHS remains a very remarkable social institution, but it can do better. My 5 point strategy for improvement will not please everyone. Nevertheless, I am willing to argue quite hard and with uncharacteristic obstinacy for the key elements in it.

If anyone tells me that they know the single thing that (if adopted) will

transform the NHS into what it might be, I am not going to believe them. The matter is simply too complex for that. My 5 points may not be absolutely correct, but they go some way to reflecting the complexity of the issues, and are relatively distinct from one another. For the moment, therefore, my advice is not to agonize too much over whether they are correct in every particular - they are undoubtedly not - but to see how far they can take us towards shaping an NHS for the year 2,000.

Figure 1 Per Capita Health Spending,1987



Mean = $934
(or $968, excluding Turkey)

Per cap expenditure % U.S. exceeds

Source: OECD, Health Data Bank, via Health Affairs, Fall 1989.

Figure 2

Total Health Expenditure, 1987

As a Percentage of GDP

	%		%
United States	11.2	Ireland	7.4
Sweden	9.0	Belgium	7.2
Canada	8.6	Australia	7.1
France	8.6	Italy	6.9
Netherlands	8.5	New Zealand	6.9
Austria	8.4	Japan	6.8
Germany	8.2	Portugal	6.4
Iceland	7.8	United Kingdom	6.1
Switzerland	7.7	Denmark	6.0
Luxembourg	7.5	Spain	6.8
Norway	7.5	Greece	5.3
Finland	7.4	Turkey	3.5

Mean 7.3, or 7.5 (excluding Turkey)

Service : OECD, Health Data Book, Via Health Affairs,

Fall, 19

Figure 3

Total Health Expenditure As A Percentage of Gross Domestic Product

	1960	1965	1970	1975	1980	1985	1986	1987
Australia	4.6%	4.9%	5.0%	5.7%	6/5%	7.0%	7.1%	7.1%
Austria	4.6	5.0	5.4	7.3	7.9	8.1	8.3	8.4
Belgium	3.4	3.9	4.0	5.8	6.6	7.2	7.2	7.2
Canada	5.5	6.1	7.2	7.3	7.4	8.4	8.7	8.6
Denmark	3.6	4.8	6.1	6.5	6.8	6.2	6.0	6.0
Finland	3.9	4.9	5.7	6.3	6.5	7.2	7.3	7.4
France	4.2	5.2	5.8	6.8	7.6	8.6	8.7	8.6
Germany	4.7	5.1	5.5	7.8	7.9	8.2	8.1	8.2
Greece	3.2	3.6	4.0	4.1	4.3	4.9	5.3	5.3
Iceland	1.2	2.8	4.3	5.9	6.4	7.3	7.7	7.8
Ireland	4.0	4.4	5.6	7.7	8.5	8.0	7.8	7.4
Italy	3.3	4.0	4.8	5.8	6.8	6.7	6.6	6.9
Japan	2.9	4.3	4.4	5.5	6.4	6.6	6.7	6.8
Luxembourg	-	-	4.1	5.7	6.8	6.7	6.8	7.5
Netherlands	3.9	4.4	6.0	7.7	8.2	8.3	8.3	8.5
New Zealand	4.4	4.5	5.1	6.4	7.2	6.6	6.9	6.9
Norway	3.3	3.9	5.0	6.7	6.6	6.4	7.1	7.5
Portugal	-	-	-	6.4	5.9	7.0	6.6	6.4
Spain	2.3	2.7	4.1	5.1	5.9	6.0	6.1	6.0
Sweden	4.7	5.6	7.2	8.0	9.5	9.4	9.1	9.0
Switzerland	3.3	3.8	5.2	7.0	7.3	7.7	7.6	7.7
Turkey	-	-	-	-	-	-	3.6	3.5
United Kingdom	3.9	4.1	4.5	5.5	5.8	6.0	6.1	6.1
United States	5.2	6.0	7.4	8.4	9.2	10.6	10.9	11.2
Mean	3.8	4.5	5.3	6.5	7.0	7.4	7.3 (7.4)[a]	7.3 (7.5)[a]

Source: Organisation for Economic Cooperation and Development, Health Data Bank, via Health Affairs, Fall 1989

[a] Mean excluding Turkey.

Figure 4

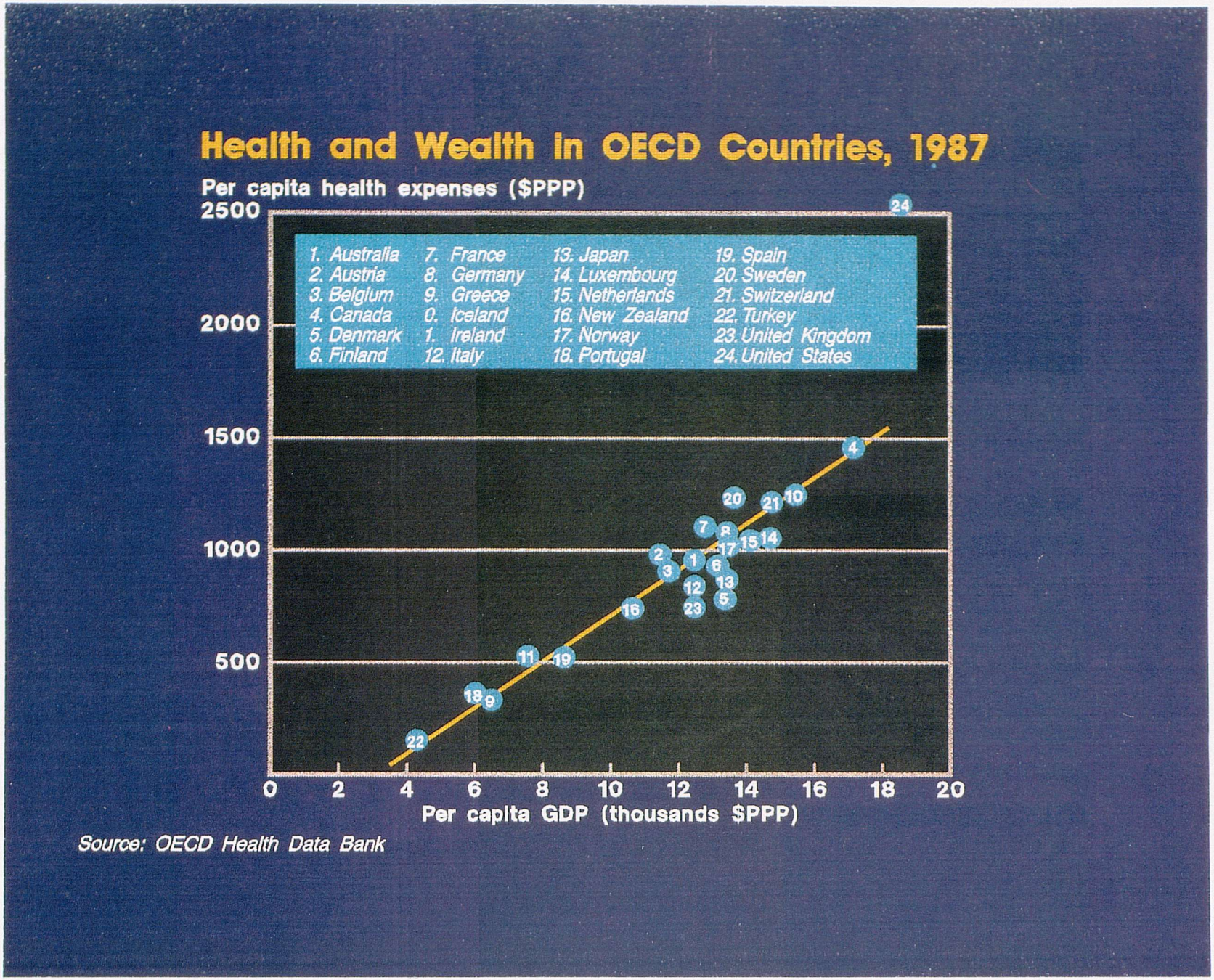

Health and Wealth in OECD Countries, 1987
Per capita health expenses ($PPP)
2500
2000
1500
1000
500
1. Australia
2. Austria
3. Belgium
4. Canada
5. Denmark
6. Finland
7. France
8. Germany
9. Greece
0. Iceland
1. Ireland
12. Italy
13. Japan
14. Luxembourg
15. Netherlands
16. New Zealand
17. Norway
18. Portugal
19. Spain
20. Sweden
21. Switzerland
22. Turkey
23. United Kingdom
24. United States
0
2
4
6
8
10
12
14
16
18
20
Per capita GDP (thousands $PPP)
Source: OECD Health Data Bank

Figure 5

Health Activity Statistics

(1987 or nearest available date)

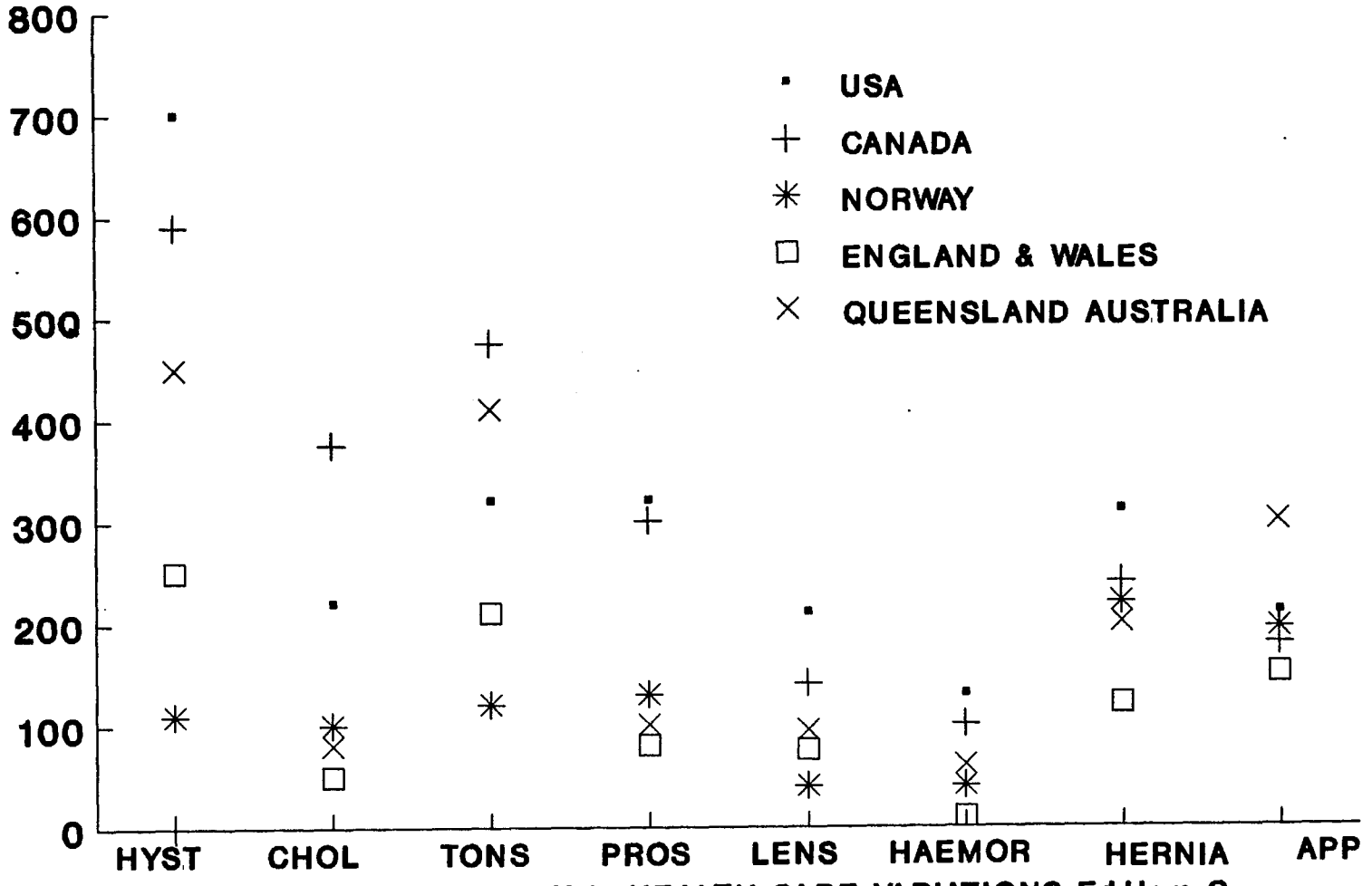
	Physicians per 10,000	Nurses per 10,000 (p.a.)	Patient Consultations (p.a.)	Hospital Admissions (% p.a.)	Av. length of hospital stay (days)	Hospital bed day (per head p.a.)	Staff per occupied bed
Canada	21.5	94.3	6.6	14.5	13.2	2.0	2.13
France	25.0	52.9	5.2	21.2	12.5	3.3	1.37
Germany(West)	28.1	49.2	11.5	21.1	17.1	3.5	1.25
Italy	**	38.7	10.9	15.0	11.0	1.6	1.37
Japan	15.7	57.4	12.8	7.5	52.9	3.9	0.77
Sweden	26.8	86.2	2.7	20.0	19.7	4.2	1.85
UK	13.7	42.0	4.5	15.8	15.0	2.1	2.60
USA	23.4	66.7	5.3	14.7	9.6	1.7	2.75
Average	22.0	60.9	7.4	16.2	14.0*	2.8	1.9*

** Italian figures unreliable in terms of comparability

* excluding Japan

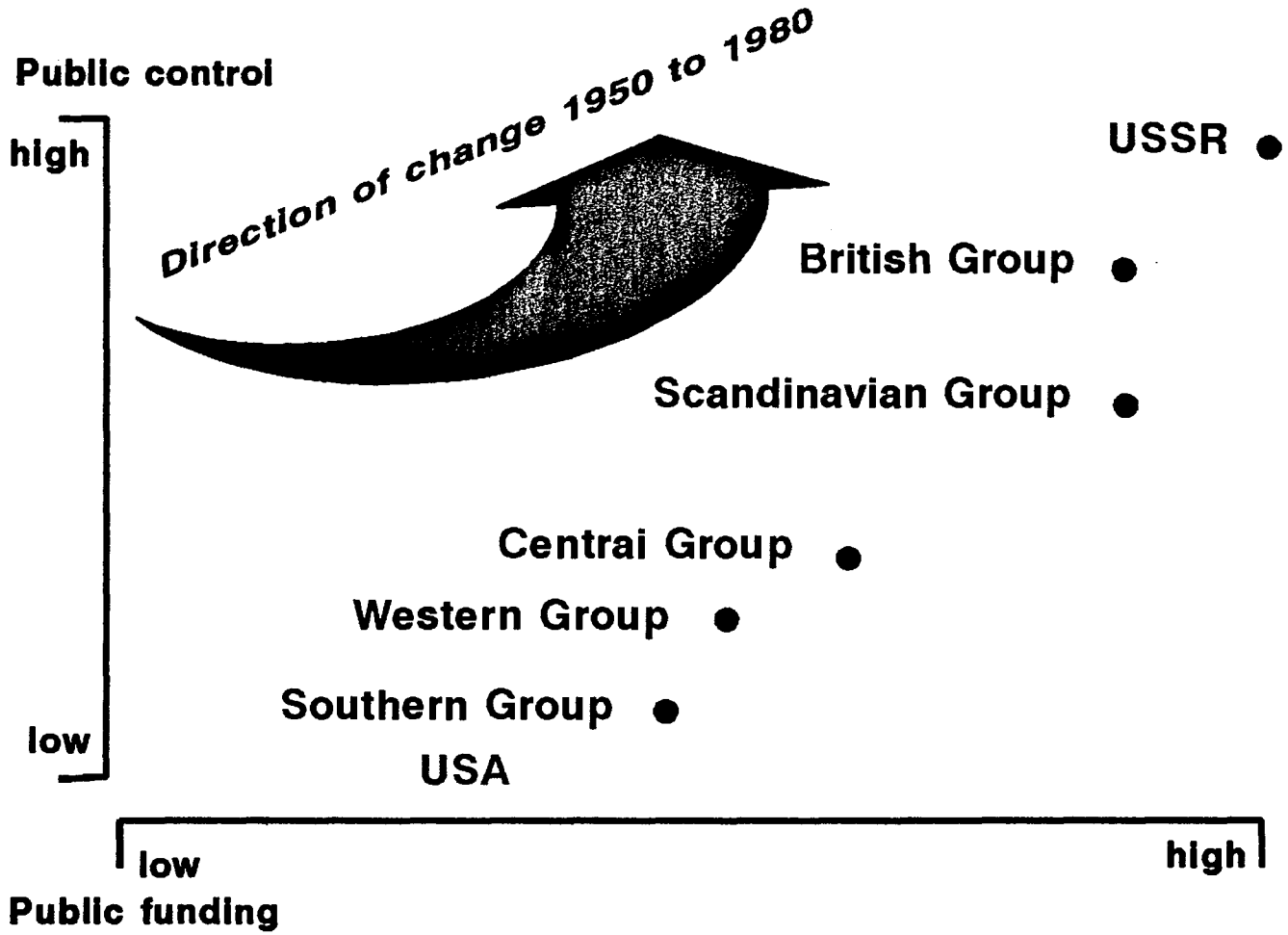
Source: OECD Health Care Systems in Transition Paris, 1990

Figure 6 Surgical Procedures
Age Standardised Rates/100,000 (At Risk)



Source: Mcpherson, K in HEALTH CARE VARIATIONS Ed.Ham C, King's Fund Institute Research Report No2., 1988.

Figure 7 THE ORGANIZATION SPECTRUM



Source: Maxwell, R Health Care: The Growing Dilemma. Mckinsey & Co, 1974

Figure 8

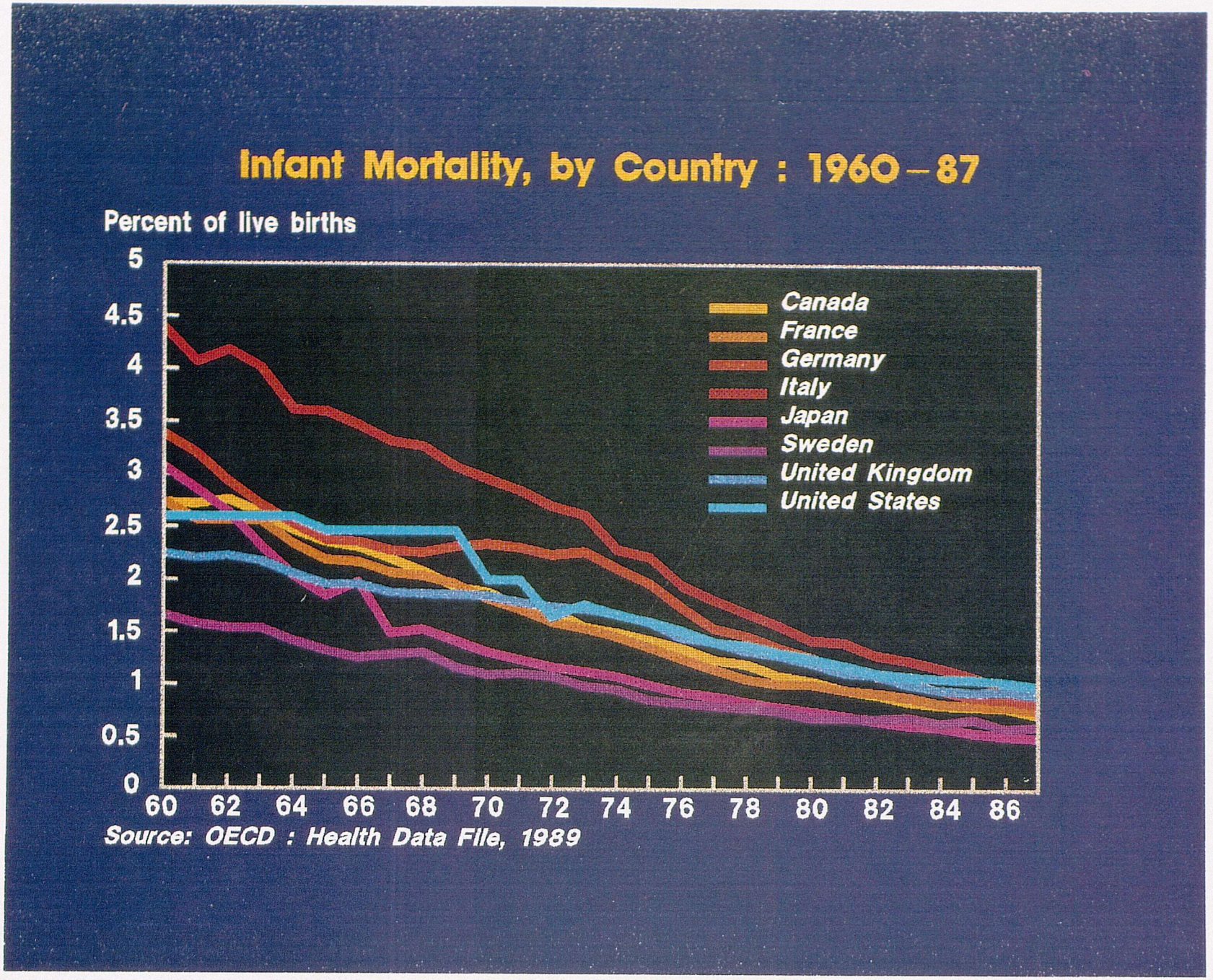

Infant Mortality, by Country : 1960–87
Percent of live births
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
60 62 64 66 68 70 72 74 76 78 80 82 84 86
Canada
France
Germany
Italy
Japan
Sweden
United Kingdom
United States
Source: OECD : Health Data File, 1989

Figure 9

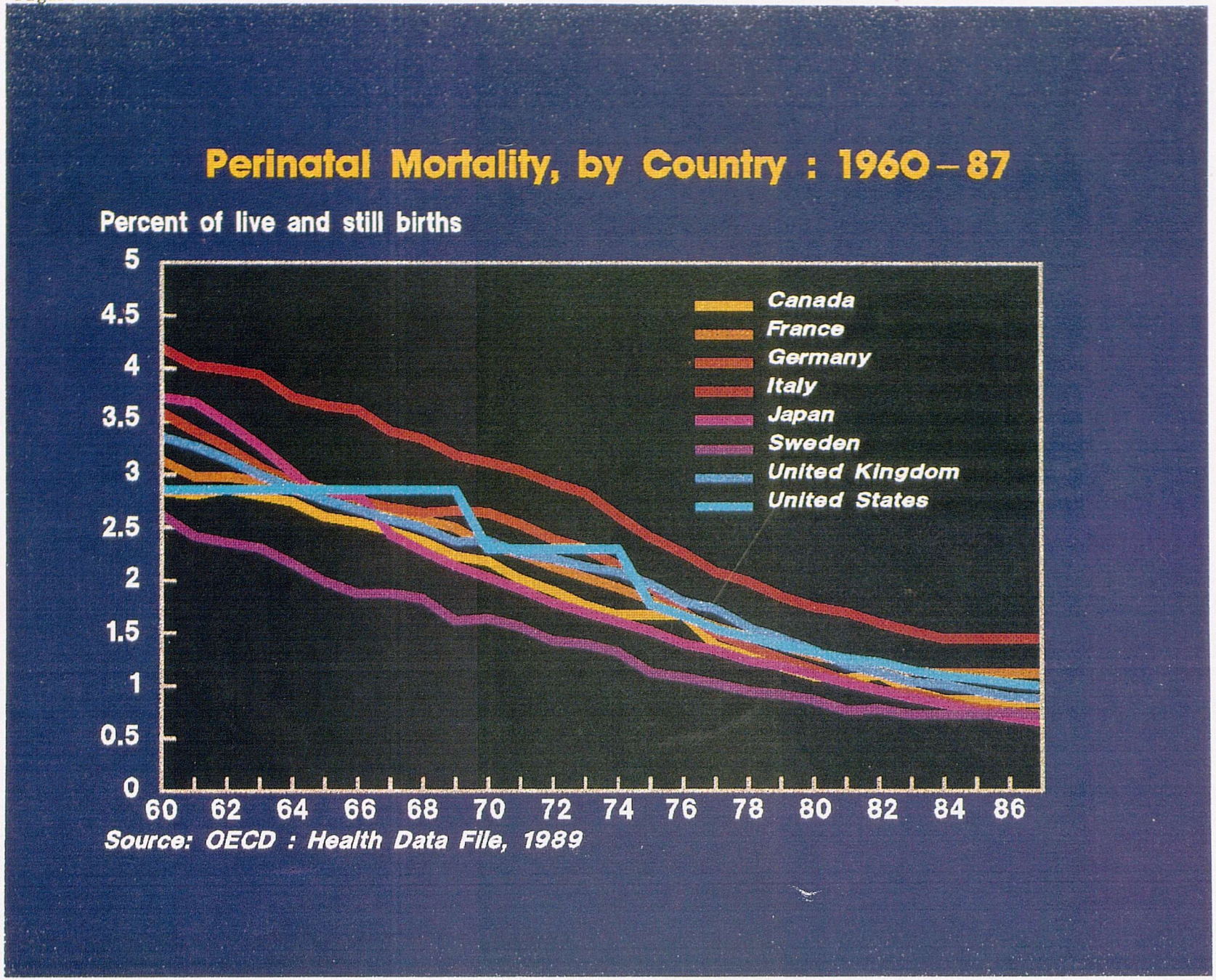

Perinatal Mortality, by Country : 1960–87
Percent of live and still births
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
60
62
64
66
68
70
72
74
76
78
80
82
84
86
Canada
France
Germany
Italy
Japan
Sweden
United Kingdom
United States
Source: OECD : Health Data File, 1989

Figure 10

The Public's View of Their Health Care System in Ten Nations, 1990

Percent	Minor changes needed	Fundamental changes needed	Completely rebuild system
Canada	56	38	5
Netherlands	47	46	5
West Germany	41	35	13
France	41	42	10
Australia	34	43	17
Sweden	32	58	6
Japan	29	47	6
United Kingdom	27	52	17
Italy	12	46	40
United States	10	60	29

Figure 11 U.K. Population (percentages by age band and by sex)

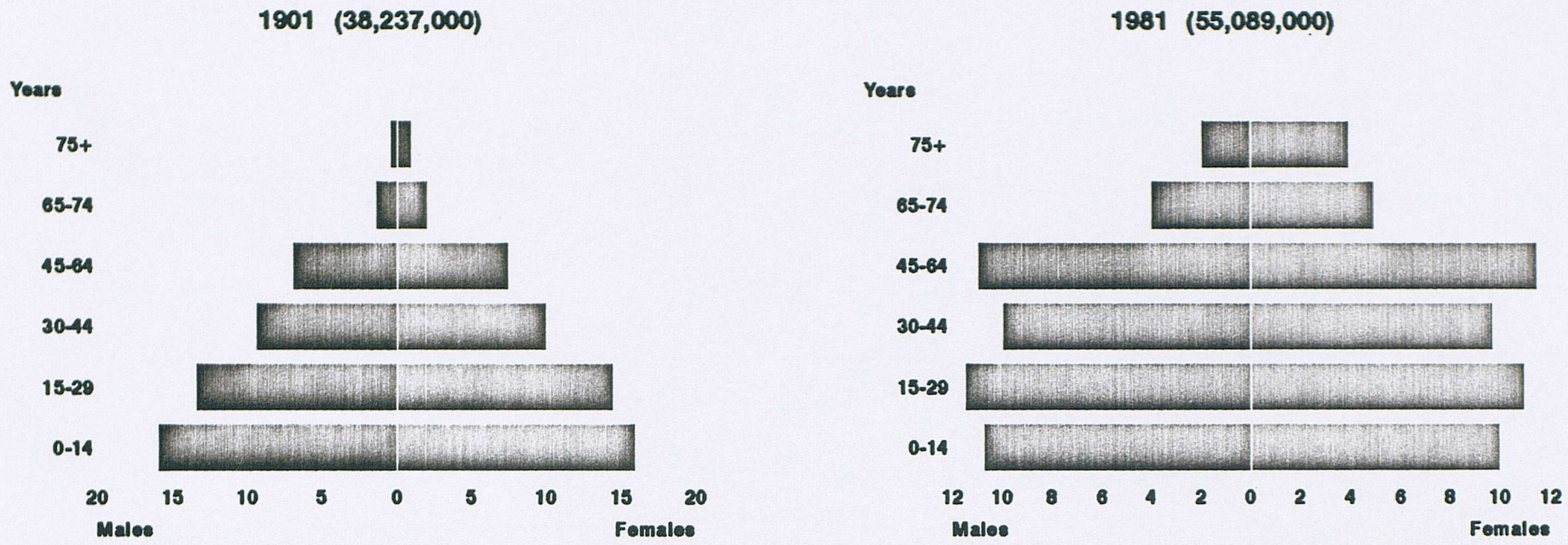
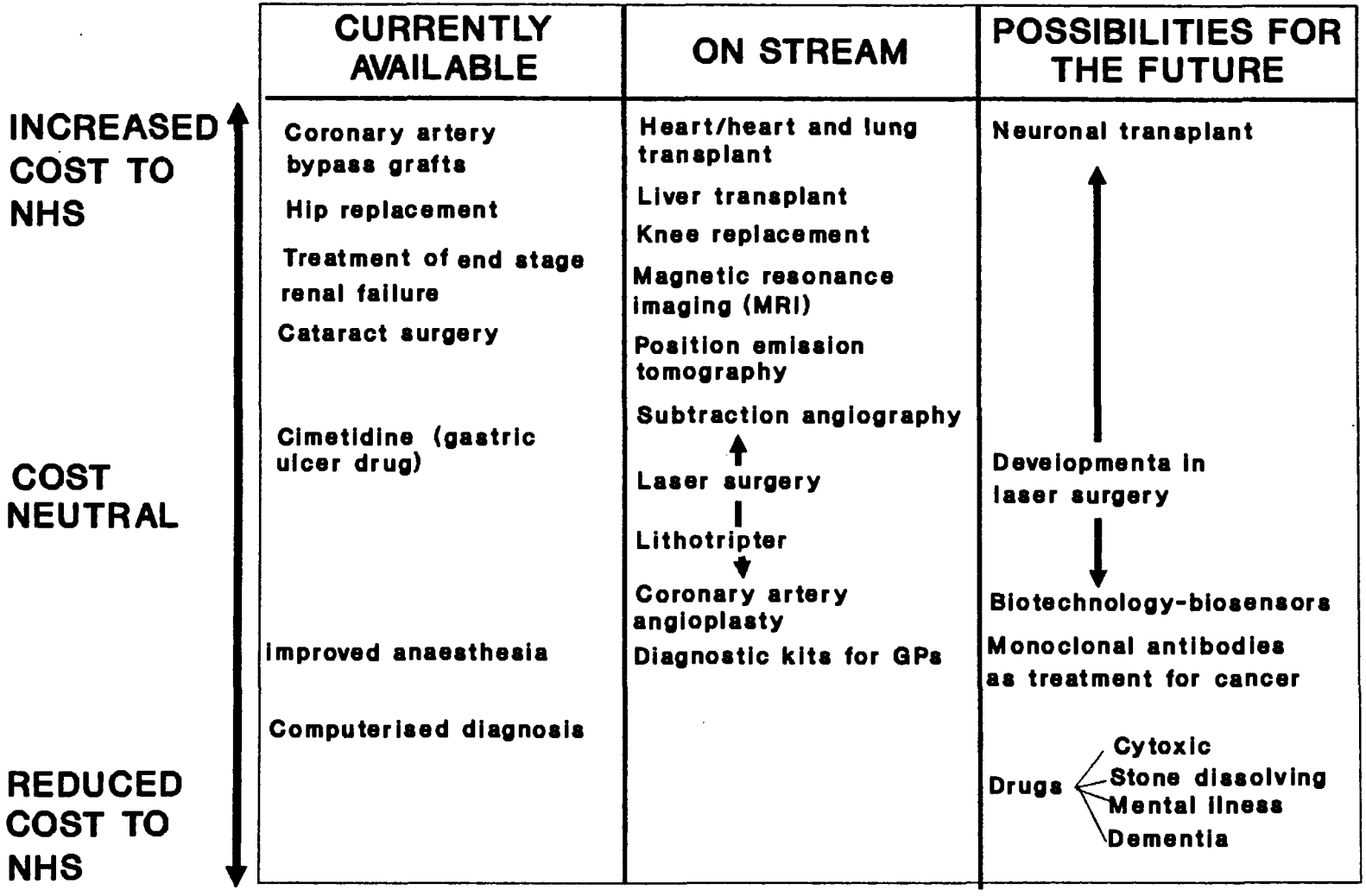


Figure 12 Context of fast moving technology



Source: House of Commons, session 1987-88, Social Services Committee, First Report. *Resourcing the National Health Service: Short Term Issues*, vol.2,Minutes of Evidence (20 January-17 February 1988). London HMSO, 24 February 1988, p34

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