

OTHER AREAS FOR INVESTIGATION

I (PVB) added the area for investigation, 9. Iatrogenic illness, after the meeting. It is a problem which the medical profession would rather did not exist and is particularly sensitive. It does appear that it will not be tackled unless some political initiative is taken. There is a danger that real problems will just be swept under the cloak of some medical quality improvement programme. The public needs information on the matter, not platitudes. Since the meeting I would also like to add the following topics:

Undiagnosed and incorrectly diagnosed illness: There is inevitably in our society a proportion who have undiagnosed illness. This can be critically so with children where failure to recognise illness early in life can lead to lifelong disability, deafness and blindness being only two examples. The extent of these problems and proposals for their resolution need to be investigated and widely discussed and should be included in the research topics 10(c) and 10(d) above.

Self diagnosis by patients: Advances in information technology are rapidly making possible on-line computer systems where patients with worrying medical conditions can easily key in their symptoms in privacy. The computer can interact with the patient in an impersonal manner without any emotional entanglements or embarrassments between patient and clinician. Causes of problems, possible solutions, relative frequencies or likelihoods will all in the not too distant future become available to the public. The medical profession in Britain can either take the lead in this area or it will be done abroad as it would clearly be a most lucrative venture as there is evidently a worldwide market for such information. In the future such computer systems will become available either in libraries or in doctors' surgeries.

ARTICLES**THE INVISIBLE PEOPLE**

Malcolm Williams, SSRU, City University

Millions of tourists every year take away a picture post card image of Cornwall. Cream teas, pasties, pirates and quaint locals. The superficial picture that the tourist industry and the media are anxious to promote is of a contented and prosperous community. The reality is far from this. Cornwall is one of the poorest parts of Britain, yet unlike other areas, as for example the North East or Merseyside, that poverty is hidden. Cornwall and the Cornish are for the most part statistically 'invisible'.

In this article I will show how Cornwall's poverty is 'hidden' in official statistics and argue that this concealment is in itself a contributory factor in this poverty.

For statistical and planning purposes Whitehall divides Britain into ten regions. Regional statistics are produced on a huge range of topics: unemployment, health, income, education etc. Because data is habitually gathered and presented on a regional basis the regions come to be regarded as effective social and cultural units with the data taken to be representative of the people who live in that region. Large intra-regional differences are inferred to be absent when data is presented. Indeed the rationale behind regional statistics is that they present

data that will measure the difference between that region, other regions and Britain as a whole. Regional data then is considered authoritative and crucial to central government decisions, particularly in economic planning, but also transport, health, and the arts. Additionally regional data presented by central government, is used not just by government departments, but also by semi official bodies, academics, the media, and advertising.

The South West region consists of Wiltshire, Gloucestershire, Avon, Somerset, Dorset, Devon and Cornwall. It stretches from Lands End in the far west of Cornwall to northern Gloucestershire less than 40 miles from Birmingham. Though sub regional statistics are produced for the counties of each region and local authorities themselves produce a wide range of statistics these are of secondary importance in central government decisions about regions. In the case of the South West region much of the sub regional data for Cornwall exhibits quite different characteristics to that of the other constituent counties of the region.

There are significant statistical differences between Cornwall and the South West region in four main areas:

Unemployment

It can be seen from Table 1 that in November 1991 the South West Region had an unemployment rate of 9.8%, whilst Cornwall's unemployment rate stood at 15.2%. Though the South West figure is slightly higher than the average for England and the figure for the South West has itself increased, the region remains comparatively prosperous. Indeed without Cornwall the South West would be one of the most prosperous regions in Britain.

TABLE 1 UNEMPLOYMENT *

	Nov 1991	March 1991	Jan 1990	Jan 1987	Oct 1985	Oct 1982
Cornwall	15.2	10.3	7.7	20.0	18.2	16.1
South West (1)	9.6	9.8	4.4	12.0	12.1	11.2

(1) Includes Cornwall

Sources Regional Trends 25 & Employment Gazette May & December 1991.

* Unemployed as a percentage estimate of employees in employment and the unemployed.

Cornwall's unemployment rate is double that of Gloucestershire and Wiltshire and a third higher than that of Devon, the county in the region with the next highest unemployment rate Table 1a. Throughout the 1980s Cornwall had almost continually the highest unemployment rate in Britain, whilst on a number of occasions the Cornish towns of Newquay and Redruth had the highest rate for any town in Britain. In November 1991 Newquay (at 21.7%) had the second highest rate in Britain and Redruth and Camborne the fourth highest. Cornish towns occupied four places in a 'top ten' of Travel to Work Areas with the highest unemployment in Britain.

TABLE 1a UNEMPLOYMENT SOUTH WEST REGION NOVEMBER 1991*

Avon	9.5
Cornwall	15.2
Devon	10.9
Dorset	10.3
Gloucs	7.4
Somerset	8.6
Wilts	7.5

* Unemployed as a percentage estimate of employees in employment and the unemployed.

A comparison of Development Areas in Assisted regions reveals that Development Areas in the South West have a higher unemployment rate than any in other regions. The South West Development Area comprises nearly all of Cornwall and North Devon. The unemployment rate for North Devon, whilst high by UK standards, is lower than any Travel to Work Area in Cornwall except Truro. Thus the high unemployment rate in the South West Development area simply reflects that of Cornwall.

Whilst Cornwall, in common with much of Britain, underwent a recovery in the latter years of the 1980s it was at a much slower rate than the South West or Britain generally. Indeed whilst unemployment in Britain declined between 1985 and 1987 it was increasing in Cornwall. Throughout the 1980s Cornwall's unemployment rates resembled those of the North East or North. Table 2 compares 'highest' and 'lowest' percentages of unemployed in each region. Though the recent recession has somewhat eroded the concept of a 'north - south' divide it will be seen that the percentage unemployed in Cornwall resembles those of the North rather than the South. Indeed when the 'divide' was statistically more apparent in the 1980s Cornwall was even more firmly 'in the North'. In common with the North of England and Wales, Cornwall's unemployment rate has grown less rapidly than the South of England, during the recent recession, simply because the former areas had a higher level of structural unemployment to begin with.

TABLE 2 UNEMPLOYMENT - HIGHEST AND LOWEST COUNTIES IN REGIONS NOVEMBER 1991

	Lowest %		Highest %	
South East	Berkshire	6.2	E.Sussex	11.7
East Anglia	Suffolk	6.8	Norfolk	8.6
South West	Gloucestersh.	7.4	Cornwall	15.2
West Midlands	Warks.	8.0	W.Midland	12.4
East Midlands	Northants.	7.9	Notts.	10.6
Yorks/Humberside	N.Yorks	6.6	S.Yorks	13.7
North West	Cheshire	8.4	Mersey	16.5
North	Cumbria	7.1	Cleveland	14.0
Wales	Powys	7.0	Mid Glam.	13.6
Scotland	Grampian	4.3	Wtn.Isles	17.2

Source Department of Employment, Employment Gazette January 1992

Gross Domestic Product

Table 3 Compares Cornwall's GDP with that of the South West and England. Whilst the GDP of the South West is slightly lower than that of England, Cornwall's is dramatically lower. Moreover the South West figure, excluding Cornwall, would compare very favourably to England. The 1991 edition of Regional Trends notes: "the GDP per head in Cornwall appears to be slightly lower relative to the United Kingdom average than 1981."³ This would appear to indicate that despite a period of growth in the UK, in the 1980s, Cornwall's position has worsened relative to the UK.

TABLE 3 GROSS DOMESTIC PRODUCT Per head Index UK=100

	1987	1981
Cornwall	78.4	76.0
South West	93.3	94.9
England	102.1	102.3

Source Regional Trends 25: Table 2.6

Income

Table 4 again compares the position of Cornwall to the South West and to England. In 1989 the average full time gross weekly male earnings in Cornwall were £219.2, lower than any other county in England or Wales. Full time gross weekly earnings for females, in Cornwall, averaged £155.4 the second lowest in England and Wales (Northumberland was lower at £153.5. Male and female earnings in the South West were the third highest of any region in England and Wales.

TABLE 4 INCOME

	Gross Weekly Earnings 1989 Full Time. £s	
	Males	Females
Cornwall	219.2	155.4
South West	253.3	169.9
England	272.9	184.4

Source Regional Trends 25: Table 2.7

Housing

Cornwall's housing problem is perhaps the most invisible of all. Figures on homelessness are not significantly different to other areas and Cornwall has a 'crude surplus' of housing stock (Table 5). The 'crude surplus' belies the presence of a large number of holiday and second homes. Accurate figures for these are notoriously difficult to obtain, however a rough idea of the problem can be gained from Table 5. If the total population is divided by the total housing stock then a figure of persons per dwelling is obtained. If this is then compared to the actual average size of households and assuming one household per dwelling (this

figure does not distinguish concealed households) it will be seen that the percentage difference for Cornwall is somewhat higher than other South West counties which would seem to indicate that a great deal of housing stock is under used. Cornwall has few empty public sector properties and the number of abandoned or permanently empty private sector properties differs little from other South West counties⁴. Though this table does not tell us how many second homes there are it does at least give us a crude estimate of the comparative position of Cornwall to the South West. The 1981 Cornwall Structure Plan⁵ estimated 6.4% of household spaces are holiday homes - the highest in the UK. Local politicians however cast doubt upon the accuracy of this figure given the difficulty in identifying holiday homes. It is considered to be a conservative estimate.

TABLE 5 HOUSING DENSITY 1988

	A Average hsehold Size	B Stock Dwellings 000's	C Population/St ock	D % Difference A - C
Cornwall	2.54	201	2.28	+0.26
Devon	2.49	413	2.47	+0.02
Somerset	2.54	187	2.44	+0.10
Dorset	2.42	276	2.37	+0.05
Avon	2.49	379	2.51	-0.02
Wilts	2.64	223	2.49	+0.15
Gloucs	2.57	212	2.48	+0.09

Source Regional Trends 25

- A Shows average household size
 B Total stock of dwellings
 C Total population divided by Total Stock gives density if all stock in use.
 D Difference between average household size and density if all stock in use.

Meanwhile house prices are slightly higher than the South West generally⁶. Here at least Cornwall does not resemble the North of England. Unfortunately high house prices are combined with low wages and a small public sector stock.

With the exception of large cities and industrial towns there is a level of homogeneity in British housing. One would not therefore expect huge dissimilarities between housing in Cornwall and elsewhere. Moreover it is important to remember that any consideration of housing poverty will only refer to small percentages of the population anywhere in Britain. Despite this there is evidence that the quality of housing stock, in Cornwall, is poor by standards elsewhere in the South West. In a 1% sample of the 1981 Census⁷ a comparison of residential neighbourhoods shows that 68% of all those in the South West who lived in wards characterised by 'poor quality owner occupied housing in industrial areas' were to be found in Cornwall. This type of housing is more usually a feature of the North of England, the Midlands and South Wales. It is not typical of the South West where only 0.4% of wards were characterised in this way as compared to Cornwall where 6% were so characterised. The claim is not that Cornwall has a monopoly of poor housing within the South West, but simply that there are indications that housing in Cornwall has distinctive features not typical of its region. This type of housing is a legacy of an industrial past in Cornwall which is very different to that of the South West.

Information on the lack of baths and inside WCs would seem to indicate a high percentage of sub standard housing stock. Table 6 again uses a 1% sample of census

data to compare the provision of amenities in Cornwall with those of the South West and England and Wales. Percentages of those lacking/sharing amenities, in Cornwall, on the face of it do not differ appreciably to those of the South West. This is a little misleading for it includes shared facilities, a feature common in inner city housing, but uncommon in Cornwall. A comparison of lack of bath and inside WC tells a very different story. The percentage of those lacking both is lower for the South West (including Cornwall) than for England and Wales generally, whilst for Cornwall it is very much higher. In both 1971 and 1981 the percentages of those lacking both amenities, in Cornwall, resembled those of the North of England. Other research has shown that properties lacking amenities are also likely to be in a poor state of repair.⁸

TABLE 6 ACCESS TO INSIDE WC AND BATH 1971-1981

	1971			1981		
	Cornwall	S.West*	Eng & Wales	Cornwall	S.West*	Eng & Wales
Sole use of amenities	85.8	91.0	85.6	95.4	97.3	96.6
Lacking/sharing WC &/or bath	14.2	9.0	14.4	4.6	2.7	3.4
No WC or bath	(7.9)	(3.3)	(5.8)	(2.2)	(0.8)	(0.9)
100% =	2627	28869	515537	3290	30374	524093

* Includes Cornwall.

Source OPCS Longitudinal Study.

The Invisible People

The foregoing examples of Cornwall's statistical invisibility may not be the whole story and it may well be that in many other ways Cornwall resembles its region. The data presented here does however demonstrate substantial differences in key statistics between Cornwall and its region: Sub regional data shows Cornwall to be both the poor relation of its region and of the whole of the south of Britain.

Cornwall's case is more usually judged upon data readily available from regional sources and on that data vital decisions are made. The ensuing regional economic strategy has been to encourage manufacturing and administration on the regional growth points and to promote the development of tourism and light industry in the rest of the region. The further east one goes in the region the more successful this policy has been. Commuting distances to either Bristol, Plymouth, Exeter or Swindon are feasible for virtually all of the South West except for much of Cornwall. It is a matter of geography. The South West peninsula becomes narrower to the west. Travel to work areas take on a more 'west/east' character the further south west one travels. In Gloucestershire, Avon, Somerset and Wiltshire, in particular, the geographical proximity of growth points to each other, combined with good communications have led to prosperity. Therefore although tourism and light industry feature in the economies of all of the South West it is only in Cornwall where they have become considered the mainstay of the economy.

Bristol, Exeter and Plymouth are taken as regional growth points and on this basis Cornwall is seen to be in the economic orbit of Plymouth. Plymouth is 90 road miles from Lands End. Any economic advantage accruing from investment in Plymouth, or other growth points brings no advantage to much of Cornwall simply because of distance. Indeed Deacon et al⁹ have argued that this policy has led to a defeatist attitude amongst planners, even in Cornwall, that Cornwall is remote. Cornwall's excellent sea communications links, and potential links, with Europe are ignored in favour of improving road links with Plymouth, Bristol and London, a policy that Deacon et al are highly critical of.

Regional policy has been a disaster for Cornwall. Most tourist jobs are part time, low waged and non unionised. A 1987 study by Exeter University Department of Geography found:

"The jobs created by tourism are often occupied by the extended families of the owners [of tourist enterprises] and create no additional jobs for the local community."¹⁰

Light industry has often been located in Cornwall for no other reason than attractive start up grants and low labour costs. When the grants run out most either relocate to obtain further grants elsewhere or close down. The collapse of this strategy was particularly spectacular in the early and mid 80s when thousands of jobs created just a few years previously were lost when firms such as Rank Toshiba, Case and Fisher Controls relocated elsewhere¹¹.

'Regionalisation' has centralised a number of functions traditionally carried out on a county basis. Since the 1960s Cornwall's health service has been administered as part of the South West Regional Health Authority, its police by the Devon and Cornwall force and its water by the South West Water Authority. Each of these were located in Exeter leading to a huge loss of administrative jobs in Cornwall. Regional administrative centres create a pool of skilled labour an attractive feature for private sector companies wishing to establish regional headquarters¹². Very few companies have located regional headquarters in Cornwall and indeed several, including the major clearing banks, have relocated local headquarters from Cornwall to the regional centres.

Economic planning has ignored a unique set of circumstances in Cornwall. These are partly to do with geography and communication and partly a result of a social and economic history very different to the rest of South West Britain. Until the 1960s the Cornish economy was dominated by china clay and tin mining, agriculture and fisheries. Tourism was very much less important¹³. Indeed the decline of the former industries rather than a major increase in employment in the latter has been the major contributory factor in tourism being elevated to a 'major industry' in Cornwall. The number of holidaymakers visiting Cornwall has actually decreased since the 1960s.

Unlike other areas of Britain there is very little secondary industry associated with primary extractive processes and agriculture in Cornwall. Though in recent years china clay production has declined it remains an important constituent of many industrial processes. None are carried out in Cornwall. Cornwall is a major producer of early vegetables, yet food processing in Cornwall is negligible. The lack of secondary industry is an indication of a regional economic policy which fails to recognise the potential of Cornwall.

There is a vicious circle. Cornwall is part of the South West Region. Statistics produced for the South West show it to be prosperous. Thus Cornwall as part of the region is seen as prosperous. Regional policy is aimed at overall prosperity for the region and in this it is successful. Cornwall is simply not noticed and policies sensitive to its particular needs are not formulated. Thus statistical invisibility has had indirect but profound consequences for the Cornish. High unemployment and low wages mitigate against participation in a housing market dominated by owner occupation and distorted by a demand for holiday cottages and second homes. There are also cultural consequences. A combination

of a Celtic culture, similar to that of Wales or Brittany and a social history shaped by mining, fishing and farming has made Cornwall a community very different to its neighbours. As in Ireland the tradition has long been for the Cornish to leave their homeland in search of better prospects elsewhere. Yet outward migration of Cornish people to seek better prospects elsewhere has been more than matched by inward migration of professionals, the elderly and those seeking to start their own business. Cornwall's population has increased from 320,000 in 1951 to 420,000 in 1981¹⁴. The departure of the Cornish goes statistically unnoticed, yet like the Basques they appear to be on the way to becoming a minority in their own homeland. The Exeter study cited above found that 226 of 411 entrepreneurs, in tourist towns, in 1986/87 had moved directly from outside Cornwall to start their businesses. It is likely that at least some of the other 185 would be businesses started by incomers some time after their arrival in Cornwall. Additionally Perry found that in 1987 incomers to Cornwall were over-represented in higher local government jobs and in companies with branches in Cornwall¹⁵.

The evidence indicates that unemployment, low wages and poor housing prospects effect local people - the Cornish themselves, disproportionately, whilst incomers working in tourism or managerial posts are relatively well off.

Regional data shapes regional policy. Perhaps more importantly it helps to construct attitudes and views when presented by the media. The existence of 'North - South' divide in the 1980s was claimed on the basis of economic and social data which showed the North to be different to the South and very much poorer. Though matters were probably never so clear cut as they were presented the debate that ensued at least had the merit of attracting attention to the problems of the North and perhaps helping to construct a moral climate that would demand something be done about them. It is different in Cornwall. I think it was a character of Oscar Wilde's who remarked: if there is one thing worse than being talked about, it is not being talked about!

If Cornwall's poverty were more visible, if a more authentic picture of Cornwall was available, then arguments for a different economic strategy to tourism and 'light industry' might be more successful. Meanwhile in the absence of an authentic picture the media and the tourist industry have constructed a public face of quaint West Country charm, with the Cornish themselves relegated to the role of exhibits in a cosy theme park.

Notes and References

1. Department of Employment (1992) Monthly employment statistics, *Employment Gazette*, January.
2. Ibid
3. Government Statistical Service. (1991) *Regional Trends 25*.
4. Department of the Environment. (1991) *Local Housing Statistics*, December.
5. Cornwall County Council (1980) *Structure Plan 1981*, Truro.
6. George, A. (1987) *Homes for locals in Cornwall*, Truro: Cornwall Rural Community Council.
7. The Longitudinal Study is a 1% sample of Census records from 1971 and 1981, kept by OPCS. In 1981 OPCS derived a ward based classification of residential neighbourhoods. This is similar too, though not identical with the ACORN classification developed by CACI Market Analysis. For a description of housing characteristics in England and Wales using the OPCS classification see:
Williams, M. and Dale, A. *Measuring Housing Deprivation using the OPCS Longitudinal Study* (1991), London: Social Statistics Research Unit, City University.

8. Dept. of the Environment. *English House Condition Survey, 1986* (1988), London, HMSO.
9. Deacon, B; George, A and Perry, R. (1988) *Cornwall at the Crossroads*, Redruth: Cornish Social & Economic Research Group.
10. Exeter University, Department of Geography (1987) *Tourism in Cornwall*. Exeter.
11. Deacon, George, Parry Op Cit.
12. Ibid.
13. Cornwall County Council (1970) *Cornwall Structure Plan 1971*, Truro.
14. Cornwall County Council (1985). *Structure Plan - Population Discussion Paper*, Truro.
15. Perry, R (1987) *The Small Firm Manufacturing Sector in Cornwall*: Camborne, Cornwall Polytechnic.

QUALITY CONTROL: THE CURE FOR MEDICAL MISTAKES?

Philip Bertrand

[This article was first presented as a poster at the 11th Meeting of the International Society for Clinical Biostatistics in Nimes, France, 18-21 September 1990.]

The management objectives put forward by Dr William Edwards Deming for achievement of high quality products by elimination of faults of manufacture have been enthusiastically followed by Japanese Industry. They are believed to be the principal factor in the world wide success of their industry.

Medical care and medical treatments are normally carried out by well trained and dedicated staff with a commitment to providing the best possible treatment for their patients. Mistakes and omissions of treatment can, however occur.

This article is concerned to describe and discuss the necessary practices that should be implemented in the provision of health care in order to help reduce the occurrence of medical mistakes. Improvements in information services provided by computing systems could aid in both correct diagnosis, suitable schedules of treatment, and revision and review of treatments. Mistakes by the medical profession can lead to considerable expense for the whole community in terms of suffering by the patient, cost of further treatment to alleviate or solve the induced medical condition and the suffering and hardship of relatives.

One of the principle themes of Deming's philosophy is that if mistakes are minimized then cost reduction follows. How can the medical profession minimize the occurrence of mistakes within it?