Improving Health Outcomes
VOLUME TWO - Full version
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Locality profiling in Avon

Geographical Area covered: Avon
Focus: Case studies focusing on subdistrict variation in health outcome

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Editorial comments on how case study is linked to improving health outcomes: (also published in Volume 1)

Abstract (also published in Volume 1)
This case study concerns the use of locality profiling techniques in focusing attention on a population with outstanding health needs and in defining the steps which will be taken to meet them. Two generic population outcome measures in particular - standardised mortality ratios and census derived morbidity indicators - provided compelling evidence on which to base the case for change. Improvements to the infrastructure and care are under way or planned and they are listed together with suggestions for monitoring progress. Key factors in the success and in the management of change are presented. Population outcome measures are essential tools in the task of distributing resources within health authorities.

The locality profiles included standardised hospitalisation rates by specialty. The variation in admission rates for psychiatry was greater than the variation in any other specialty. The case study explores this example to illustrate the application of the locality profiling approach. The analysis included an examination of the number of people admitted, regardless of the number of times each person was admitted, and the relationship between admissions and certain socio-economic variables, including unemployment. The relationship with unemployment was so strong that this variable alone explained nearly 95% of the variation. In the context of the wider literature on this subject, this was thought to be because unemployment acted as a sensitive marker of deprivation, rather than a direct effect of unemployment. The inner city had the highest admission rate by far, and the study identified that this was unlikely to be related to the nature of the service provided, but more a marker of increased need. As a result, a number of developments were funded to improve services available in the inner city and other deprived areas.

Introduction:

Why this clinical area was chosen:
Local variation in health outcomes in a large health authority makes perfect sense for public services and civic authorities to set their sights on large populations. However, people remain concerned that the benefits of efficient administration clash with their need for organisations to respond to the different circumstances of the communities that make up the standing health districts which covered Bristol and the surrounding population merged and changed during the reforms of the early 1990s, and led to the emergence of the concept of localities within the new Authority. Within the boundary (recently further enlarged and now commissioning health for just under one million people as Avon Health Authority), it is now possible to define 13 such localities (see map) according to a set of key criteria:

- broadly, they reflect traditional community boundaries;
- they are large enough to represent significant use of services in their own right and for health and service measures to be robust for monitoring purposes;
- boundaries fit those of electoral wards and local authorities, although this is not precise;
- boundaries also fit those of general practice populations;
- localities can be grouped to represent local NHS provider "catchment areas".


Since 1992, the Authority has maintained a database of information which provides a health profile of each locality - partly to inform the kind of work which is described here and also to facilitate discussion with local people and professionals. Generic outcome measures include mortality and census data on long-standing illness.

That there are variations in health indicators between localities has long been recognised. In particular, one of the localities in south Bristol stands out and forms the subject of this case study. To illustrate this, Table 1 compares standardised mortality ratios (SMR) in the under 65 year age range for all causes of death and for ischaemic heart disease and lung cancer between three localities in the south of Bristol and with the Authority as a whole. At the relevant time, the Authority was slightly smaller and is this population (Bristol and District) which provides the standard. (The South Central and South West localities have recently been amalgamated to form Bristol South).

Table 1: Deaths under 65 years of age in 3 localities in South Bristol and in Bristol and District Health Authority 1986-90.

<table>
<thead>
<tr>
<th></th>
<th>All Causes SMR (95% CI)</th>
<th>Ischaemic Heart Disease SMR (95% CI)</th>
<th>Lung Cancer SMR (95% CI)</th>
</tr>
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<tbody>
<tr>
<td>Bristol South Central</td>
<td>113.8</td>
<td>114.6</td>
<td>140.1</td>
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In this age group, the South West Locality had markedly higher death rates and the 95% confidence interval around each SMR is in each case above 100, indicating that this is unlikely to be a chance finding.

Figure 1 illustrates the difference between electoral wards in Bristol with respect to one of the census measures of long-standing illness - the five wards making up the locality are shaded and rank high in the list.

Figure 1: Ratio of people with long-standing illness to the number of people aged 75 years and over in Bristol City Electoral Wards (preliminary findings from the 1991 census)

Interpreting the profile
Much of the recent debate on variations in health between different populations has centred on the causal factors involved and on the social policy and, indeed, political questions that are raised. Important as this work is, divided opinion has tended to obscure the fact that some communities have unusual health experiences and may need more or different services whatever is the reason for people's poor health. The action to be taken, how to bring it about and in what way it would affect health outcomes over the next ten years has not been clear.
The exercise which is described here can be said to address three questions in three different timescales.

Is there a distinctive pattern to the health and health service experience of people in south Bristol which can point to useful interventions? (Early 1990s)

Can the Health Authority bring about the necessary changes? (Mid 1990s)

Can population health outcomes be monitored and will they improve? (Late 1990s)

Further information that was required:

Additional information was added to the South Bristol Locality profile in the early 1990s. It covers two areas.

Perceptions of health and health care needs
Local people and the GPs and health care workers from the locality were asked for their views in four distinct ways.

- Residents and local community groups in one part of the locality took part in a semi-structured interview survey in 1989.
- GPs participated in two group exercises on priorities for change in order to improve the health of the population in 1990 and 1992 (responses were little different).
- Public health physicians, GPs and local health workers and managers held an unstructured discussion on the needs of the population in 1992.
- Local community and action groups made representations to the Health Authority in 1992.

These exercises were held over a three year period and used very different methods, but it is instructive to describe the summary responses from public health physicians, GPs and residents together (Box 1).

Box 1: Views about the need for health and health services in Bristol South West: Priorities for action

Public Health
- Health promotion and other proven measures to prevent ischaemic heart disease, stroke and lung cancer
- Action with families to begin the promotion of health and the avoidance of harm amongst children
- Measures leading to the most appropriate management of people with long-term illness
- Measures to reduce any over-reliance on emergency hospital care

General Practitioners (first 5 priorities for change from local GPs)
- Better access to orthopaedic clinics
- Better access to emergency hospital admissions
- Development of a better service for people with acute and chronic back pain
- Better access to physiotherapy in local surgeries and clinics
- Better local care for those of their patients with a psychiatric problem

Local People (from the Hartcliffe survey question: "How could you improve your health?")
- Older people: health and social services, more places to meet, better transport, housing conditions, money problems
- Older families: money problems, housing, healthier living (diet, smoking, etc.)
- Young families: recreation facilities, play groups and nurseries, parks and play areas, places to meet, type of housing

In all three cases, participants were asked to consider improving the health of the population. Their different perspectives are evident—health promoting measures from public health, measures to cope with demand for health services from GPs and a broader view of health from the public.

Use of health services
The pattern of hospital usage by south Bristol residents in the early 1990s is set out in Table 2. The admission ratio is standardised for age and sex (SAR) with the Health Authority average set at 100. There is a consistently high SAR for emergency hospital admissions and psychiatric admissions and, indeed, a more detailed examination of the distribution of psychiatric admissions in relation to population characteristics is presented.

<table>
<thead>
<tr>
<th>Table 2: Standardised admissions ratios (SAR) in Bristol South West (1990/91 - 1990/92 for psychiatric admissions)</th>
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<tbody>
<tr>
<td>Bristol South West</td>
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<tr>
<td>SAR</td>
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<td>--------------------</td>
</tr>
<tr>
<td>Emergency Admissions</td>
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<tr>
<td>- Under 15 years</td>
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### Data validity studies:

**Validity of profile data:**

Data on mortality and health service usage are subject to well known error but broadly are reliable and valid. On the other hand, census data on long-standing illness in relation to the true burden of morbidity in a population is not precisely known. There is evidence that communities with high levels also rank highly with respect to mortality and to dependency among the adult population.

More uncertain is the validity of opinions from public health physicians and from residents and health workers. They are valid in the sense that care was taken to draw them out and they stand up well as expressions of opinion. They are important since they come from people who matter in the debate. However, since these exercises were carried out, it has become clear that a better way to elicit opinion and to involve the community is to present real choices about change and development and to discuss the Authority's response in turn. This approach is now beginning to be established.

### Summary findings from initial work:

The South Bristol Locality is unusual in health terms compared with others.

- **Premature mortality** (death before retirement age) is substantially higher than in the Health Authority as a whole, and particularly so for heart disease and lung cancer. Both conditions are potentially avoidable and, with heart disease, good management (for example, diabetes and raised blood pressure) and of early disease is effective in reducing morbidity and mortality.

- **The burden of chronic illness** among adults (from census date) and children (as shown from health visitor caseload data) is higher than average. People in south Bristol consult their GP and are also admitted to hospital in an emergency much more frequently than elsewhere. This is particularly so for children and for people who have been injured.

This pattern of ill health burden and excess use of some health services points to the need to enhance primary rather than secondary care and to enlarge its scale and its scope. The standard of primary care is already high in general within South Bristol but there is higher demand for some initiatives and for particular groups. A number of initiatives are under way or completed.

- **Health visitor staffing** is already tightly allocated in favour of localities with high levels of need (see figure 2) and this is evident in south Bristol. There is, however, evidence of a mismatch for community nurses. A recent analysis has shown that a fair population indicator of workload for community nurses is the proportion of elderly and of people with long-standing illness in the population - there is, however, no correlation with staffing within general practices.

**Figure 2:** Health visitors per 1,000 under 5s compared to Townsend score for general practices in the district
Two nurse practitioner schemes are being piloted in the Authority's area, one of which is in the locality. Assuming a favourable evaluation, there are plans to expand this and place them in localities with high GP workload - south Bristol in particular.

There are now firm plans to replace a dilapidated health centre in the centre of the locality with a larger building in collaboration with the City Council. Facilities will be greatly extended in the expectation that it will act as a community centre and a focus for primary care development.

GPs and the Authority have been overhauling the primary care chronic disease management programmes especially for blood pressure control and diabetes. Special attention has been paid to south Bristol with the funding of additional staff and improved shared care arrangements.

The Authority's vision for locality based commissioning is now well established and the newly constituted South Bristol Locality is among the most advanced. GPs are keen to progress and are as active in project development and monitoring as the pace of development will allow. The CHC has also set up a system of community consultation - Local Voices - which has concentrated on south Bristol and has led to greater influence over health matters by the residents.

**Changes which were made:**

**How changes will be monitored:**

The actions already listed here can be monitored in structural and process terms, albeit with some difficulty given the newness of primary care information systems. Key indicators will include:

- staffing levels in relation to the appropriate populations denominators;
- chronic disease management indicators;
- improved general practitioner workload indicators;
- change in the use of hospital services, although it is difficult at this stage to forecast the extent of this, especially for the general trend towards increasing usage across all parts of the population.

More difficult still is monitoring the impact of these changes on population outcome measures. Improvements in morbidity in states will be evident, for example with eye disease and diabetes. Many indicators, particularly those of mortality and longer-term influenced by cohort and other trends and, indeed, further health and non-health service changes to come. Nevertheless, improvement is anticipated both in absolute terms and in relation to other localities over the next ten year period.

**Resource Implication:**
Changes in primary care require lower levels of funding than those of the acute sector, although funds may be harder to find. The strategy is to invest steadily in primary care over the next few years and the issue for this particular locality is to ensure that the strategy is robust and that the funds are available.

The management and professional workload involved in addressing the needs of localities such as south Bristol has already been stressed.

Practical lessons learnt:

South Bristol is not the only locality with particular health needs, although it is perhaps the most striking. Much has been learned about profiling, interpreting the findings and facilitating change.

Information about health and health services can act as a focus for debate but rarely contributes wholly original ideas. It is important to stress the general pattern that counts and of course it is debate itself that leads to change.

Organisational issues often predominate when change is considered. Particular features in this case include:

- the difficulty of maintaining a high profile for primary care development when management time and resources are preoccupied with demand in the secondary sector;
- many important developments in health care have been opportunistic, when a particular champion can be encouraged to make progress; for a variety of reasons, this is difficult in hard pressed localities;
- resources to put into developments - one of the main levers for change - are scarce and usually have to be found at the expense of others; the general practice system itself is not suited to this approach, however compelling the arguments.

Despite these difficulties, the needs of people in south Bristol have been well appreciated by Authority and primary care staff.

Conclusion:

References:

Organisational Context:

It is important to recognise that efforts to improve health and services for people in this locality have been under way for many years and will continue for many more to come. In this phase of development, four key features of the Health Authority's approach have helped to make progress.

- The emergence of locality commissioning which has led to the recognition of the locality as a significant entity and given it a forum for meeting and working with GPs in particular but also has done the same for Trust-based staff and community groups.
- An acceptance that resources may have to be channelled towards specific populations perhaps at the expense of others. An important factor here is the coincidence of the views of people who live and work there and the evidence of population indicators showing there to be an unusual need.
- The existence of staff who are skilled in change management and who can persist in this for several years. The merger of the FHSA and DHA has undoubtedly helped in bringing people together for a common purpose.
- A strategic approach which intends to commit funds to primary care development.

Throughout this work, the ready availability of high level information on a locality basis has been of fundamental importance. Profiles which emphasise population outcome measures also serve to downplay the vested interests with priority setting and to promote health gain. Recently, GPs in South Bristol have greatly improved their approach to diabetes services for the population, workers and residents of the locality. Population health outcome measures have played a key part, well understands the meaning of generic measures such as those discussed here and, like many others, is keen to monitor and procedures as quickly as they can be devised.