Improving Health Outcomes
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Alastair McColl, Paul Roderick, John Gabbay
Diabetes mellitus in Barking and Havering

Geographical Area: Barking and Havering
Focus: Case studies focusing on the use of national indicators

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Editorial comments on how case study is linked to improving health outcomes: (also published in Volume 1)
Nationally produced population health outcome indicators for diabetes together with concerns from local clinicians stimulated a strategic review. Kishore summarises the reasons why they undertook the review and further information that they required. He critically appraises national outcome indicators for diabetes.

Abstract (also published in Volume 1)
A strategic review of the services for diabetes was undertaken in Barking and Havering Health Authority in 1995/96. The starting point for the review was that the district had poor outcome indicators for diabetes in the year ending 31st March 1990, as shown in the HSI packages for 1992/93. The position of the district was above the national median figure for age standardised hospital episode rate for ketoacidosis and coma (for males and females) and for age standardised rates for lower limb amputations in male diabetic patients. In addition, consultants in the local acute trust and local general practitioners expressed concern about the service.

A multi-disciplinary diabetes focus group was set up consisting of professionals involved in the care of diabetic patients and a patient representative. The group was chaired by the Consultant in Public Health Medicine for acute services.

The focus group undertook a review of the population outcome indicators and decided that the apparent ‘improvement’ shown in the indicators in 1993/94 was likely to be spurious and a complete service review was indicated. A health needs assessment was undertaken. The number of diabetic patients in the district estimated by extrapolation was 4000. It also concluded that the number was likely to increase over the next decade. The figures obtained by extrapolation were compared with local figures; the district did not have a diabetic register. The only source of data was that obtained by the Health Promotion/Chronic Disease Management programme and even this was incomplete because only 85% of the general practices in Barking and Havering participated in this programme. The total number of diabetic patients identified by the programme was 2854; comparison with figures from extrapolation suggested under-diagnosis which was higher for NIDDM.

The health needs assessment was followed by a detailed review of the effectiveness literature. The review covered management of diabetes, its acute and chronic complications, as well as the effectiveness of different treatments and delivery of care by health organisations. A detailed description of the current services was obtained, along with identification of problems in the service. A special meeting of the local branch of the BDA was held where patients were asked to give their views of the service. Based on all these, an ideal model of service was developed. Care was taken to ensure that it would address the health needs identified, that it would promote interventions of known effectiveness and lead to better outcomes.

The main recommendations were:

- the need to develop a business case for a diabetic day centre along with alternatives;
- the appointment of a diabetes nurse specialist for children with diabetes;
- setting up of a multi-disciplinary diabetes foot clinic;
• formalising a district-wide shared care programme with development of guidelines;
• setting up a diabetic register.

The recommendations will be implemented within existing resources and need to await the finalisation of the Health Authority's acute services strategy and the Havering Hospitals Trust's business case. An implementation group will be set up to oversee the implementation of the recommendations.

Introduction:

Why this clinical area was chosen:

The specific reasons for focusing on diabetes mellitus, in addition to its well known impact on Health of the Nation targets and general public health importance, were:

A) Population outcome indicators

The Directorate of Public Health in Barking and Havering Health Authority each year produces guidelines for commissioning. One of the documents produced in November 1994 (Watts 1994) was based on the Health service Indicators for 1992/93. The population health outcome indicators were analysed and health outcome objectives were defined. Objective 8 was 'To reduce admissions to hospital for ketoacidosis and coma, lower limb amputations and mortality associated with diabetes'. The outcome indicators showed that the age standardised hospital episode rate for ketoacidosis and coma for males, females and all persons (AB21, AB22, AB23) and age standardised operation rate for lower limb amputation for males (AB24) were above national median values (detailed later).

B) Concerns raised by consultants in the local trust and by local general practitioners

The local trusts which provide care for residents in Barking and Havering Health Authority are Havering Hospitals Trust (Acute) and Barking, Havering and Brentwood Community Trust (Community and Priority Services). In addition, a proportion of patients at the Barking and Dagenham end of the District utilise the services provided by Redbridge Healthcare Trust, which is located within the boundary of Redbridge and Waltham Forest Health Authority.

Havering Hospitals Trust, the main acute provider for the district, incorporates two hospitals - Oldchurch and Harold Wood. Each hospital has a consultant physician with interest in diabetes.

The consultant physician based at Oldchurch with interest in diabetes raised several concerns about the quality of diabetic care provided for the residents. His main concerns were:

• Over-crowding in the diabetic outpatient clinic, with the result that sufficient time was not available for examination and patient education;
• Lack of a centralised diabetic register;
• Lack of formal shared care arrangements;
• Problem in co-ordinating the diabetic team: the two consultant physicians with interest in diabetes operated different clinical styles. Sufficient space for chiropody, dietetic advice, etc was not available in the outpatient clinic.

A proposal for a diabetic day centre was put forward as a solution to the problems identified above.

The local general practitioners also raised concerns about the differing clinical styles of the two consultants, the long waiting times in the outpatient clinics and problems in accessing services such as dietetics and chiropody. In addition, there had been long standing concerns regarding the local ophthalmology service which had a very long waiting time for outpatient appointments.

In view of this, it was felt that the Directorate of Public Health should undertake a complete review of the field of diabetes. The task was entrusted to a newly appointed consultant in public health.

Further information that was required:

A) Setting up a focus group
Faced with 'unsatisfactory' outcomes for diabetes, as revealed by the population health outcome indicators, and concerns raised by consultants and general practitioners, it was decided to undertake a strategic review of the field of diabetes. A focus group on diabetes was set up.

**B) Interpretation of the Population outcome indicators**

The population outcome indicators for diabetes mellitus available in 1991/92 and 1992/93 HSI package were analysed along with some other indicators of service access. While the work was in progress, the HSI package for 1993/94 became available. The indicators are summarised in table 3.

<table>
<thead>
<tr>
<th>Table 3: Selected health service indicators for Barking and Havering (and Brentwood) Health Authority</th>
<th>1991/92</th>
<th>1992/93</th>
<th>1993/94</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Diabetic Outcomes</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Age standardised hospital episode rate for ketoacidosis and coma (males) - rate per 100,000</td>
<td>17.13 - above national median. Within 80% bracket</td>
<td>Same as 1991/92</td>
<td>10.90 - below national median. Within 80% bracket</td>
</tr>
<tr>
<td>2. Age standardised hospital episode rate for ketoacidosis and coma (females) - rate per 100,000</td>
<td>14.8 - above national median. Within 80% bracket</td>
<td>Same as 1991/92</td>
<td>8.40 - below national median. Left of 80% bracket</td>
</tr>
<tr>
<td>3. Age standardised hospital episode rate for ketoacidosis and coma (all persons) - rate per 100,000</td>
<td>15.99 - above national median. Within 80% bracket</td>
<td>Same as 1991/92</td>
<td>9.75 - below national median. Left of 80% bracket</td>
</tr>
<tr>
<td>4. Lower limb amputation rate per 100,000 males</td>
<td>6.92 - above national median. Within 80% bracket</td>
<td>Same as 1991/92</td>
<td>5.48 - same as national median</td>
</tr>
<tr>
<td>5. Lower limb amputation rate per 100,000</td>
<td>1.65 - below national median. Left of 80% bracket</td>
<td>Same as 1991/92</td>
<td>3.7 - above national median. Close to right bracket for 80%</td>
</tr>
<tr>
<td>6. Lower limb amputation rate per 100,000. (all persons)</td>
<td>4.27 - above national median. Within 80% bracket</td>
<td>Same as 1991/92</td>
<td>4.57 - above national median. Within 80% bracket</td>
</tr>
<tr>
<td>7. SMR* for diabetes mellitus 1-44 years (males)</td>
<td>-</td>
<td>-</td>
<td>0.51 - same as national median</td>
</tr>
<tr>
<td>8. SMR* for diabetes mellitus 1-44 years (females)</td>
<td>-</td>
<td>-</td>
<td>0 (lowest)</td>
</tr>
<tr>
<td>9. SMR* for diabetes mellitus 1-44 years (all persons)</td>
<td>-</td>
<td>-</td>
<td>0.26 - below median. Within 80%</td>
</tr>
<tr>
<td><strong>B. Other Indicators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standardised hospitalisation rate for ophthalmology per 1,000</td>
<td>4.22 - below national median. Within 80% bracket</td>
<td>3.96 - below national median. Within 80%</td>
<td>4.33 - below national median. Left of 80% bracket</td>
</tr>
</tbody>
</table>

**Footnotes**

i. The outcome indicators in 1991/92 and (1992/93) package are for the year ending 31.3.90

ii. The outcome indicators for 1993/94 are for the year ending 31.3.94

iii. The outcome indicators in 1991/92 and 1992/93 package were given per million population and those for 1993/94 were given for 100,000. The former have been converted to rate per 100,000 for comparison.
iv. There was a change in the boundary of the health authority. Up to 1993/94 it covered the areas of Barking, Havering and Brentwood and from 1993/94 onwards Barking and Havering; Brentwood became a part of the South Essex Health Authority.

* Indicators BB 27 - BB 29 are titled SMRs. THIS IS INCORRECT. The figures given are directly age-standardised mortality rates from DM per 100,000 persons aged 1-44 years. However, in the Public Health Common Data Set, the SMRs given are correct.

** In the HSI package when ‘box plot’ presentation is selected, the values for all DHAs are presented within a box plot and the values in the middle 80% (ie from 10th to 90th percentile) are enclosed in brackets; 80% bracket refers to these brackets.

The following comments were made regarding the indicators:

- Changes in denominator rate for the indicator from ‘rate per million’ in 1991/92 and 1992/93 to ‘rate per 100,000’ in 1993/94;
- The grave error in labelling directly standardised rate SMR; this caused confusion as the significance of an SMR of 0.51 was not obvious to clinicians;
- The change in the boundary of the health authority - hence the figures over the years are not comparable;
- The problems resulting from calculating outcome indicators based on one year’s data. There are likely to be random fluctuations, especially for events with small numbers, such as lower limb amputations. This may partly explain some of the ‘improvement’ in the outcome indicators between 1990 and 1994;
- Too much reliance should not be placed on mortality as an outcome indicator as it is a rare event, involves small numbers and, most important of all, a low mortality rate does not suggest good care for diabetes;
- Standardised admission rate for ketoacidosis and coma: in the year ending 31 March 1990, the admission rates were above the national median; the rates have dropped to below national median by 1993/94. It was felt that this is difficult to interpret and that it cannot be assumed that the care of diabetes had improved over this period. The accuracy of coding was an important issue; one of the consultants in the group had undertaken an audit of patients admitted with a diagnosis of ketoacidosis. He found that of the 5 patients who were coded as having ketoacidosis, 3 did not and 2 patients who had ketoacidosis were not coded as such;
- Similar concerns are applicable to lower limb amputation rates. The actual numbers involved each year are even smaller and hence random fluctuations are an even greater problem. There is also the problem that the diagnosis of diabetes may be under recorded for amputations. It was difficult to explain the disparity between high amputation rates for males and low rates for females in the year ending 31 March 1990;
- The other indicator which is useful, in the absence of outcome measures for diabetic eye disease, is the standardised hospital admission for ophthalmology. As detailed previously, the ophthalmology service was a concern locally. The indicator shows that the standardised hospitalisation rate per 1,000 population was low for the district for all the years from 1991/92 to 1993/94. Diabetic retinopathy is in itself not a major cause of inpatient treatment; however, if admission rates are taken as a measure of access and utilisation of ophthalmology services in general, it can be seen that the district scores low in this. It is most likely that the diminished access is likely to be generalised across all types of problems including diabetic retinopathy.

In conclusion, it was felt that the outcome indicators suggest the need for better control of diabetes so as to prevent both the acute and chronic complications.

C) Health needs assessment

A health needs assessment was undertaken including:

- Estimation of the incidence/prevalence;
- A review of effectiveness of interventions;
- A description of services currently provided.

The expected number of patients with diabetes was estimated by extrapolation of incidence and prevalence figures obtained from previous studies. These figures were then compared to the number of diabetic patients known to local services.

Incidence

The incidence of DM in those under 20 years of age was obtained by extrapolation of the rates provided by Williams (Williams 1992). This is shown in Table 4.

Table 4: Incidence of DM in Barking and Havering in those under 20 years of age
Thus it was estimated that there would be 10 - 14 new cases of DM in those under 20 years each year.

Prevalence

The age specific prevalence rates of clinically diagnosed diabetes detailed by Williams (1994) were applied to the local population to obtain the expected number. The estimates were undertaken separately for the Caucasian population and the black and ethnic minority population. Table 5 shows the estimated number of diabetic patients by ethnicity.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>1,952</td>
<td>1,799</td>
<td>3,751</td>
</tr>
<tr>
<td>Asian</td>
<td>125</td>
<td>82</td>
<td>207</td>
</tr>
<tr>
<td>Afro-Caribbean</td>
<td>116</td>
<td>52</td>
<td>168</td>
</tr>
<tr>
<td>Total</td>
<td>2,193</td>
<td>1,933</td>
<td>4,126</td>
</tr>
</tbody>
</table>

Comparisons with figures available locally

An attempt was made to relate the estimated number of diabetic patients with the numbers known to the services locally. Unfortunately there is no diabetic register available locally and hence other sources of information were explored.

Hospital outpatient data. Diagnostic coding of hospital outpatients had been initiated only in 1995 and it was known that there were teething problems. Data from this source was not, therefore, used.

Health promotion/chronic disease management programme. Another source of the number of diabetic patients identified at primary care level is the data obtained by health promotion/chronic disease management programme. It is known that this data is incomplete because in Barking and Havering only 85% of the practices participate in the programme. The definitions used also vary between GPs.

With these reservations in mind, the data was examined. The health promotion/chronic disease management programme had identified a total of 2,854 patients (1,470 male and 1,384 female), of which 969 had IDDM and 2,845 had NIDDM. It is difficult to draw definite conclusions but comparison with figures obtained by extrapolation suggested that there was under-diagnosis; the under-diagnosis seemed to be greater for NIDDM.

Projection of prevalence

It was concluded that the total number of patients with DM is likely to increase in Barking and Havering because of:-

- demographic changes: increasing number of elderly and increase in the district population over the next 5 - 10 years with commissioning of the Barking Reach Project (which is a housing project);
- possible changes in racial/ethnic composition: the district had an ethnic minority population equal to England and Wales average but lowest in London. It is difficult to forecast changes but it was felt that this could change in the future;
- other factors which are not unique to Barking and Havering Health Authority, such as increasing incidence of insulin dependent diabetes (Bingley 1989), increase in diagnosis and changes in mortality rates of patients with diabetes.

Review of effectiveness of intervention in diabetes

A detailed literature review was undertaken to identify interventions of known effectiveness.
A description of the services currently provided

The Barking and Havering Medical Audit Advisory Group (MAAG) commissioned a survey to ascertain the attitudes and actual practices of GPs in managing diabetes in primary and secondary care settings. GPs were asked to complete a questionnaire which covered issues such as the GP’s role in managing DM, the role of other staff, training and education requirements, etc. A summary of the result is given below.

- Number of persons with diabetes: the number of diabetics in the practice population varied from 3-87 per 1000 practice population with a mean of 17. The proportion who were on insulin varied from 1-56%
- The attitude of GPs regarding management of diabetes varied: 20% of GPs placed emphasis on shared care, among which nearly half felt that they wished to share the care of both IDDMs and NIDDMs. The types of patients who should receive regular hospital follow-up were identified as (a) those with brittle diabetes, (b) those with complications, (c) children with diabetes and (d) patients with diabetes who are pregnant. About 14% of GPs felt that there are no patients who should be exclusively managed by the hospital.
- Table 6 shows the other professionals involved in the care of diabetic patients in primary care.

<table>
<thead>
<tr>
<th>Percent of practices</th>
<th>Practice Nurse</th>
<th>Dietitians</th>
<th>Chiropodist</th>
<th>Optician</th>
<th>Other Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>48%</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4%</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2%</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2%</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>2%</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<tr>
<td>2%</td>
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<td>2%</td>
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<tr>
<td>2%</td>
<td>✓</td>
<td>✓</td>
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</tr>
</tbody>
</table>

- Regarding types of clinics in general practice, 50% of practices did not have a separate diabetic clinic and patients were seen in routine surgery. Twenty-four percent of practices saw their patients in a weekly diabetic clinic. The rest of the practices (26%) saw the patients in both settings, depending on individual circumstances.
- Use of guidelines or protocols: 46% of the local practices used a protocol for the management of diabetes.
- The problems identified by GPs with shared care were: communication difficulties, the need for GPs to make separate referrals to the eye clinic, poor hospital clinic administration and lack of continuity.
- The constraints of providing care for diabetic patients in the practice identified were: lack of ancillary staff, especially dietitians and chiropodists, problems in surgery organisation and lack of sufficient training and education.
- GPs felt that some diabetic patients were not receiving an accepted standard of eye care. Access to chiropody was also raised as an issue.

A detailed description of the diabetic services in secondary care was also obtained. There are two hospital clinics, one on each site. Each is run by a consultant. The clinics follow different styles of clinical management. In addition there were clinics for children with diabetes and diabetic patients who are pregnant. The community diabetic services consisted of the diabetes nurse specialist service (which had 2 WTE diabetes nurse specialists), the chiropody service and the dietetic and nutrition service.

Data validity studies:

It was mentioned that the number of diabetic patients in the health authority was obtained by extrapolation; it was impossible to obtain any accurate local data to validate these. The only source of local data is that obtained by the GP Health Promotion/Chronic Disease Management Programme and the limitations of this have been previously highlighted. The figures on the prevalence of complications of DM were even more difficult to validate. There is a strong case for setting up a population based diabetic register to overcome these problems.

Summary findings from initial work:

Changes which were made:
The report on the review has only recently been submitted and hence most of the recommendations are yet to be implemented. Some changes have, however, been made.

The setting up of the focus group itself provided considerable benefit—all the professionals involved in the care of diabetic patients were meeting together for the first time; it provided an opportunity for the professionals to meet each other and raise issues of concern. This led to increasing co-operation between the professionals and by the time the focus group had completed its work, a fully formed diabetic team emerged. Changes in working practices with more frequent discussion of patients by professionals resulted.

The most urgent priority identified was the creation of the post of diabetes nurse specialist for children. This was put forward as a bid to the Health Authority. However, the Health Authority was in the process of finalising its acute services strategy and had decided not to make any further investment in the acute sector until the strategy was finalised and the business case for Havering Hospitals Trust had been completed. In view of the delay caused by these factors, interim arrangements were set up: one of the nurses in the children's home care team had just completed the post basic course on diabetes and she was seconded on a part-time basis to undertake this role.

The other change which was made was the improvement in the organisation of foot care. Havering Hospitals Trust had appointed a new vascular surgeon who had a special interest in diabetic foot care and a joint clinic between the vascular surgeon, the chiropodist and orthotist has been set up.

The implementation of other recommendations such as preparing a business case for a diabetic day centre, the setting up of a diabetic register, etc. have to await the completion of the Health Authority's acute strategy and information strategy (especially developing GP links) respectively.

How changes will be monitored:

**Structure and process measures**
- Production of a detailed service specification by the health authority jointly with GP fundholders;
- Audit of the service against the specification and identification of target dates by which the service will conform to the specification;
- Production of a joint protocol for diabetes management by the two consultant physicians with an interest in diabetes;
- The development of a clear written policy regarding paediatric/adult diabetic services;
- Creation of the post of paediatric diabetes nurse specialist;
- Setting up diabetes nurse specialist run outreach clinics;
- Setting up diabetes foot clinic, ‘at risk’ clinic, etc;
- Progress achieved in developing the business case for the diabetic day centre and diabetic register;
- Audit of specific aspects of diabetes such as admission from ketoacidosis, lower limb amputation, and diabetic retinopathy;
- Audit of the completeness of annual review including the complication screen.

**Outcome measures**
- Changes in population outcome measures, especially admissions from ketoacidosis. This is likely to reflect service changes more quickly compared to mortality rates and lower limb amputation rates.
- Patient satisfaction survey.
- Trends in A&E attendance for hypoglycaemia: It is highlighted that this would need careful interpretation as there is likely to be an increase in the risk of hypoglycaemia with more rigorous blood sugar control.

**Resource Implication:**

The resource implications of achieving the recommendations need to be seen in the overall organisational context (see end of case study). Barking and Havering Health Authority is in the process of finalising its acute service strategy. One of the aims of the strategy is to disinvest in hospital based services and move the resources into primary care. In view of this, no additional funding will be available for the development of acute services.

The local acute trust, Havering Hospitals Trust, is in the process of finalising its business case. Various options with site rationalisation are being evaluated.
The issue of a diabetic day centre, which will need capital investment, needs to await the result of the above two strategies. In addition, there were two other reasons why the case for a diabetic day centre was not clear-cut:

- There is no clear evidence of the effectiveness of diabetic day centres. Most of the work on diabetic day centres has been undertaken by enthusiasts who have compared the care provided in conventional outpatient clinics with that provided in a diabetic day centre. It is felt that this is an unfair comparison and that some of the advantages of the day centre, such as better co-ordination and integration of care, could be achieved without setting up a new physical centre;
- It is also not clear how a centralised diabetic day centre would fit into a primary care led NHS, with care being moved closer to where patients live.

In view of this, it was recommended that the case for a diabetic day centre needs to be looked at separately after finalisation of the acute strategy and the trusts’ business cases.

It was decided that other developments, such as paediatric diabetes nurse specialists, should be funded from the existing budget. The plan is to develop a district-wide shared care plan, with a shift of care into primary care. Additional resources would be made available for primary care from the cash released by changes in the configuration of acute services.

As the issues involved are complex, a Diabetes Strategy Implementation Group will be set up, composed of representatives from the health authority, the trusts and GPs. The group will explore the financial and non-financial issues and submit a detailed plan for implementation.

**Practical lessons learnt:**

### Problems in the service

The information collected (health needs assessment, effectiveness literature and description of the service) was presented to the professionals involved in the care of diabetic patients so that they could identify problems in the service and suggest a way forward. A special meeting of the local branch of British Diabetic Association (BDA) was convened at the request of the author, which was attended by diabetic patients and their carers. The author and two managers from the health authority also attended; none of the professionals directly involved in the care of patients with diabetes were involved. The purpose of the meeting was to enable patients and carers to freely express their concerns.

#### Problems identified by professionals

The following is a summary of the problems identified by the professionals involved in the care of diabetic patients:

- lack of physical space in the diabetic clinic;
- lack of suitable venues in the community to set up diabetes nurse specialist run clinics;
- shortage of manpower: the lack of a paediatric diabetes nurse specialist was identified as the major problem. Other problems were non-availability of a paediatric dietitian and a dietitian specialising in DM;
- the need for a multi-disciplinary orthotic clinic was highlighted;
- lack of facilities to set up a special clinic for the follow-up of 'high risk' patients;
- problems in the co-ordination of diabetic care in 'non-medical' wards;
- problems in the primary/secondary inter phase, such as no agreed shared care across the district, problems in referring patients for foot care, lack of rapid advice to GPs, etc;
- lack of a centralised diabetic register;
- problems with data availability such as inaccuracies in diagnostic coding;
- lack of venues and facilities for patient/carer education;
- problems in training health care professionals, especially those working in primary care.

#### Problems identified by patients/carers

- Conflicting advice given by different doctors working in clinics;
- Lack of information;
- Problems in communication between GPs/hospital clinics;
- Lack of knowledge regarding diabetes among nurses and doctors working in surgical wards and A&E department;
No facility to obtain good quality advice rapidly; patients/carers had to ask other patients as there was no way of contacting professionals rapidly.

**Ideal model of service**

Based on the work undertaken so far, plus a review of the literature on models of providing care for diabetes, an ideal model of service was developed. The objectives provided in the St Vincent declaration were used as the objectives for the service and the standards of the service were derived from the Clinical Standards Advisory Group (CASG) report on diabetes.

The ideal model is shown diagramatically in figure 2.

**Figure 2: Ideal model of service for the treatment of diabetes**

The recommendations made and priorities for future financial years can be obtained from the author.

**Conclusion:**

Several valuable lessons were learnt by the author and others who worked on this project.

The clinicians were initially very sceptical about the use of health service indicators; however, when it was interpreted properly and used as a method of identifying areas of concern, its use was welcomed. It is important to use health service indicators as a means to an end, not as an end in itself. Clinicians generally have reservations about the quality of routinely available data. However, if the limitations are highlighted and the data is interpreted properly, it is still possible to use it meaningfully.

The need for improvement in the construction of health service indicators. The population health outcome indicators are useful; however, there is room for improvement in the construction of the indicators. The indicators are calculated for one financial year; for calculation of rates for rare events such as lower limb amputations, this is not appropriate as there is likely to be a considerable degree of random fluctuation. It would be more appropriate to provide 3 or 5 year mean values.

Other issues concerning the construction of population outcome indicators were:

- The need to use the same population: Health Authority boundaries are changing repeatedly. This means
that comparisons are impossible. It is suggested that when boundary changes are made, either the old indicators should be recalculated or the new indicators should be presented for both the 'old' and the 'new' Health Authority.

- The need to avoid errors: Labelling directly standardised rate SMR, for example, causes confusion among clinicians and also casts doubts on the credibility of the HSI package.

The other lesson learnt was the need to develop good quality data on the local population. The only estimate on the number of patients with diabetes mellitus was obtained by extrapolation. There were no sources of data on the local population. This highlights the need to set up local sources such as diabetic registers which are invaluable both for patient care and planning purposes.

One of the barriers encountered was the difference in the clinical style between the two consultant physicians with interest in diabetes. The full participation of the two consultants in the focus group was ensured; the issue of different clinical approach was repeatedly mentioned in the group and by patients, but was felt to be too sensitive to be handled in a focus group setting. The public health consultant made an attempt to invite the two clinicians on their own to discuss and resolve the styles without much success. It was felt that the only practical approach is for the Health Authority to produce a detailed service specification and insist that the two clinicians provide a service consistent with the specification. The general lesson is that when there are widely different clinical styles, it is often impossible to resolve them in such situations; often the Trust managers refuse to be involved and the only solution which the purchasers have is to produce a detailed specification and insist that unless the clauses in the specification are satisfied, contracts would be placed with other providers. However, even this is not possible for some services. There needs to be a mechanism for handling issues such as this, and it is suggested that professional organisations such as the Royal College of Physicians should set up an independent advisory service which can be consulted by Health Authorities or Trusts.

The other factors which delayed the implementation of recommendations were the organisational changes within both the purchasing organisation (merger with DHA and FHSA) and within the Trusts. Another factor was the need for completion of the Health Authority's acute strategy and the approval of Havering Hospitals Trust business case.

One interesting problem encountered, which generated considerable debate in the group, was the setting up of a diabetic day centre. The literature review did not identify any clear evidence on the effectiveness of diabetic day centres. However, most professionals involved in the care of diabetes have come to regard diabetic day centres as an essential part of a diabetic service. The patients also raised this issue as some of them had previously been treated in hospitals where there were day centres.

Considerable attention needs to be directed to the development of clinical guidelines for GPs. GPs should not be expected to follow different guidelines from different consultants, therefore agreement among consultants within the Trust is necessary. Also, if compliance with guidelines is to be assured, there should be GP involvement in production and dissemination of the guidelines.

References:

B) Diabetes mellitus


Organisational Context:

Barking and Havering Health Authority was formed on 1 April 1996 with the merger of Barking & Havering DHA and FHSA. The Health Authority is in the process of finalising its acute services strategy, the aim of
which is to rationalise the provision of acute services in the local Trust which should help to release resources for improving primary care and community services.

The Public Health Department in Barking and Havering has been using population outcome indicators ever since they first became available. Each year, the Directorate issues several documents to guide the commissioning process and one of the documents issued is based on the latest HSI package. A section is devoted to the population outcome indicators and health objectives are defined based on the indicators. The topics chosen for detailed strategic review are also partly based on the relative position of the district in the population outcome indicator profile.

The health authority has adopted a population health outcome approach in focusing on key health problems and monitoring improvements in health (Barking and Havering HA 1994). The public health department has refined the outcome indicators so that they are available for the seven localities in the district (Congdon 1993). This enables us to be more precise as to where local problems are greatest. We do regular six-monthly monitoring of indicators (based on admissions data) and present this to the health authority. We use indicators in a number of different ways:

- For some indicators e.g. diabetes and hip fractures we use a focus group approach to examine local epidemiology, service profiles and to identify problems. These groups involve key stakeholders such as hospital clinicians, general practitioners, Trust managers and service users. Recommendations for action are made to health authority managers.
- For other indicators we adopt a population approach and work with commissioning managers in deciding what appropriate action is needed in consultation with the local authority, NHS Trusts, general practice and the community. In one such project (Singleton 1994) we addressed the health and social problems in a disadvantaged locality in one of our boroughs. Senior officers of the health authority, local authority (including the Chair of Social Services), NHS Trusts and residents of the locality. The focus was on Health of the Nation including coronary heart disease. We used local epidemiology and a ’rapid appraisal’ of the community’s expressed needs to guide our decisions. An action plan is currently being implemented and we will be evaluating its effectiveness.
- We also use indicators in the needs assessment work for health strategy development such as older people and cancer.
- We developed a contract debriefing pack so that contract negotiators can be informed of any issues we need to raise with Trusts. This summarises key points arising from needs assessment work. The quality specification in the contract is a useful tool for focusing on general problems such as communication with general practice.
- Each year we produce clinical audit guidelines for NHS Trusts highlighting any areas where clinical audit might provide solutions to problems identified e.g. amputation in diabetes and cancer outcomes. We develop these guidelines from our needs assessment work and also incorporate ideas from key reports emerging during the year: for example, the confidential enquiry into surgical mortality. This forms part of the specification for the clinical audit contract.
- The authority’s commissioning intentions is a vehicle for signalling any major changes resulting from this work, especially where new developments of services are proposed.
- Our clinical effectiveness programme involves working closely with general practitioners and hospital clinicians in developing evidence based guidelines for clinical practice and other ways of getting research evidence into practice e.g. thrombolytic therapy in acute myocardial infarction.
- In conclusion, although there is great interest within the organisation for using outcomes, this interest has not been translated fully into practice because of the lack of good quality data. Another general issue which prevents the use of outcomes in contracting is the lack of clear relationship between structure, process and outcome of care. The provider units incur costs on the structure and process of care and it is difficult to contract on the basis of outcomes, when the relationship between the three is not clear. Further work needs to be undertaken in this area.