

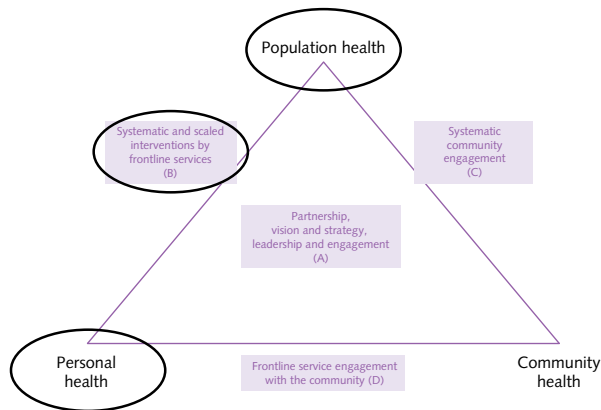
How to develop a taxonomy of general medical practices to support and encourage performance development



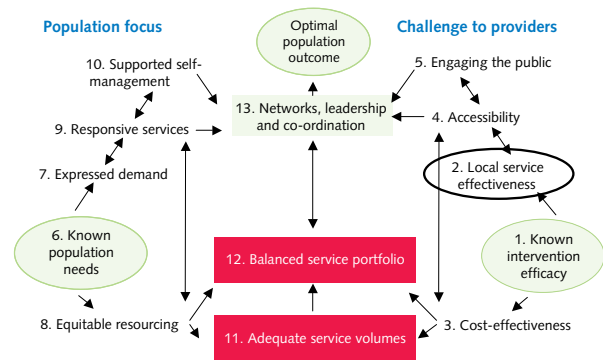
Health Inequalities
National Support Team
Enhanced Support Programme

DH INFORMATION READER BOX

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Bentley C (2007). *Systematically Addressing Health Inequalities*, Health Inequalities National Support Team.



FOREWORD

The Health Inequalities National Support Team (HINST) has chosen to prioritise this topic as one of its 'How to' guides for the following reasons:

- It offers the potential to systematically improve the outcomes from evidence-based treatment of patients with potentially 'killer' conditions, on a scale that could enable the individual patient quality improvements to add up to a population-level change.
- Specifically within the 'Christmas tree' diagnostic it addresses the following components:
 - Local service effectiveness (2). Clustering of practices like with like in relation to the characteristics of the practice population allows practice performance on service outcomes to be benchmarked appropriately, enables the identification of 'cluster champions', allows practices sharing the same context to exchange experience on what works and what doesn't, and enables the primary care trust (PCT) to provide differential inputs to practices based on their demography.
- Adoption of the suggested clustering of practices should help meet the Quality and Productivity Challenge by providing practices with benchmark outcomes achieved by others with a similar practice profile, and so helping to 'raise the bar' on what is realistically possible.
- Successful adoption of processes similar to those outlined here would demonstrate good use of World Class Commissioning (WCC) Competencies:
 - Clinical leadership (4)
 - Stimulates provision (7)
 - Innovation (8)
 - Performance management (10).

CONTEXT

This guide provides examples of how the process has been undertaken successfully and recommends steps to creating a grouping or Taxonomy of Practices. This guide needs to read alongside *How to develop and implement a balanced scorecard*.

STEPS TO DEVELOP A TAXONOMY OF PRACTICES

The Department of Health has circulated the Primary Care Commissioning Support Application produced by the Primary Care Commissioning Team. This application tool allows comparisons between PCTs and between practices based on several socio-economic indicators that are already available in this application. It is suggested that PCTs use this tool as the basis to rank practices by their Index of Multiple Deprivation (IMD) and combine this with an analysis of demographic factors. This will enable segmentation.

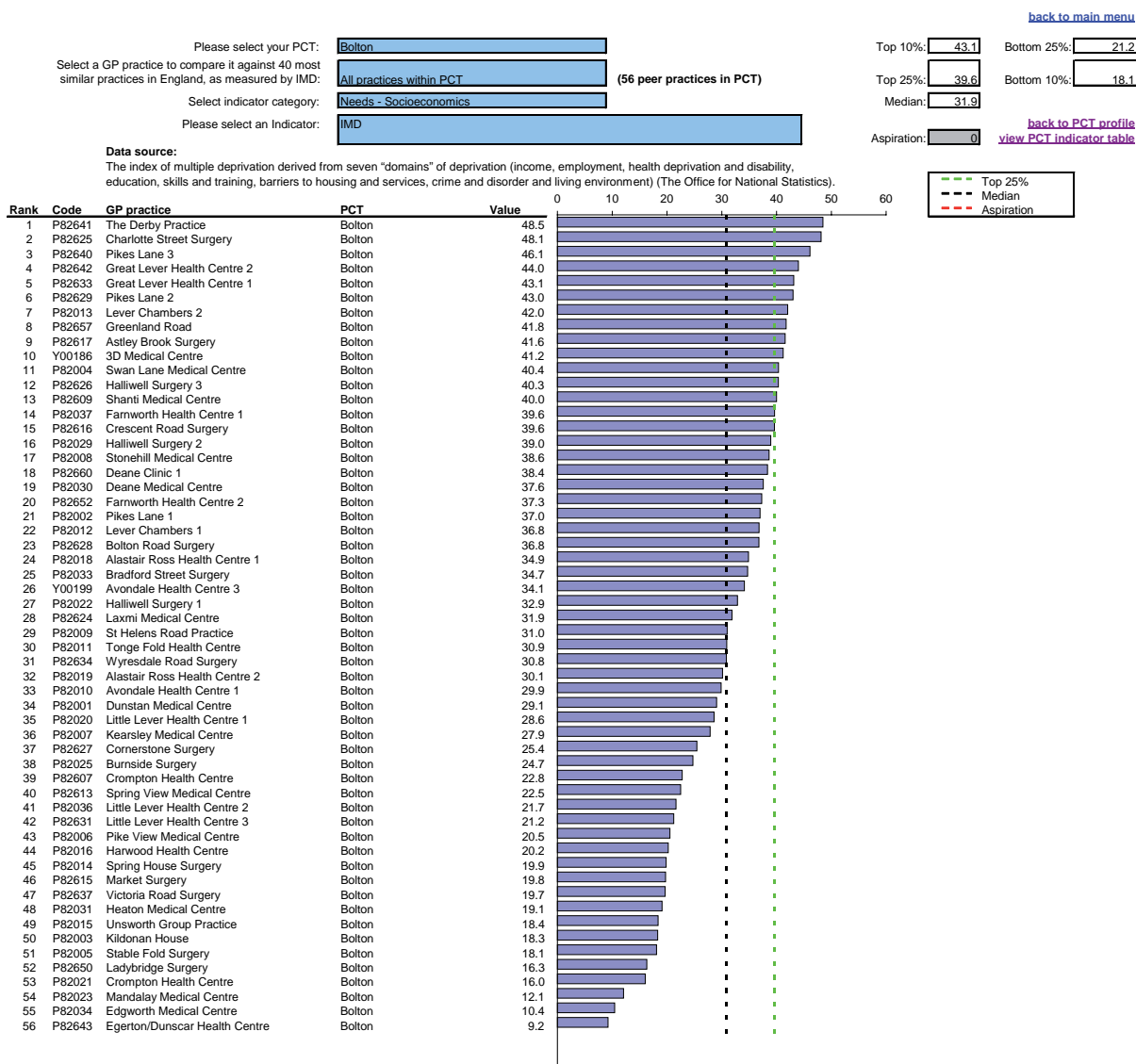
PCTs should consider involving their equality and diversity leads to explore how this tool can be localised, incorporating other equality dimensions, national equality guidance and local equality policies.

Step 1

Using the Primary Care Commissioning Support Application, rank practices according to the IMD 2007 score.

Figure 1 is a simple demonstration of how practices can be grouped together based on the IMD. This allows comparison of results to be made between true peers: practices that share a similar population based on their IMD scores.

Figure 1: Indicator table – GP practice level



The tool also enables comparisons of performance to be made between practices with similar characteristics from different PCTs across the country, but this is not pursued here.

Step 2

Determine the additional socio-demographic factors that are deemed to have an impact on practice performance, for example:

- Age – using age variables for individuals in the GP patient register.
- Rurality – may be a factor in some areas – particularly when intra-district inequalities are being looked at. This and other variables are available from the general medical services global sum allocations formula, including one that may give an insight into a phenomenon associated with difficulties in accessing services: 'population churn'.
- Practice list turnover index.

Yorkshire and Humber Public Health Observatory has developed practice clusters not within a PCT but within a region – using the variables of age, sex, ethnicity, deprivation, and urban/rural – using the NHS National Strategic Tracing Service.

The NHS National Strategic Tracing Service contains administrative data on all patients registered with the NHS. Yorkshire and Humber Public Health Observatory used 99.9% of these data to build its model and group practices into clusters using k-means cluster analysis.¹

If each of the factors were judged to have the same importance, then there would have to be some process to standardise the scale used for each variable and their ranking – to avoid disproportionate influence. HINST recommends using the IMD score as the primary determinant of the cluster, and to use only a couple of additional fields that have relevance and credibility locally in order to moderate the clusters. At this stage there is no evidence that sophistication adds value.

Step 3

Place practices in bands and use cut-off points (e.g. quintiles) to form groups; then apply local knowledge to judge whether any practices stand out as being included with others that are obviously different – the ‘reality test’. Formulate explicit rules that explain the adjustments that are needed to make the groupings obtained purely from the data into sensible groups.

Step 4

Use the results split by practice groups to populate a performance data report using, for example, Quality and Outcomes Framework (QOF) scores, taking account of the ‘How to’ guide.

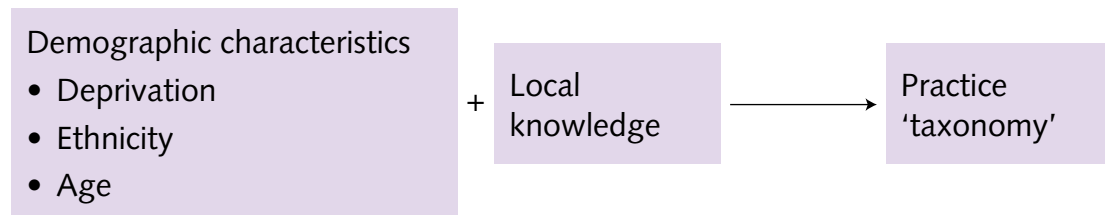
HOW TO USE THE TAXONOMY OF PRACTICES

The Taxonomy of Practices can be used by the PCT and practice-based commissioning groups to identify opportunities to cluster similar practices in relation to the characteristics of the practice population in order to:

- allow practice performance on service outcomes to be benchmarked appropriately
- enable the identification of ‘cluster champions’
- allow practices sharing the same context to exchange experience on what works and what doesn’t
- enable the PCT to provide different inputs to practices based on their demography.

NHS Bolton developed a set of General Practice clusters (‘Taxonomy of Practices’) to enable a comparison of performance that takes into account the different populations that practices work with. NHS Oldham has done the same as part of an investigation into the numbers of patients on disease registers compared with predicted prevalence.

The NHS Bolton approach to grouping practices



Three aspects of population data were used to suggest initial groupings based upon the demographic profile of practices.

Group 1 – Deprivation

IMD 2007 scores at Lower Standard Output Area were used and the postcodes of patients assigned to them. An overall average deprivation score was calculated for each practice.

Group 2 – Ethnicity

The majority of the black and minority ethnic (BME) population in Bolton is of South Asian origin. The Nam Pehchan surname recognition software was used to identify names of possible South Asian origin. This software has some limitations but until full ethnic coding for all patients is available it is considered a workable tool with a high level of specificity but only when the minority ethnic population is of South Asian origin. The software was used to group practices, broadly, into high BME, mixed and white groupings.

Group 3 – Age

Originally, NHS Bolton used an age index score that was calculated using prescribing units data, but it is now recommended that the average population age is calculated for each practice using the age variable for individuals in the GP patient register.

These three characteristics were used to identify practice groups, but an element of local knowledge was then added to ensure that obvious anomalies were addressed. This step is less easy to describe in objective terms, but all tools like this need to undergo a 'reality check' before they are applied.

The PCT has used this information to report performance (QOF based) on key indicators to the PCT Board and is working on a set of measures that better describe the PCT's progress towards implementing major programmes that will improve health and reduce the gap in life expectancy between the district and the average for England. Progress and need for support will be monitored through a matrix showing practices, in the context of practice clusters. It is proposed that this will be the subject of a further 'How to' guide in due course.

The NHS Oldham approach to grouping practices

The HINST report following its visit to Oldham last year recommended the calculation of predicted register sizes at a practice level.

Calculations were undertaken to estimate the predicted practice register sizes relating to vascular disease, chronic obstructive pulmonary disease (COPD) and asthma. An integral part of the process was the creation of practice groups based on practice population size, ethnicity and deprivation level.

The **practice population data** are based on January 2009 Exeter data, with the exception of:

- Exeter data for November 2009 for the asthma predictions
- 2007 list data for the COPD predictions (Association of Public Health Observatories calculations).

Predictions have not been made for the new practices as they do not yet have a stable population on which to base the prediction.

To estimate the proportion of the practice population from **BME heritage**, the Nam Pehchan surname recognition software was used to identify registered patients of South Asian origin.

The **deprivation level** of each practice has been estimated using the UV67 household deprivation score (see Table 1). UV67 household deprivation scores were calculated for each census output area in Oldham, using 2001 census data. GP practice scores were then estimated by using the postcodes of each patient to calculate the proportion of patients falling within a super output area. The higher the percentage score, the more deprived the GP practice population. For example, a GP practice with a score of 40% is classed as very deprived.

Table 1: Variables included in the UV67 household deprivation score

Employment	Any member of the household aged 16 to 74 who is not a full-time student or is either unemployed or permanently sick
Education	No member of the household aged 16 to pensionable age has at least five GCSEs (A–C) or equivalent, and no member of the household aged 16–18 is in full-time education
Health and disability	Any member of the household has a general health 'not good' in the year before census or has a limiting long-term illness/condition

Table 1: Variables included in the UV67 household deprivation score continued

Housing	The household's accommodation is either overcrowded, or is in a shared dwelling, or does not have sole use of a bath/shower and a toilet, or has no central heating
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The variables in table 1 were used for the primary purpose of the exercise – comparing the number of patients on chronic disease registers against the predicted prevalence rates for primary care practice registers for vascular disease, COPD and asthma.

REFERENCES

- 1 For cluster characteristics: www.yhpho.org.uk/resource/view.aspx?RID=10390
For the methodology: www.yhpho.org.uk/resource/item.aspx?RID=10073 This then enables practice profiles on a 'like for like' basis. To download profiles: www.yhpho.org.uk/resource/view.aspx?RID=10319#
This follows work by Emma Maund as part of an MSc in Health Services Research, University of York, in 2008.

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If you want more information on the examples contained in this guide please contact HINST on 0207 972 3377 or email hinst@dh.gsi.gov.uk