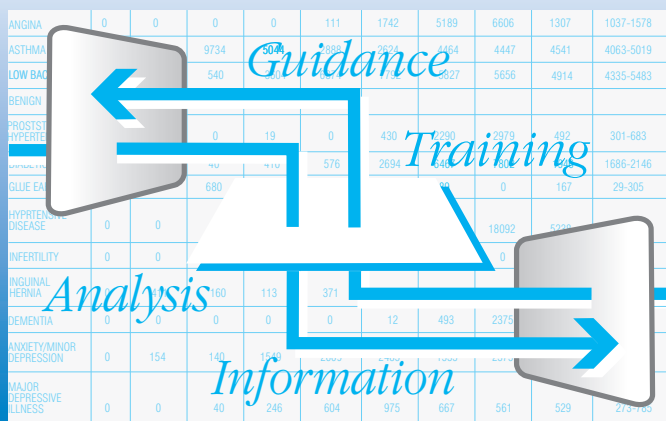


Collection of Health Data from General Practice (CHDGP) Project

Case Study

A review of the Oxfordshire scheme



Where did we start?

During the first few years of the MAAG's work in promoting clinical audit in general practices it became increasingly clear to us that effective clinical audit fully integrated into routine clinical practice required good quality information recorded on practice clinical computer systems. Manual clinical audit is too time consuming and tedious even when a sample of patient notes is used, and so it tends to be done infrequently. Collecting data from the clinical computer system is far quicker and so much more likely to be done and repeated regularly. In addition, computers are almost essential for the processing and reporting of the large amounts of information often generated by clinical audit. For these reasons, building on a MAAG survey of Practices' use of computers in September 1994, a substantial amount of work has been done to develop a variety of training opportunities for PHCT members. It is aimed at improving both the quality of information recorded on clinical computer systems and the use made of this for clinical audit. The training included:

- Audit criteria linked to Read codes
- Suggested computer system templates for:
 - Diabetes
 - Asthma
 - Ischaemic Heart Disease (IHD)

they would like to join the scheme. This was a far better response than we had expected, although on reflection not so surprising, since all of the practices had previously participated in one or more of the MAAG's computer audit training courses on,

- Data management and quality
- Consistency and coding
- Searches and audits
- Analysis and presentation

based on specific systems and software:

- EMIS
- VAMP
- Meditel
- Read codes
- Microsoft Excel

Practices were offered free training if they were prepared to contribute their data to a comparative feedback report. This approach proved very successful, and 60 of Oxfordshire's 89 practices have been involved in our computer training courses since 1994. We have been able to build on the established relationship of trust and confidentiality between the MAAG and Oxfordshire general practices. Becoming a pilot scheme for **the CHDGP project** seemed a natural progression of our work in recent years.

The only criteria for inclusion were a willingness to participate fully and a commitment to make changes to improve data quality.

12 practices joined for the initial data collection. 3 more joined for the 2nd collection. One more joined as a VAMP Vision pilot for the 3rd collection.

Recruiting practices

An invitation letter was sent to all 43 EMIS and 9 Meditel practices in the county in July 1997. 18 practices said

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Profiles of the practices

The 16 practices who have taken part in the CHDGP project represent 21.5% of the county population with about 131,500 registered patients. The practices also cover a good mixture of size, area, computer experience and different practice cultures.

First lessons

One of the most important lessons we learnt early on in the project was the need to view all of the data collected from the practices with caution. Our first feedback from the Comparative Analysis Service demonstrated this very effectively. In a few cases we were presented with some very odd looking data which needed to be interpreted and untangled, frequently in discussions with practice staff.



Sue Trinder, Co-ordinator and
Rosemary Smith, Data Analyst

A number of problems were experienced with the process of collecting data from practices, particularly in the first round.

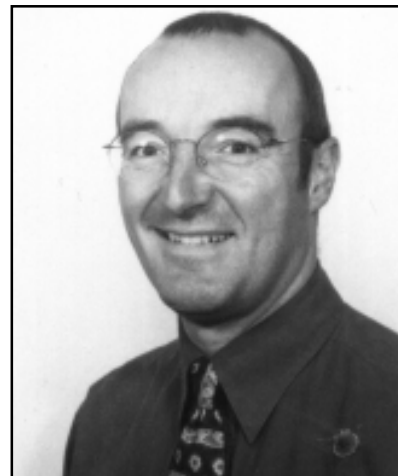
For example:

- changes to the MIQUEST software to deal with bugs and lack of documentation on how to use the latest version
- difficulties in getting the MIQUEST queries to run without error on different GP systems
- human error due to unfamiliarity with the software and processes being used

These were resolved satisfactorily so that the second round of data collection proceeded very smoothly. Improvements continue to be made to the software and there is now very good documentation for users. Human error is always liable to crop up from time to time, but is much less of a problem due to increased confidence and familiarity with the processes. Even so, unexpected problems can occur when the data collection set is changed.

In October 1998, following the second data collection we arranged a feedback presentation from the Nottingham team for all of the practices. Most of Oxfordshire's participating practices were able to attend and it was an ideal opportunity for practices to gain an

understanding of how the *Rush* software works, to discuss common problems and to feed back directly to the central team.



Malcolm Chandler,
Data Analyst

We also discovered problems at practice level with incorrect coding issues. An example of this was one practice who appeared to have recorded 25% of its population as having a diagnosis of IHD!

This occurred because the practice had created its own code to record that patients had been asked if they had a family history of IHD and had inadvertently linked it to a diagnosis code in the READ hierarchy.

Key Messages

- Beware comparison of any data until its quality has been verified at source
- Beware averages, means and calculated data (until you know how it was done)
- Consistency of coding needs - education, and education, and education!
- - and don't make up your own codes!
- Only the most obvious discrepancies are easy to spot - how many do we miss?
- How long does it take for meaningful, clinically relevant changes in data quality to be achieved in general practices?

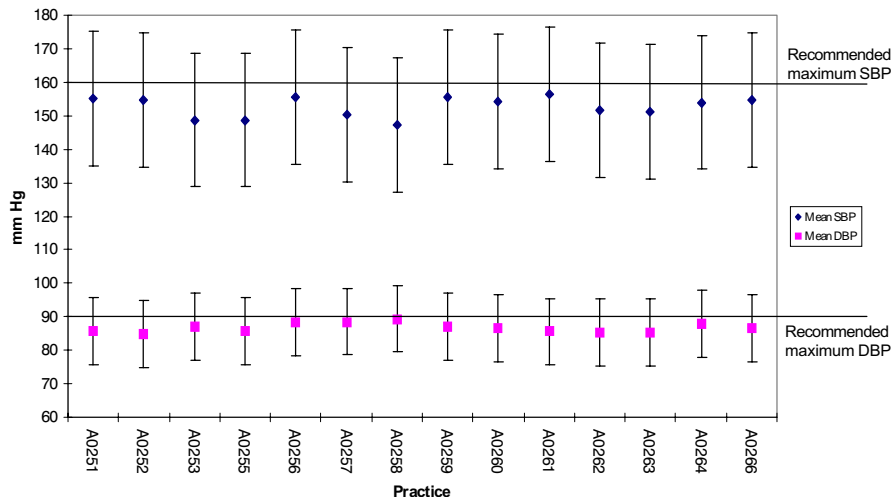
Feedback

Practices have received written national and local feedback reports. These enable them to identify where there are discrepancies in their data and make the necessary changes to improve things. In addition, using MIQUEST to collect data allows us to produce some information which has previously been very difficult to obtain at general practice level. For example:

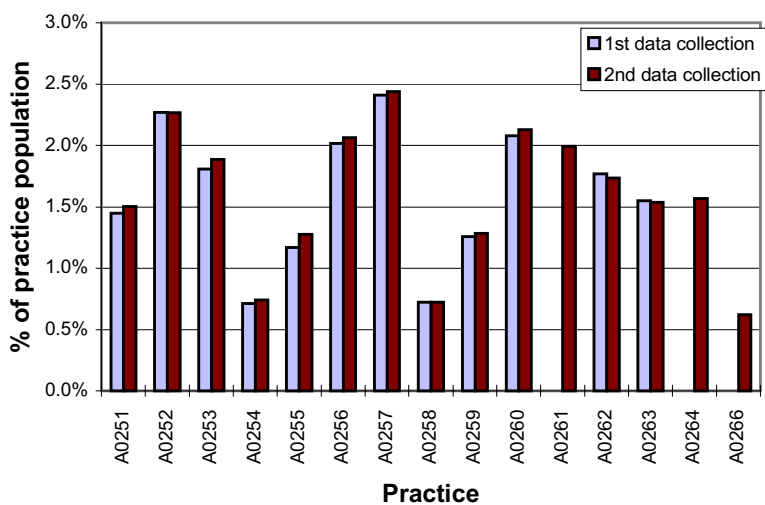
The *Rush* software, produced by the national Comparative Analysis Service in Nottingham, for analysing and presenting feedback data makes it easy to apply age and sex standardisation to the data comparing practices. This can significantly alter comparisons between practices. For example this chart shows the prevalence of diabetes mellitus and changes between the first and second rounds of data collection:

This chart shows the mean BP and standard deviation for all hypertensive patients in each practice. The mean is calculated by combining the averages of the last three BP readings for each patient, practice by practice.

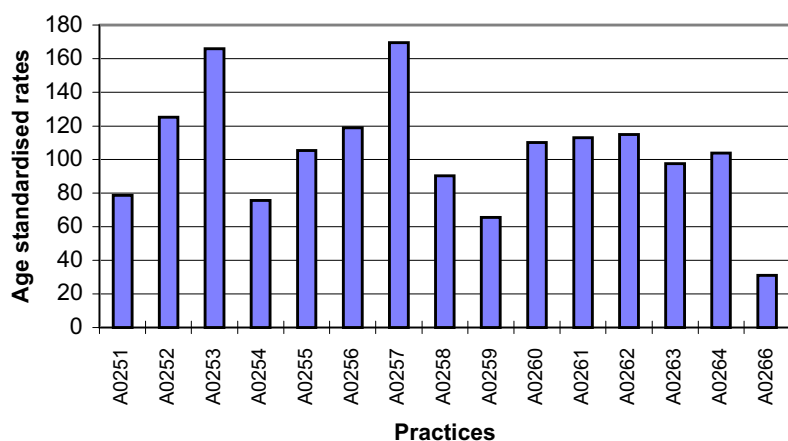
It shows that the blood pressure of the majority of patients in each practice is well controlled, although some practices appear to do better than others. It would be very difficult to produce this sort of information by routine methods without MIQUEST and it gives us very useful insights into the quality of care in hypertension.



Mean BP of all hypertensive patients - practices compared:



Practices A0254, A0258 and A0266 seem to have quite low diabetes prevalence, whereas in A0252 and A0257 it is relatively high. When age and sex standardisation is applied to the data, a different picture emerges:



A0252's prevalence is closer to the average, but A0257 remains high. A0254 and A0258 are also closer to the average, but A0266 remains low. A0253 now seems to have a relatively high prevalence for its population, which isn't apparent in the unadjusted figures.

What have been the benefits to us?

by Dr John Derry, MAAG Chairman



Dr John Derry,
MAAG Chair and Team Leader

Participation in the CHDGP project has had a number of benefits for Oxfordshire MAAG, and for the participating Practices.

1. Firstly, we have become familiar with the MIQUEST system and now feel confident about using it to collect data from general practice clinical computer systems. We are beginning to see its potential more clearly, but also to have a better understanding of the things MIQUEST cannot do.

The searching, audit and reporting facilities of the many different GP clinical systems in use all have their particular quirks. Anyone who has tried to collect the same information from different systems will know how difficult it is to be sure that the results really are comparable. There is also the challenge of learning enough about using the different systems to be able to extract any meaningful data. It seems that no GP system has the ideal routines for searching, analysing and reporting on the data held within it. Each system has its limitations and idiosyncrasies. This is where MIQUEST really comes into its own. At last we can collect comparable data from the common GP systems, and we only have to learn how to use one software package to do it.

2. Being able to collect comparable, comprehensive and detailed data leads to the second benefit. Now we can begin to understand the issues affecting the quality of data recorded on GP computers. There aren't any particular surprises here:

- inconsistent use of Read codes
- home made codes, sometimes duplicating existing codes
- using free text to qualify diagnostic terms
- using free text instead of coding entries
- failure to record follow-up information
- random mistakes in data entry

Using MIQUEST we can now provide specific feedback to Practices and even to individual clinicians which highlights the particular data quality issues that are relevant to them, with evidence about what they are actually doing. This is a very powerful motivator for change. It is also simple to repeat the exercise, doing regular audits of data quality to reinforce the points and reward change.

A valuable feature of using MIQUEST is the ability to track odd-looking data back to individual patient records at the Practice level. This has enabled our participating Practices to correct errors and identify patients who had slipped through the recall net for various reasons.

3. The third benefit has been in learning more about the skills of feeding back the results of the data collection exercises. We have been able to see the methods used by other schemes, and discuss with our participating Practices what kinds of presentation they find most helpful. The development of the *Rush* software has given us a powerful tool for letting Practice users analyse their data in ways that interest them.

4. Fourthly we have had the benefit of a lot of support and help from our new friends in the Nottingham CHDGP team, and of being part of a big, nationally important project. This has enabled personal development of all the staff in the Oxfordshire scheme in many different ways.

5. Finally we have the major benefit of having had 18 months experience of using MIQUEST in local general practices. It is clear that the formation of Primary Care Groups, and the development of their functions (particularly clinical governance and commissioning services) will require effective and efficient mechanisms for reliably collecting comparable information from the variety of general practice

computer systems. MIQUEST is really the only contender here and we are well placed to provide essential support and services to the new Oxfordshire PCGs.

One Practice's Experience

by Anne Hodgson
Church Street Practice, Wantage

Generally, the software was easy to install and run. Participating in the running and downloading caused minimal interference with System 5 (Meditel).

Once the MIQUEST software had been loaded, running the queries was not difficult.

We set the queries, in advance, to run over the weekend, as we did not know how long this would take.

After the queries had run we did have a problem with downloading the responses back on to the floppy disk as MIQUEST failed to prompt for a second disk when the first was full.

Following discussion with the MAAG team we continued to download the remainder onto a second disk. This "blip" was sorted out by an upgrade to the software (by Meditel) in time for the third phase.

The only inconvenience, while running the queries, was that the appointments system back-up had to be turned off, or it would have been affected.

The feedback day and the written reports were very interesting. The project obviously has great potential for data collection within PCGs. It was also interesting to be made aware of the limitations of the data, at present.

In time it should be possible to make more accurate comparisons with national and local statistics.

The feedback within the practice, from the MAAG team, was very useful and appreciated.

We were able to clean up the computer records of several patients who had wrong information attached to them over the years. Having these patients identified was probably one of the most useful aspects within the practice - we hope the accuracy of some computer audits will be improved as a result.