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Are general practice networks 'ready' for clinical data management?

Background

Australian general practice networks (GPN) are required to report on national performance indicators under the Australian Government Department of Health and Ageing's National Quality Performance System (NQPS).

Objective

To investigate the extent to which Victorian GPN are 'ready' to manage clinical data from general practice for reporting under the NQPS.

Methods

A qualitative study using semistructured interviews from a purposive sample of chief executive officers from urban and rural Victorian GPN included those either participating or not participating in the Australian Primary Care Collaboratives Program.

Results

Australian Primary Care Collaborative experienced DGP have developed the range of skills and knowledge to undertake clinical data management for quality improvement and NQPS reporting. Trust by local general practices for the provision of clinical data has been developed through the demonstration of benefits to practices and improved patient health. General practice networks without Australian Primary Care Collaborative experience have a range of concerns about clinical data management for NQPS reporting, such as gaining cooperation from their practices, handling privacy issues and finding appropriately skilled staff.

Conclusion

Victorian GPN involved in the Australian Primary Care Collaborative appear more 'ready' than GPN without this experience to undertake clinical data management for reporting purposes on the national performance indicators under the NQPS.

■ **Australian general practice networks (GPNs) are required to report on national performance indicators (NPIs) under the Australian Government Department of Health and Ageing's National Quality Performance System (NQPS).¹ The aims of the NQPS are to provide: better information for the GPNs, a national picture of GPN achievements, evidence of the contribution of GPNs to their communities, and evidence of value for money for the public. This reporting function is managed through the Primary Health Care Research and Information Service (PHCRIS).¹**

The reports from GPNs on NPIs were required in February 2009 from data compulsorily collected since July 2008. These NPIs include the provision of general practice level clinical data requiring the extraction and aggregation of de-identified patient data from medical software. Examples of NPIs include the mean levels of HbA1C in diabetic patients and Pap test rates in eligible women.

In the United Kingdom (UK) and New Zealand, primary care trusts and primary care organisations (PCOs) – similar to Australian GPNs – have invested in clinical audits with feedback activity in general practice, and also set targets for quality improvement (similar to NPIs) as part of their national health policies.^{2,3} Both UK and New Zealand PCOs have infrastructure that supports the capture and use of clinical data which are used for accountability to government and quality improvement in health care.^{4,5} The infrastructure includes drivers in senior leadership and boards of management who are involved in, and accountable for, the quality of care delivered. Management systems (eg. planning, organising staff, providing resources and lines of accountability) use information management to support the design and implementation of quality improvement initiatives. Government financial incentives based on performance measurement frameworks have also been useful.^{6,7}

The Australian Primary Care Collaboratives (APCC) is a large scale, voluntary, quality improvement program undertaken by over 800 Australian general practices since 2005.^{8,9} This program requires

monthly clinical data collections for diabetes and coronary heart disease, similar to the requirements of the NQPS, as well as for patient access to general practice. These data are collated locally and nationally, and the program has demonstrated major improvements in the management of the two selected medical conditions and also for patient access to appointments in general practice.

Not all GPNs participated in the APCC for a range of reasons, including limited interest from practices. Participating GPNs supported practices through a specifically funded program officer who worked closely with practices to extract clinical data, undertake online reporting and assist with quality improvement efforts.

The aim of this study was to investigate the extent to which Victorian GPNs are 'ready' to manage clinical data requirements such as for NQPS reporting. 'Readiness' can be defined as a GPN demonstrating three key features that enable data collection to occur: staff skills, a board of management supportive of clinical data collection from general practice, and a high level of member practice trust. This definition was derived from this study and was based on elements reported as important in the clinical data management literature.

Methods

A purposive sample of 14 chief executive officers (CEOs) from two urban and four rural APCC GPNs and four urban and four rural non-APCC GPNs in Victoria were interviewed face-to-face or via telephone during April to June 2008 by the principal researcher (JK). These represent just under half of all Victorian GPNs. The CEOs were chosen as interviewees to gain their views on organisational requirements of the GPNs for data management, and their perspectives on the views of their board of management. The semistructured interview questions were developed and refined following a literature review which examined UK and New Zealand PCOs' roles in clinical data management.^{7,9} The interviews were tape recorded, typed and the qualitative data subject to both content and thematic analyses. The thematic analysis was informed by the literature review and also independently derived from the transcripts. The final analysis was synthesised from both independent sources.

Ethics approval was received from the Monash University Standing Committee in Research Involving Humans.

Results

Role of GPNs in clinical data management

Australian Primary Care Collaboratives GPNs expressed confidence in their ability to manage clinical data because of the trust the GPNs had developed with practices through quality improvement efforts in the APCC program.

'...there were no problems with the whole process because they [the GPs and the practices] were receiving feedback and being benchmarked [against similar practices] and this was a very positive experience'. APCC GPN

Some non-APCC GPNs expressed a lack of skills and confidence in

using data extraction tools and were concerned about explaining the benefits to practices of providing data to GPNs.

Most GPNs emphasised the importance of supporting practices to undertake a range of activities arising from clinical data extraction and aggregation, not just utilising the data for NQPS reporting. This support included data cleaning (archiving patients, ensuring correct demographic details), data analysis (reviewing a practice's patient clinical outcomes) and benchmarking (comparing like practices) as ways of improving the health of the community. Being rural or urban did not affect attitudes to the role of GPNs in clinical data management.

Three GPNs boards of management objected to sending data to the government. However, although no GPN suggested that providing data for NQPS reporting to government was an end in itself, the process was generally acknowledged as a means of adding value to member practices for quality improvement activities and benchmarking.

Skills and knowledge required by GPNs

All GPNs identified the importance of recruiting staff with the required skills for clinical data management and highlighted difficulties in finding the necessary skill set in one person. Skills required included understanding the use of computers from technical and information management perspectives, principles of change management, and quality improvement in practices. Moreover, non-APCC GPNs were concerned that they would not be able to adequately interpret exacted clinical data.

All GPNs identified that an expert driver for utilising data for quality improvement in general practice was important whether this be a general practitioner, CEO or information management officer.

Some GPNs (both APCC and non-APCC) were implementing a 'practice liaison role' to support data collection, undertake quality improvement and change management in practices to add value to practices who provided data. Some GPNs were moving to an integrated program approach across the GPNs rather than traditional silo approaches to providing program support to practices.

Rural GPNs stated they had difficulty attracting staff with good information management skills, but one rural GPN stated that:

'Being rural should not be an excuse for not being IT savvy'.

Australian Primary Care Collaboratives GPNs benchmarked practices and one had used its data for local planning purposes in limited populations such as Aboriginal people and Torres Strait Islanders. While clinical data obtained from practices was being used by one APCC GPN for local planning, most GPNs thought it had limited use for this purpose at present as the data were incomplete. Non-APCC GPNs were focusing on improving data quality but were keen to offer practice benchmarking.

While all GPNs considered using data for local planning, there was only minor consideration given for its use for research purposes. One rural GPN stated that research was not a priority in rural areas. The

GPNs were cognisant of the trust they had with practices and therefore only used data for the purposes for which they were collected.

Perceived benefits for being involved in clinical data management

All GPNs stated that being involved in clinical data management for reporting purposes, and the subsequent quality improvement in participating practices, made the GPN useful, relevant and credible to members and increased its understanding of their membership. The APCC GPNs embraced quality improvement for better patient care and non-APCC GPNs stated they were gradually moving in this direction and away from traditional program support, which had been more reactive in responding to the perceived needs of practices.

'The benefits are that it helps us to help the practices focus on quality improvement'. APCC GPN

Attitude of the boards of management

The APCC GPNs' boards of management had already seen benefits to practices of clinical data management, such as quality improvement in practice systems leading to better patient health outcomes in diabetes and coronary heart disease. There were still questions from some GPNs about whether GPs should be paid for data.

'The board of management sees clinical data as beneficial to practices and that we are not just collecting it for the government. They have seen how the APCC has been very helpful, and they see population health as being very important'. APCC GPN

The non-APCC GPNs' boards of management had some scepticism about clinical data management but were beginning to change as they became aware of benefits to practices and patients. One rural GPN stated:

'Clinical data management (for reporting) was not the most pressing issue in our rural setting'. Non-APCC GPN

Discussion

This qualitative research indicates that the APCC GPNs may be more 'ready' for clinical data management for NQPS reporting than non-APCC GPNs. This 'readiness' is apparent in that the APCC GPNs:

- believed they had built up trust with practices to provide clinical data
- have invested in staff skills in areas required for data management such as information technology, information management and practice change management. Many were restructuring their internal staffing to manage clinical data collection processes
- are more familiar with data extraction tools and benchmarking practices
- already had a driver for clinical data management and change processes within the GPN and practices, and
- had boards of management who were comfortable with data collection from practices as the benefits of quality improvement had already been demonstrated; therefore, the process of providing

data to government for NQPS reporting was of little concern.

The APCC GPNs have had resources and time to focus on building organisational structures and processes and a positive culture regarding clinical data management, which should make NQPS reporting easier. Clinical data obtained from practices were being used by one APCC GPN for local planning, but most thought it had limited use for this purpose as the data were incomplete.

It would appear that those non-APCC Victorian GPNs boards of management ambivalent about the provision of clinical data for NQPS reporting remain to be convinced that it is possible to use this data to undertake quality improvement in general practice.

Only one APCC GPN was utilising its data for research, which is in contrast to PCOs in the UK and New Zealand who use aggregated data for primary health research, epidemiological studies of disease prevalence and teaching purposes. Victorian GPNs are also not ready to use locally collected data for widespread local health services planning, disease projections, resource allocation, monitoring health inequalities and clinical governance, all of which are undertaken in the UK.

One limitation of this study is that CEOs were interviewed, although others within a GPN such as information management officers, where these exist, might have had more direct experience with data management. The CEOs were chosen as they would be expected to have a better perspective on the role of GPNs managing clinical data.

The APCC GPNs provide a model for how non-APCC GPNs could manage data for reporting and quality improvement. Moreover, given that all GPNs must report on NPIs, it is important that the Australian Government recognises the resources required by GPNs to collect and manage clinical data and provides adequate financial support for this.

Lessons from the APCC GPNs need to be translated into other GPNs, which may require dissemination of 'best practice' case studies and incentives to ensure that all GPNs have the capacity to meet the compulsory NQPS reporting requirements.

Implications for general practice

- Victorian GPNs involved in the APCC have greater capacity in clinical data management for the NQPS reporting, and to support quality improvement in their local practices.
- Some GPNs are restructuring their service delivery models to enhance their work with practices, and view clinical data management as making them useful and credible to their member practices.
- Lessons from APCC GPNs need to be translated into other GPNs. This may require dissemination of 'best practice' case studies and incentives to ensure that all GPNs have the capacity to meet the compulsory reporting requirements.

Conflict of interest: none declared.

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References

1. Primary Health Care Research & Information Service. NQPS planning & reporting. C2006. Available at www.phcris.org.au/products.info_bytes/div_framework/.
2. De Lusignan SI. An educational intervention, involving feedback of routinely collected computer data, to improve cardiovascular disease management in UK primary care. *Methods Inf Med* 2007;46:57–62.
3. Campbell SM, Sheaff, Sibbald B, et al. Implementing clinical governance in English primary care groups/trusts: Reconciling quality improvement and quality assurance. *Qual Saf Health Care* 2002;11:9–14.
4. Vandenberghe HE, Van Casteren V, Jonckheer P, et al. Collecting information on the quality prescribing in primary care using semi-automatic data extraction from GPs electronic medical records. *Int J Med Inform* 2005;74:367–76.
5. Barnett P, Malcolm L, Wright Hendry C. Professional leadership and organisational change: Progress towards developing a quality culture in New Zealand's health system. *N Z Med J* 2004;117:1198.
6. Roland M. Linking physicians' pay to the quality of care – A major experiment in the United Kingdom. *N Engl J Med* 2004;351:1448–54.
7. De Lusignan S, Hague N, van Vlymen J, Kumarapeli P. Routinely-collected general practice data are complex, but with systematic processing can be used for quality improvement and research. *Inform Prim Care* 2006;14:59–66.
8. Australian Primary Care Collaboratives. Available at www.apcc.org.au/Collab_background.html [Accessed March 2008].
9. Knight A. The collaborative method. A strategy for improving Australian general practice. *Aust Fam Physician* 2004;33:269–74.