Implementation of Chronic Condition Self-Management by General Practitioners: A Primary Health Care Change Management Problem

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Abstract

Australian general practitioners are recognising the need to implement some form of chronic condition management program to better service and cope with the ever increasing number of patients presenting with chronic conditions. Chronic Condition Self-Management (CCSM) is one such program. In this paper it is argued that the basis of CCSM (and other chronic condition management programs) is a multi-disciplinary, care-team approach and that implementation of such an approach represents a paradigm shift in primary health care service delivery. This equates to a significant innovation in primary health care service that, in economic terms, aims to increase primary health care outputs.

Although general practitioners are at the centre of the change they cannot implement the change without the participation and collaboration of the other stakeholders. These stakeholders include other health service providers, the Divisions of General Practice, the Department of Health and Aging and the patient. This paper presents a general practice business model to illustrate the relationships between entities in the primary health care domain and to identify the impact of CCSM on these relationships. The organisational issues that need to be addressed to promote diffusion of CCSM are also identified.
INTRODUCTION

For some time now the Department of Health and Ageing (DoHA) has offered incentives designed to improve patient care and operational efficiency. These include:

- Practice Incentive Payments (PIP) designed to encourage GPs to make better use of information and communication technology (ICT) resources;
- Service Incentive Payments (SIP) to encourage a longer term care program; and
- Enhanced Primary Care (EPC) packages designed to encourage GPs to offer more coordinated care to chronically ill patients. Care plans can be used to facilitate CCSM (Jayasuriya et al 2001).

All of these incentive payments have the potential to enhance the level of care provided to patients with chronic illnesses however they have had little impact on GP behaviour. Studies by Oldroyd et al (2003) and the Australian Divisions of General Practice (2004) reveal that the current incentive schemes, including care plans, are not being embraced by the majority of GPs.

Patients suffering from chronic conditions have an ongoing and increasing demand for primary health care services and their service needs differ from patients with acute ailments (Solberg et al 1998). There are numerous chronic condition management (CCM) programs, including chronic condition self-management (CCSM) programs, designed to deal with the complexities associated with treating chronic conditions.
There is some consensus in the literature that multi-disciplinary, team based approaches are needed. Some argue for chronic condition self-management (CCSM) models (Battersby et al 2001; Bodenheimer et al 2002; Jayasuriya 2001) whilst others focus on patient-centred care (Bauman, Fardy & Harris 2003; Von Korff, Glasgow & Sharpe 2002) and stress the importance of the patient being an active partner of the physician (Holman & Lorig 2000). Wagner (2000), Veale (2003), Fox, Etheredge and Jones (1998), Berenson and Horvarth (2003), Chew and Van Der Weyden (2003) and Brooks (2003) propose a multi-disciplinary care team approach involving the general practitioner (GP) and other members of the primary health care sector. Although there appears to be general recognition that the multi-disciplinary team based models serve patients with chronic conditions better than the acute care service model, GPs are struggling to implement them and most are not even attempting to implement these programs.

The critical point being made in this paper is that adoption of any of these CCM programs represents a service delivery paradigm shift that requires more resources than are currently available in the primary health care sector. Furthermore, the paradigm shift represents an innovation in primary health care service delivery that requires sound change management practices and strategies. Rothman and Wagner (2003) argue that it is the whole care system that needs to be redesigned and that the coordination of multiple caregivers is ‘a cornerstone of high-quality medical care’ (p.256). To be successful all primary health care sector stakeholders need to support the change. GPs cannot do it alone.
THE NEED FOR CCSM

Presently in Australia as many as 70% of GP consultations involve patients with chronic conditions (Veale, 2003) and many of these patients have comorbidities (Grumbach 2003). It is generally agreed that the care needs of chronically ill patients is different to the needs of acutely ill patients. Table 1 lists the characteristics of acute care and chronic care.

Table 1 Comparison of Acute and Chronic Care

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>Chronic</th>
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<tbody>
<tr>
<td>Episodic</td>
<td>Episodic</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Cure expected</td>
<td>Cure expected</td>
<td>Incurable</td>
</tr>
<tr>
<td>Quality of life highly dependent on professional care</td>
<td>Quality of life highly dependent on patient self-management and decision making</td>
<td></td>
</tr>
<tr>
<td>Quality of life highly dependent on short term services</td>
<td>Quality of life highly dependent on ongoing support services</td>
<td></td>
</tr>
<tr>
<td>Health professional generally the expert</td>
<td>Patient often has more knowledge</td>
<td></td>
</tr>
<tr>
<td>Short term goals</td>
<td>Short term goals to meet long term outcomes</td>
<td></td>
</tr>
<tr>
<td>Compliance expected</td>
<td>Compliance and self reliance expected</td>
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For the most part GPs treat the chronically ill with the same acute care service model and practices that they have always employed however they are finding that this approach is not efficacious. Patients frequently present with acute symptoms in relation to chronic conditions that may well be prevented with properly developed
care plans and actions. The complexity and long-term nature of chronic illness requires more frequent and extended consultation times.

Solberg et al (1998, p. 2) hold the view that chronically ill patients:

…require planned, regular interactions with their caregivers, with a focus on function and prevention of exacerbations and complications. This interaction includes systematic assessments, attention to treatment guidelines, and behaviourally sophisticated support for the patient’s role as self-manager.

Self-management is a ‘…means of empowering a person to manage their disease on a day to day basis and thus improve their quality of life.’ (Jayasuriya et al 2001).

CCSM has the potential to improve patient outcomes (Flinders Human Behaviour Health & Research Unit, 2003a) however it is resource intensive and requires significant changes to existing practices. It also has the potential to reduce the demand for ad hoc GP visits by and hospitalisation of chronic condition sufferers. With proper organisational changes to support the program GPs may find that they are better able to utilise their scarce resources and increase overall output. GP and practice nurse time can be better managed and utilised because patient visits are scheduled in advanced and there is a degree of predictability regarding the nature and the length of the visit.

It is not the purpose of this paper to provide an extensive case for CCSM. Rather it is to explore the business issues relating to the implementation of CCSM. It is advocated that the principles relating to the application of CCSM apply equally to CCM programs that embrace the notion of team based and patient centred care.
THE SIGNIFICANCE OF THE CHANGES REQUIRED

Innovation is defined by Brown (cited in McAdam, Stevenson & Armstrong 2000) as ‘…. doing things differently or better across products or procedures for added value and/or performance’. Widespread adoption of innovative practices requires the recognition of the impacts on current practices and raises change management issues both within and outside the entity of interest. The innovation that is the subject of this paper is CCSM and the entity of interest is the general practice.

Some GPs have already been transitioning towards patient centred care and they have been increasingly adopting team based care plans for patients so implementing CCSM should not require a significant mindset change. For others it will mean a shift from authoritarian medical service provider to patient centred care facilitator and from sole clinician mindset to clinical team member or coordinator mindset. Regardless of the starting point, effective implementation of CCSM will require GPs making organisational changes, delegating responsibility to practice nurses and therefore developing and implementing quality assurance procedures to support those changes.

Lawson and Price (2003), recognise three levels of change. The simplest one does not require participants to change the way they work. The second level does require participants to change their work practices and adopt new ones but does not require a change in their mindsets. GPs that are already developing care plans, and utilise practice nurses for clinical procedures and practice patient centred care would fit into this category. The third and most complex level of change requires participants to change their existing culture. The GPs who find themselves in this category require
substantial retraining and assistance. They need to develop management and communication skills that have not been crucial for the delivery of traditional, acute services. For CCSM to become widely implemented all three levels of change need to be resourced and supported by the primary health care stakeholders.

The difficulty of implementing change should not be underestimated. A worldwide study of 134 companies from all sectors by KPMG revealed that only 44% of change management projects are successful (Accountancy London 2003). To maximise the chance of CCSM being implemented successfully throughout the primary health care domain sound change management measures need to be taken.

Mabin, Forgeson and Green (2001) list the prerequisites for successful change management. They include:

- A vision of the future and a clear mission for the organisation;
- An organisation culture that is receptive to change;
- Strong leadership and trust;
- Good communication; and
- Participation;

Each of these elements needs to be examined from the point of view of each entity involved in the primary health care sector and from the point of view of the health care sector as a whole. For instance, strong leadership is required at the primary health care sector level as a whole, at the federal government level and from within each general practice. In general terms, those general practices that have strong
internal leadership and are culturally receptive to change will be more successful in implementing CCSM than those with a weak disposition to change.

It is important that the motivations of all parties affected by the change are understood and dealt with in order to gain commitment to the change (Lamb & Cox 1999). Stakeholders cannot be expected to embrace change unless the perceived benefits outweigh the perceived costs.

Ewles and Simnett (cited in Lamb & Cox 1999) represent this concept algebraically i.e. $A+B+C>D$ where:

- $A =$ the individual’s or group’s level of dissatisfaction with things as they are now;
- $B =$ the individual’s or group’s shared vision of a better future;
- $C =$ the existence of an acceptable, safe first step;
- $D =$ the costs to the individual or group.

In order to promote change and improve its chances of success, the perceived benefits need to be communicated and the perceived costs reduced so that the perceived benefits outweigh the perceived costs. The benefits of change follow the costs and are often difficult to recognise so it is necessary to develop ‘a clear strategic aim…for implementation.’ (Carnall 2003, p.128) that will warrant commitment to the change by those most affected by it.

In terms of the implementation of CCSM the entities affected by the change are the GPs and their staff, the chronically ill patients, medical specialists, hospitals and other allied health service providers and both federal and state governments. The exercise
of identifying and measuring the variables in the formula needs to be carried out for each entity affected by the change to CCSM.

Dissatisfactions will include clinical outcomes of the present approach and poor utilisation of health sector resources.

All entities in the health care domain need to agree on a shared vision for the future. This vision needs to encompass the expectations of all entities affected by the change.

Each stakeholder must be assured of a safe first step. Brynjolfsson, Renshaw and Alstyne (1997) recognise the difficulty of transitioning from one state of practice to another and that ‘Often the problem is not that the proposed system is unworkable but that the transition proves more difficult than people anticipated.’ (p.38). There must be an acceptable transition to CCSM that minimises the risk to all concerned.

The final variable is the perceived costs to each entity. Both monetary and non-monetary costs need to be considered. They include training costs, information system and data management changes, administrative costs both transitional and ongoing and the additional time required of GPs and their clinical staff in the early stages of implementation. Costs to patients include their time to attend extended, scheduled consultations and the input to the program that they would not otherwise be required to provide. These costs are often difficult to estimate however they must be identified and quantified.
THE IMPACT OF CCSM ON THE GENERAL PRACTICE BUSINESS MODEL

A general practice business model is proposed to describe the inter-relationships general practice has with the other entities that make up the health care domain. The effects of CCSM on these inter-relationships will be analysed with a view to identifying the functional difficulties that may arise in the transition to CCSM.

A business model describes and illustrates both the inner elements and workings of an entity and the relationships between an entity and its consumers (patients), suppliers and allies. Many definitions and constructs of business models exist but essentially they need to describe the value offered by the entity, the value received in return and how the entity relates with other entities in the value domain (Lambert 2003). It is from the business model that the essential resources, strategies and organisational structures of the entity are derived. The generic business model attributes are listed in the table below along with the corresponding specific business model attributes of general practices.
### Table 2: General Practice Business Model

<table>
<thead>
<tr>
<th>Generic Business Model Attributes</th>
<th>General Practice Business Model Attributes</th>
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<tbody>
<tr>
<td>Value offering and to whom</td>
<td>Primary health care services offered to patients predominantly using an acute service model.</td>
</tr>
<tr>
<td>Value received and from whom</td>
<td>The GP receives a federal government-determined rebate plus a practitioner determined fee (gap) from the patient.</td>
</tr>
<tr>
<td>The firm’s position in the value domain</td>
<td>The general practice is a direct-to-patient service provider.</td>
</tr>
<tr>
<td>The nature and channels of interaction of the firm with other entities (allies) within the value domain</td>
<td>The general practice has two categories of allies with which it interacts. <strong>Other Health Service Providers</strong> who provide services directly to patients of the GP either with or without the knowledge of the GP. <strong>Federal Government</strong> via the Department of Health and Ageing which is the policy implementing body and the Divisions of General Practice that provide advocacy services for GPs to the Federal Government and that carry out Federal Government initiatives.</td>
</tr>
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</table>

The General Practice Business Model is represented illustratively in the figure below. The interactions with allies are significant characteristics of the general practice business model distinguishing it from business models of many other professional service firms. Allies provide valuable resources to the general practice and play a major role in the successful delivery of health care services. It is therefore crucial that the nature of these relationships is clearly understood along with the implications of CCSM.
Other Health Service Providers

This group includes hospitals, dieticians, dentists, asthma educators, social workers, psychologists, and community service providers such as alcohol and drug support workers, disability service coordinators, carer respite and support workers, pharmacists and education providers. These entities interact directly with the patient, most often being referred from the GP and at other times without the GPs knowledge. It also includes medical specialists who only consult with patients at the request of the GP or hospitals and provide patient information to the patient’s GP.

Although there is some exchange of information between these allies and the GP it not discursive but more of a reporting nature with the patient often not privy to the communications.
To be eligible for EPC funding GPs must demonstrate that communication with care plan participants (i.e. the patient and other health care providers) is discursive. It is not enough to simply inform care plan participants of the care plan details. Participants must have the opportunity to provide input and feedback into the care plan. CCSM carries with it the same requirements where communication between the allies and the GP must be discursive and patient inclusive.

This raises information technology issues for both the GP and the other health service providers. The aim is for all parties involved in the care of the patient to be able to contribute to the care plan and be fully informed of changes and actions taken by other members of the care team. Patient data management and communication technology must be employed to ensure data is kept up to date and accurate.

Effective chronic condition management requires the utilisation of ICT resources and the integration and coordination of the whole primary health care value domain to monitor patient care. (Celler, Lovell & Basilakis 2003)

The Federal Government

The Federal Government is represented by DoHA and Divisions of General Practice (DGP). DoHA has both a monitoring and a regulating role with respect to GPs. General practice revenue models are determined by DoHA which implements Federal Government health policies by controlling the GP rebate structure and the conditions by which GPs can claim additional funding.
The successful diffusion of CCSM throughout the primary health care sector requires a revenue model that supports CCSM. Alternative revenue models such as capitation payments and monthly, all-inclusive fees need to be considered (Berenson & Horvarth 2003; Gross, Leeder & Lewis 2003). In addition, the government must work in a collaborative fashion with health care providers to facilitate the required change rather than in a monitoring role that discourages innovation. They need to break down the ‘traditional silos of departmentalism’ and support multi-provider care teams (Maddock 2000).

The DGP is funded by DoHA to provide professional development and resources to GPs. One of the roles of the DGP is to assist GPs to work more collaboratively with other health professionals to improve the health outcomes of patients (Primary Health Care Research & Information Service 2004). Such collaboration is one of the necessary elements of CCSM.

The DGP is well positioned to channel Federal Government funded services and resources to GPs. These might include centralised ICT resources and data management services and CCSM training for GPs and their staff.

**The Patient**

The traditional relationship between GP and patient can best be described as didactic; the GP having an authoritarian role and the patient a passive role (Holman & Lorig 2000). The general practice business model has developed over time to assist and support GPs in achieving their objective, which is to provide primary care to patients largely by employing an acute care model.
Changes to the service model and the resulting revenue model impact directly on the patient. Not all patients are suited to self-management or to any form of chronic condition management. They may not be receptive to a team based approach. Patients who are content with the traditional service model may be reluctant to change and therefore must be assessed by the GP to determine whether they should continue with the traditional model or migrate to the new service model. Patients who do adopt the CCSM model, like the other care team members, must be educated in self-management. This must be provided and funded by the service model. (Fardy 2001)

**RESOURCE IMPLICATIONS FOR GENERAL PRACTICE**

The impact of CCSM on the entities that form the primary health care value domain has been examined and it has been determined that communication and information sharing between GPs and other health providers must intensify. To enable this an increase in government funding is necessary. It is also necessary for general practices to make changes internally in order to improve their service delivery and take advantage of various aspects of CCSM. The internal resources, strategies and organisational structures of GPs have evolved to support the acute care objective stated earlier. These internal resources, strategies and organisational structures will need to be modified to facilitate CCSM.

Personal interviews with six South Australian general practitioners who have had some involvement with CCSM revealed that, regardless of their inclination (or not) to implement a CCSM program, a lack of physical resources, trained support staff including practice nurses and adequate information processing and communication
facilities would prevent them from implementing CCSM programs on any large scale (pers. comm. Anonymous, 2004).

**Professional Capabilities and Human Resources**

The training and skills of GPs have been tailored to suit the acute service, didactic model, the emphasis being on what Balogun and Jenkins (2003) refer to as ‘explicit knowledge’. This equates to the GP being able to diagnose and apply the appropriate treatment to the illness. Undergraduate training of GPs in Australia has ‘remained rooted in urban medical schools and their affiliated teaching hospitals, where the focus is on acute disease’ (Balakrishnan & Finucane 2003, p.2). Treatment of chronic disease requires not only explicit knowledge but also tacit knowledge which Balogun and Jenkins (2003) say is ‘embedded in action or social practice’ and may include insight and intuition. A qualitative study of patient views conducted by Infante et al (2004) found that chronically ill patients valued GPs with strong interpersonal skills and an ability to understand the social and psychological impacts of their conditions.

The Infante et al (2004) study also supported the notion that a multi-disciplinary care team approach to chronic condition management is required. This implies that GPs require effective communication, data management and team leadership skills. Rothman and Wagner (2003) support this view.

A member of the care team must assume the role of care team coordinator. The role of the care team coordinator is similar to what Weill and Vitale (2001) call the value net integrator (VNI). ‘Value net integrators add value by improving the effectiveness of the value chain by coordinating information.’ (Weill & Vitale 2001, p.221). The VNI
business model recognises the significance and richness of communication between the VNI and its value domain allies. It also requires that ownership of the primary relationship with the customer rests with the VNI putting them in a position to know more about the customer than any other entity in the value domain.

The care team coordinator has a similar role and has similar requirements to the VNI. Arguably the coordinator role can be carried out by any of the care team members however the GP is well positioned in the primary health care domain to become the coordinator. The GP and the staff of the GP interact with the patients for a multitude of reasons including acute ailments and therefore have the potential to have more information about the patient and their needs than any other entity in the primary health care domain. In addition, the GP is well informed as to the services and products offered by the other health services and how they can assist the patient.

Traditionally GPs consult patients in isolation with support staff performing administrative functions and only very limited clinical functions. Some practices employ practice nurses to assist with clinical services, patient education and patient related administrative functions and larger practices employ practice managers to provide the business and management skills to the practice (Oldroyd et al 2003).

A characteristic of CCSM is the ongoing monitoring of patient condition with a view to preventing acute symptoms with early intervention. This monitoring service can be problematic for the GP who is already time starved and has difficulty servicing patients under the current model.
Much of this monitoring function is routine and does not require the presence of a GP or health service provider; it can be provided remotely over the Internet using commercially available software. Patients identified as being able to handle the procedures can be trained to interact with the website and expect intervention from a health service provider only when required. The website can be monitored by an appropriate health service provider(s) according to the chronic condition(s) and by the GP caring for the patient. It is necessary that the health care providers are kept informed of the patient condition and any other factors relevant to the care of that patient.

**ICT Infrastructure**

Effective CCSM requires the utilisation of ICT resources to monitor patient condition and communicate with other care-team members. (Celler, Lovell & Basilakis 2003). Internet based application programs that allow GPs to remotely monitor patient conditions and that allow for the sharing of patient health records are gradually becoming available, although some legal, technical and professional barriers persist and considerable research into the effectiveness of these applications is ongoing (Celler, Lovell & Basilakis 2003). Various web-based tools facilitate the continual exchange of data and information that is required to effectively manage chronic conditions (LeGrow & Metzger, 2001).

This implies a level of ICT that is not present in most Australian general practices. It is not likely that individual practices will have the skill and the financial resources to develop and manage their own patient databases in such a way as to allow input from allies dealing with the patient, processing of the data and dissemination of patient data.
to the relevant allies and the patient. It may therefore be necessary to outsource the ICT resources and data management. Since one of the objectives of the DGP is to encourage collaboration between GPs and other health service providers it may be appropriate for the DGPs to provide ICT and data management resources.

**Physical Assets and Organisational Practices**

GPs are constrained not only by their time but also by their physical premises. If they are to leverage their skills by utilising practice nurses for chronic condition patient consultations and management they will need to provide consulting rooms. In the short to medium term this may only be achieved through better utilisation of existing resources. It may be necessary to conduct CCSM consultations outside the existing consultation times thereby allowing practice nurses to utilise the consulting rooms when the GPs are not using them.

One of the problems GPs have in scheduling patient consultations is the unpredictable nature of the visits. Time required for a consultation can vary significantly causing long waiting times for patients and sometimes unproductive time for GPs. It may be possible to utilise the predictable nature of the CCSM consultations with a modified patient scheduling system, quarantining CCSM patient visits from their other patient consultation times thereby reducing patient waiting times and maximising the utilisation of physical premises.

**Strategy and Structure**

To a large extent the revenue model dictates practice strategy. The revenue model is a fee-for-service model, determined by DoHA. The GP is able to charge patients per
visit, the majority of the fee coming from government rebate and a small proportion (gap), if any, coming from the patient. The ability to charge patients for practice nurse services is strictly limited and administrative services provided by the practice to the patient are not chargeable. It follows that the traditional strategy adopted by GPs is to maximise the number of patient consultations and minimise practice support staff, which in turn maximises practice revenue. Information systems and administrative resources are utilised to maximise the number of GP consultations.

Innovative use of technology that supplements GP consultations (e.g. web based consultations) is not supported by the existing revenue model. Furthermore, GPs, unlike their counterparts in the legal, engineering and accounting professions are unable to leverage their knowledge and skills by utilising skilled and semi-professional staff to provide chargeable time to the practice. CCSM lends itself to the leveraging of GP skills and knowledge through the greater utilisation of practice nurses for routine and educational services to patients. Changes to the government rebate scheme will be required to support the various CCSM services provided by the general practice.

**CONCLUSION**

The merits of a multi-disciplinary care team approach to the treatment of chronic conditions are widely known however its practice is not widespread. Whether it is CCM or CCSM the point is it represents a paradigm shift in the delivery of primary health services by GPs and one that is not supported by the value delivery system that is in place and supported by DoHA. Furthermore, it has significant resource implications for GPs including core competencies of the GPs, human resource
requirements and ICT infrastructure and requires cultural shift capabilities that are not necessarily present in general practices.

This paper has taken the position that implementation of CCSM or any other multi-disciplinary, team based chronic care program does not constitute an incremental change in general practice procedures; rather it constitutes a significant innovation in service delivery requiring a high level change management approach. It has the potential to impact favourably on the Australian healthcare sector at large and therefore is not an issue only for GPs but for all healthcare sector stakeholders.

The successful, widespread uptake of CCSM will only take place if sound change management strategies are recognised and implemented. There needs to be a commitment gained from all participants and this can only occur and prevail if there is a shared vision of improved chronic condition care through CCSM, strong leadership, good communication and a sense of participation and collaboration of all parties.
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