

THE PATIENT-CENTRED MEDICAL HOME: A NARRATIVE REVIEW

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ABSTRACT

The “patient-centred medical home” is a model of healthcare delivery first conceived in the United States. It seeks to bring the values and principles of family medicine back into focus in this age of subspecialisation and fragmentation of care. This model is based on the following principles: a personal physician, physician-directed medical practice, whole person orientation, coordinated and integrated care, quality and safety, enhanced access to care and appropriate payment. Locally, should this model of care be implemented, a corresponding change in care delivery and funding model is needed. However, the patient-centred medical home has been associated with positive health outcomes at the primary care level in the United States. It will be interesting to see the potential impact on our healthcare system if such a model were to be implemented in Singapore.

Keywords: Patient-centred medical home, Personal physician, Physician-directed medical practice, Whole person orientation, Coordinated and integrated care, Enhanced access to care

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INTRODUCTION

The “patient-centred medical home” (PCMH) is a concept of North American origin. Far from being a physical space or building, it describes a healthcare delivery model that is built around the principles of family medicine. It provides patient-centred, coordinated, comprehensive care to patients of all ages, in the context of their family and community. It has the potential to deliver higher value care (enhanced quality and lower resource use) when viewed from a healthcare ecosystem level.^{1,2} At its centre is a primary care physician who leads and coordinates patient care with a healthcare team. The Agency for Healthcare Research and Quality (AHRQ) in the United States

defines “a medical home not simply as a place but as a model of the organisation of primary care that delivers the core functions of primary health care.”³ The American College of Physicians (ACP) endorsed the medical home model, describing it as a framework within which the MacColl’s Chronic Care Model (Figure 1) could be successfully implemented.⁴

This review serves to give an overview of how the PCMH operates, a brief history of this healthcare delivery model and the principles it is based on.

OVERVIEW

In a PCMH, the care of the patient is directed by a primary care physician and delivered by his/her team. This primary care team comprises minimally of the primary care physician, case manager(s) and administrative personnel. Patients are empanelled (assigned) to a Family Physician to ensure continuity of care. The primary care team ensures that all patients, regardless of age and gender, are managed comprehensively. Medical, psychological and social issues are addressed. Treatment goals are also tailored to the patient’s needs and priorities.

This team may be expanded to include other specialists, nursing and allied health professionals such as pharmacists, nutritionists and physiotherapists. If patient care requires more than one physician or traverses institutions, the team will track and coordinate the patient’s journey through the healthcare system.

As much as the primary care team is prepared and proactive, the patients need to be informed and activated. Part of the role of the team is to impart patients with knowledge and skills to manage their medical conditions.

Beyond the consult room, the patient is empowered to contact the primary physician and his/her team via phone or secured email should he/she have any medical needs. The patients are assured of same-day appointments for the primary care team to attend to their immediate healthcare needs.⁶ Members of the team, such as nurse educators and care coordinators, may also conduct home visits if needed, to help with home environment assessment or care-giver training. The patient can also be linked up with community resources such as home help or daycare services.

Electronic medical records are enablers used to organise clinical information and to track investigation results and referrals. Importantly, they help to generate a set of clinical and operational data that can be used to drive care. Clinical practices in the PCMH are evidence-based, and service performances are audited regularly to ensure that the patient receives quality health care.⁶

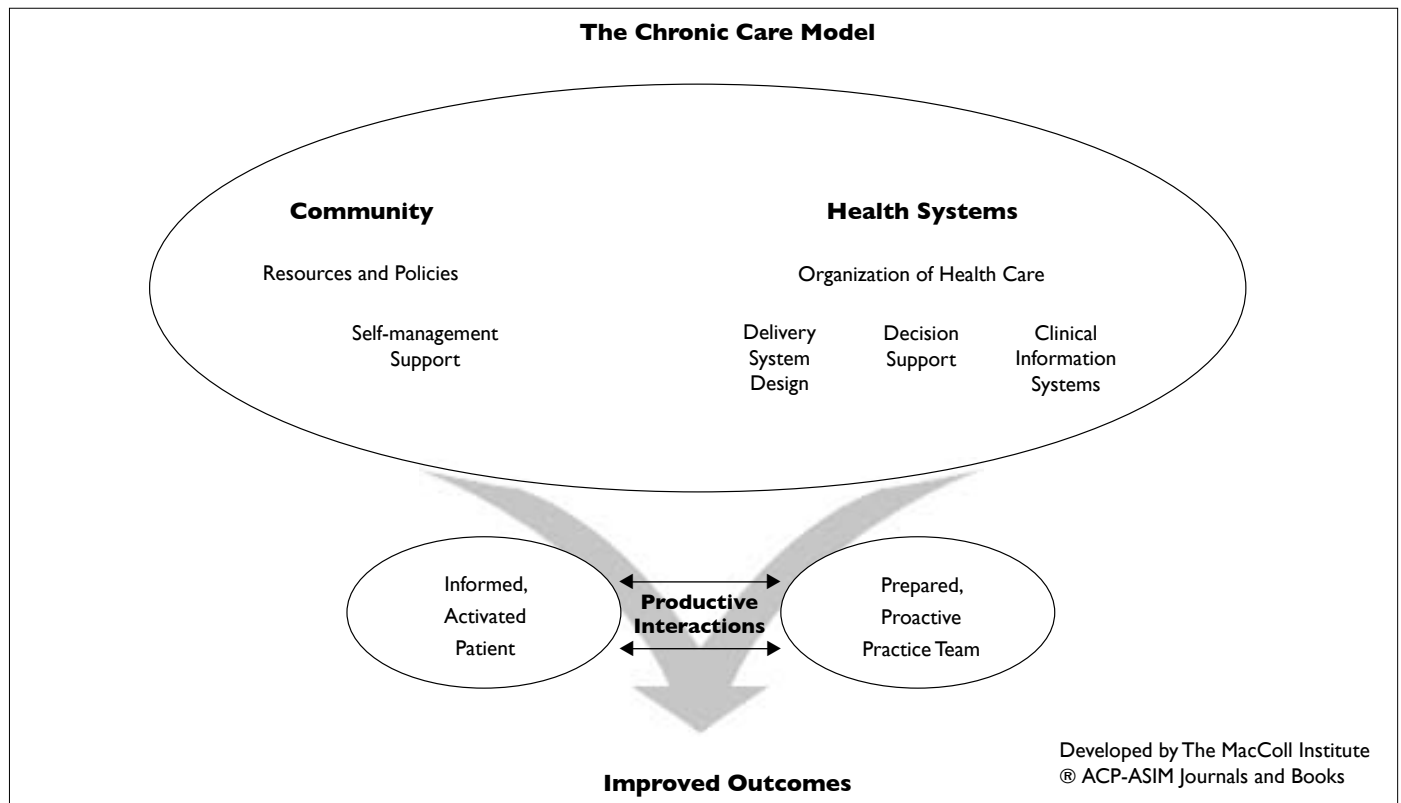
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FIGURE 1: MACCOLL'S CHRONIC CARE MODEL



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HISTORY AND PRINCIPLES

The medical home concept was first coined in a book published by the American Academy of Paediatrics (AAP) in 1967.⁷ It defined a medical home as a central source of a child's medical records, emphasising its importance with regards to children with special health care needs. Care for this group of children is often provided by different practitioners who work in disparate locations independent of each other, lacking communication and coordination. Duplication and gaps in services often result. The medical home concept sought to address these lapses. The attributes of a medical home were subsequently applied to all patients, not just to paediatric subpopulations.

In 1978 the World Health Organisation met at Alma Ata, Kazakhstan.⁸ They identified and promoted primary care as a distinct practice domain, acknowledging its central role in health care. It is the first level of contact of individuals, family and community with the national health system and the first element of a continuing health care process. This process includes first contact and continuing care over time, comprehensive care and coordination of care across different providers and settings. These are essentially the tenets of a medical home.

In 2002, the Future of Family Medicine project was initiated by 7 national family medicine organisations in the United States.⁹ Its goal was to develop a strategy to transform family medicine to meet the needs of patients in a changing health care environment. Amongst its recommendations was that

every American should have a personal "medical home" that serves as a focal point through which all individuals receive their acute, chronic, and preventive medical care services. Through their medical home, patients can be assured of care that is accessible, comprehensive, integrated, patient-centred, safe and scientifically valid.

In 2007, a group of primary care physician organisations, including the American Academy of Pediatrics and American Academy of Family Physicians, released the Joint Principles of the Patient-Centred Medical Home.¹⁰ The principles are:

- 1) having a personal physician,
- 2) a physician-directed medical practice,
- 3) whole person orientation,
- 4) coordinated and integrated care,
- 5) quality and safety,
- 6) enhanced access and
- 7) payment.

These principles are explained below.^{3, 6, 10}

Personal physician

Upon entry into the PCMH, each patient is allocated a personal, or primary care physician who provides continuous and comprehensive care. As the personal physician follows up the same patient over time, a doctor-patient relationship is cultivated. This helps the physician to empathise with and better understand the psychosocial issues which impacts on the patient's health.

Physician directed medical practice

The personal physician cannot meet the patient's health care needs all by him/herself. He/she coordinates or "directs" a team of healthcare providers who collectively take responsibility for patient care. This team can include physicians from other subspecialties, advanced practice nurses, care coordinators, social workers, occupational therapists, physiotherapists, psychologists and dietitians. Team-based care can be tapped upon to provide services such as health education, psychological counselling and medicine reconciliation. Patients have more contact points with the health care team. They receive care from a broader base of expertise and knowledge, increasing the number of management solutions.

Whole person orientation

The personal physician is responsible for providing all the patient's health care needs. This includes care for all stages of life --- acute, chronic, preventive and end-of-life care. At each stage, when prioritising the patient's problems and instituting management, the personal physician has to take into account each patient's unique culture, values, preferences and needs. Patients are also empowered by being taught skills to manage their condition at the level they choose or are comfortable with.

Coordinated and/or integrated care

The PCMH coordinates care across all domains of the health care system including specialty care, tertiary hospitals, community hospitals, nursing homes and home health agencies. As the patient journeys through these different domains, he/she is cared for by different providers. Therein lies the possibility of care fragmentation, resulting in discontinuity of treatment plans or duplication of investigations and management. This is particularly true during transitions between sites of care, such as when patients are being discharged from the tertiary hospital to a community hospital or a nursing home. Coordination of care is therefore critical. There has to be clear and open communication between healthcare providers in the different domains. This process may be facilitated by advancements in information technology. For example, electronic medical records are important enablers in health information exchange. They allow tracking and following up on tests, referrals and management at different sites of care.

Quality and safety

The PCMH is committed to service quality and clinical quality improvement. Evidence-based medicine and clinical decision-support tools guide decision-making when planning treatment. Members of the healthcare team undergo regular clinical practice audits to ensure continuous quality improvement. Patients' feedback is also sought to help improve service delivery and in meeting their healthcare expectations. Information technology is utilised to support the above processes. Publicly sharing data on practice quality and improvement is also a feature of the PCMH's commitment to quality.

Enhanced access

PCMH services are accessible with shorter waiting times, made possible by systems such as open scheduling and extended clinic hours. This also facilitates same day access for patients with urgent healthcare needs. Enhanced access also means providing care in a format other than face-to face. This includes allowing patients the option of communicating with their personal physician and other members of the healthcare team via telephone or secure email.

Payment

Payment structure of a PCMH should be based on a framework which includes:

- Recognising the efforts of the personal physician and primary care team in providing patient-centred care management services outside of the office visit. Such services include care coordination within the practice as well as between sites of care. Separate fee-for-service payments should be provided for office visits and care management services that fall outside of the office visit.

(The authors, being Family Physicians familiar with the local practice environment, appreciate the health value of such a patient centred service mindset. However, they also recognise the challenge of implementing a separate fee-for-service framework in the local setting.)

- Supporting the use of health information technology for quality improvement.
- Supporting the provision of enhanced communication access such as secure email between patient and care providers.
- Payment should recognise the value of physician work associated with remote monitoring of clinical data using technology.
- Payment needs to recognise the varied casemix in the PCMH patient population.
- Continual service quality improvements should also be remunerated.
- In the long-term, primary care physicians should be allowed to share in savings from reduced hospitalisations associated with care rendered under the PCMH model. *(The authors feel that it is timely to start looking at healthcare models from a macro perspective, particularly when the country is now moving into regional health systems (RHS) integration. Investment into primary care should not be merely looked upon as an isolated expenditure but more from the perspective of integration at the healthcare ecosystem level)*

RELEVANCE OF PCMH IN SINGAPORE:

In November 2011, the College of Family Physicians Singapore published a position paper on the Principles and Practice of Family Medicine in Singapore.¹¹ The paper defines core competencies of a Family Physician which overlap to a large extent the characteristics of care provided in a PCMH model. In the same paper, it was stated "Singapore's population is ageing rapidly and patients are increasingly likely to suffer from multiple chronic diseases with complex medical and social needs. The rapid advancement of medical knowledge and technology also requires increasing levels of specialisation of care in our health care system. An unintended consequence of such a complex healthcare system is that patients are often cared for by multiple specialists potentially resulting in fragmentation of care." Can the PCMH model transform family practice in Singapore to help meet the healthcare challenges in the coming years? Can we adapt and apply the PCMH model of care to our current healthcare landscape with the necessary changes and the funding model to support it?

The PCMH model resulted in an ongoing transformation of primary care in the United States, and has the potential to improve outcomes of chronic disease care.¹² A retrospective study was conducted over 9 years (2003 to 2011) which examined changes in patterns of service use in practices which were transitioning to PCMH models of care. In all, data from 4,595 diabetic patients were analysed. As the practices transitioned to a PCMH, the mean number of encounters with nurse educators and psychosocial services increased for all diabetic patients. The mean number of visits with a primary care physician decreased slightly. In a subsample analysis of 545 patients, mean annual levels of HBA1c decreased steadily during the 9-year study period. The findings suggest that PCMH implementation has the potential to shift resource use from the primary care physician to other members of the care team. Processes and outcomes of care can be improved this way.

However, it is yet to be seen how this model of care can be implemented locally. There are potential obstacles which may need to be addressed when implementing the PCMH model in our local primary care landscape. Primary care clinics need to be enabled with information technology not just to allow access to shared medical information, but also as tools for clinical decision-making and in auditing clinical practices. Manpower-wise, in addition to family physicians, we need more primary care nurses and allied health staff. They have to be equipped with the know-how to deliver coordinated care under this new model. Protocols have to be developed to facilitate care coordination between different sites of care, eg between tertiary and community hospitals.

There also has to be a change in mindset of various stakeholders - policy makers, funders, employers and even patients themselves - if this new model is to be adopted. This is because the PCMH will require a robust payment structure. Financial support is needed for services associated with coordination of care between subspecialty doctors,

ancillary providers and community resources. Development and implementation of health information technology also requires substantial financial support. It may be expensive to run a PCMH model now, but in the long-term, we may benefit from reduced hospitalisations associated with such a care model.

CONCLUSION

The patient centred medical home model of healthcare delivery seeks to bring the values and principles of family medicine back into focus in this age of subspecialisation and fragmentation of care. Implementation of this model of care, though financially and logistically challenging in the short term, has been associated with positive health outcomes at the primary care level, as evidenced by what took place in the United States.¹² It will be interesting to see the potential impact on our healthcare system, for example, reduction of hospitalisation rates or lowering of health care costs, if such a model is implemented in Singapore.

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