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Research

When colocation is not enough: a case study of General Practitioner Super Clinics in Australia

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Abstract. Developed nations are implementing initiatives to transform the delivery of primary care. New models have been built around multidisciplinary teams, information technology and systematic approaches for chronic disease management (CDM). In Australia, the General Practice Super Clinic (GPSC) model was introduced in 2010. A case study approach was used to illustrate the development of inter-disciplinary CDM over 12 months in two new, outer urban GPSCs. A social scientist visited each practice for two 3–4-day periods. Data, including practice documents, observations and in-depth interviews ($n = 31$) with patients, clinicians and staff, were analysed using the concept of organisational routines. Findings revealed slow, incremental evolution of inter-disciplinary care in both sites. Clinic managers found the facilitation of inter-disciplinary routines for CDM difficult in light of competing priorities within program objectives and the demands of clinic construction. Constraints inherent within the GPSC program, a lack of meaningful support for transformation of the model of care and the lack of effective incentives for collaborative care in fee-for-service billing arrangements, meant that program objectives for integrated multidisciplinary care were largely unattainable. Findings suggest that the GPSC initiative should be considered a program for infrastructure support rather than one of primary care transformation.

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Introduction

Governments in developed nations are experimenting with new models for delivering primary care services. The Patient Centred Medical Home in the USA, Family Health Teams in Canada and Integrated Family Health Centres in New Zealand represent attempts to meet evolving community needs for safe, effective and affordable services (Jackson 2012; Brown *et al*. 2013).

General Practice Super Clinics (GPSCs) were introduced in 2010 as a key component of Australia's then National Primary Health Care Strategy, with stated principles aligned to these new US, New Zealand and Canadian models (Department of Health and Ageing 2010). The Strategy aimed to improve primary care infrastructure and ease impending challenges of chronic disease, clinical complexity and increasing demand for clinical placements for future health professionals. GPSCs were intended to provide integrated and multidisciplinary services, enhance links with community organisations and optimise culturally appropriate preventive care and chronic disease management (Department of Health and Ageing 2010). The GPSC program supported construction of purpose-built facilities, which were intended to facilitate integrated care through coordination and colocation of multiple disciplines, with shared clinical governance and care protocols. GPSCs could colocate GPs, a range of allied health, mental health, visiting medical specialists, chronic disease nurses and community education. These services could be delivered on GPSC premises by a range of providers, including out-posted staff from hospital networks and community health services.

Unlike the international models, GPSCs were introduced without reform to practice funding models and lacked external support for additional health professionals. The GPSC scheme only funded construction, fit out including IT and limited start-up costs. Organisations submitted tenders to the Federal Department of Health and Ageing (now Department of Health) to construct GPSCs in over 60 predetermined locations. Once established, GPSCs had a 20-year reporting responsibility against program objectives (Table 1).

Despite an initially warm reception, the GPSC program attracted criticism from professional bodies and the medical press, with questions raised as to whether funding ($419 million 2008–12; Australian National Audit Office 2013) could be better directed to supporting existing practices (Van Der Weyden

What is known about the topic?

- Many developed countries are implementing complex organisational reforms for primary care practices.
- Australia's General Practice Super Clinic (GPSC) program aimed to support providers adopting best-practice integrated multidisciplinary primary healthcare models for prevention and chronic disease.

What does this paper add?

- The GPSC initiative provided limited support to facilitate meaningful reform to primary care delivery. The program should be considered a program for infrastructure support rather than one of primary care transformation.

2011). The program was discontinued following a change of government in 2013. Nevertheless, from 64 contracts awarded, 61 GPSCs were constructed, 60 were operational as at February 2016 and three were cancelled.

Given the novelty of the GPSC program and its stated objective of 'well-integrated multidisciplinary patient-centred care', we aimed to illustrate how the process of transitioning into a GPSC influences the development of organisational and clinical routines, particularly relating to the collaborative care of persons living with chronic illness.

Methods

Approach

The case study methodology used a rapid ethnographic approach informed by the sociological concept of routines as the unit of analysis for understanding organisational change in primary care (Becker 2004; Pentland and Feldman 2005; Greenhalgh 2008). Key concepts of routines are represented in Table 2.

As interviews often gather information mainly on 'ostensive' or explicit aspects of routines, we also employed observational techniques to access information on 'performative' or implicit aspects (Pentland and Feldman 2005). Our case study approach allowed a detailed, intensive exploration of individuals and organisations in context (Patton 2002).

Setting

Two GPSCs, sited in the Australian states of New South Wales and Victoria.

Recruitment

A typical case sampling strategy (Patton 2002) identified potential GPSCs that shared key characteristics from publicly available sources. Eligible cases (~10) had GPSC program contracts with the Federal Government, incorporated non-GP health professionals from two different professions and were situated within 100 km of a major population centre. Principal investigators selected two sites in different states that were in reasonable proximity to researchers, and organised visits to explain the study. Clinics were offered $1000 in recognition of inconvenience associated with data collection. Both clinics approached agreed to participate.

Data collection

A field worker visited both GPSCs twice, separated by 12 months, for 3 days on each occasion. During visits, we used ethnographic techniques of non-participant, direct observation and in-depth interviews with practice members and clinic leaders. The field worker and two investigators observed board meetings in one

Table 1. GP Super Clinic: national program objectives (Department of Health and Ageing 2010)

Program objectives
• Well-integrated multidisciplinary patient-centred care
• Care that is responsive to local community needs, including Aboriginal and Torres Strait Islander peoples and older Australians in residential aged care facilities and community settings
• Accessible, culturally appropriate and affordable care
• Support for preventive care
• Efficient and effective use of information technology
• Working environment and conditions that attract and retain their workforce (including teaching and research roles)
• High-quality best practice care
In addition, the GP Super Clinics were designed to:
• Operate with viable, sustainable and efficient business models
• Support the future primary care workforce by providing high-quality education and training
• Integrate with local programs and initiatives

Table 2. Key concepts of routines (Becker 2004; Pentland and Feldman 2005)

• Routines represent patterns of interaction enacted by individuals, but are determined and maintained at the organisational level
• Routines facilitate coordination and control, in part by establishing 'truce . . . between those giving and those executing the orders'
• Routines reduce uncertainty and generate stability
• Routines change over time, often incrementally, as people respond to previous iterations
• Under stress, people revert to traditional, previously learned routines, especially those most rehearsed
• Routines are embedded or codified in artefacts, such as standard operating procedures and information systems

clinic. Data collection focused particularly on the routines associated with multidisciplinary care.

Data management

Observational data for each site was organised using a validated practice environment template (Ohman Strickland and Crabtree 2007). Templates, interview transcripts, practice documents and field notes were coded using NVivo9 (QSR International, Melbourne, Vic., Australia; Richards 2002).

Data analysis

Data analysis was adapted from an approach developed in a larger Canadian study (Russell *et al*. 2009). Data were first analysed by the field worker using a constant comparative approach (Strauss and Corbin 1998), then refined at regular investigator meetings and at a face-to-face data retreat with all investigators, including senior social science, academic GP and organisational behaviour researchers. Site visits in the later stages of the study allowed practice members to check presentations of summary data and interpretations made using the routines framework.

Ethics approval

The study was approved by the Royal Australian College of General Practitioners' National Research and Evaluation Ethics Committee (approval number NREEC 10–010).

Results

Both GPSCs approached agreed to participate, and their names are fictionalised here. Table 3 summarises the characteristics of each site. The field worker interviewed 15 practice members at the 'Outertown' GPSC and 16 at the 'Hillside' GPSC, including board members, managers, GPs, allied health and nurses. They observed board and practice meetings, informal interactions among staff and between staff and patients, GP and nurse consultations and reception procedures. Boxes 1 and 2 summarise the ethnographic data.

Cross-case analysis

In both GPSCs, we mostly observed independent serial care by different disciplines in fairly typical general practices, under significant external pressure. The sites had ongoing problems in attracting either patients or clinicians, and both were preoccupied with the demands of construction, strongly influenced by the contractual requirements of the funding agreement with the Department of Health and Ageing.

Outertown prioritised the need to generate an adequate new patient base. Keen to offer a more comprehensive service, and aware of the need to augment multidisciplinary activities, the clinic rented clinical space to a physiotherapist, a psychologist, a psychiatrist and members of a community mental health team. However, these services worked in parallel with little interaction, structured by GPSC–hospital organisational agreements for specialist clinics or the use of MBS Team Care Arrangement items for private allied health. Coming from different organisations, clinicians maintained discipline-specific routines that were codified in different operating procedures and clinical information, such as hospital network systems for the mental health team.

Hillside's multi-site, hub and spoke model had few problems attracting new patients, given its location in a region of health workforce shortage. However, construction delays were profound, and provider recruitment proved difficult, especially given the preference for UK GPs, perceived as being trained in routines of multidisciplinary teamwork. Hillside attempted to form a clinical coalition of previously independent, geographically dispersed providers of varied disciplines. Where some collaborative care was achieved, it relied on established relationships between organisations or individual practitioners, allowing efficient use of MBS items. Again, multidisciplinary

Table 3. Key characteristics of GPSCs
GPSC, General Practice Super Clinic; FTE, full-time equivalent

	Outertown GPSC	Hillside GPSC	
Demography	• Established outer suburb of major city • Middle to upper socioeconomic status population	• Regional towns near major city • Lower to middle socioeconomic status population	
Local GP supply	• Well-serviced area	• Designated District of Workforce Shortage	
Structure	• Start-up clinic	• Private company purchased existing general practice for spoke GP site	
	• Single site, on University Campus	• Hub (main) and spoke (secondary) clinics	
	• Not-for-profit	• Corporate board	
	• Appointed board	• CEO active and visible in the practice	
Employment of clinical staff	• Lead GP recruited locally	• Lead GPs recruited from UK	
	• GPs and nurses directly employed; allied health through sub-contracting	• GPs and nurses directly employed; allied health through sub-contracting	
Range of professions	• 1–2 FTE GPs • 0–1 practice nurses • Physiotherapy • Psychiatry • Community mental health nursing • Psychology	• Hub Practice • 2–4 FTE GPs • 2–3 practice nurses • Physiotherapy • Osteopathy • Chiropractic • Dentistry • Dietician	• Spoke Practices • Small general practice • Exercise physiology practice • Physiotherapy practice • Chiropractic practice • Specialist eye practice • Psychology practice
Special clinics	• Schizophrenia: Clozapine antipsychotic	• Diabetes clinic in spoke general practice	

Box 1. Case study 1 – Outertown

Case study 1– Outertown GPSC

Outertown arose as a joint venture between a regional Primary Health Care Organisation, a University and a regional Public Hospital Network. Their successful tender proposed that a GPSC be constructed on the grounds of an outer urban campus of the University. The Board (comprising University and Primary Health Care Organisation senior staff and owners of two large general practices) was determined to pragmatically adapt to the GPSC program objectives.

Their vision was that the new GPSC would evolve into a collaborative, inter-professional primary care practice that could act as a placement site for medical, nursing and allied health students and GP registrars. '[The clinic gave] an opportunity to learn from one another, to enhance their collective skills and it. . . provides an environment for multidisciplinary training . . . students from three or four or five disciplines participating in team based care' [Board member 2].

After several months unsuccessfully negotiating for a nearby practice to provide sub-contracted GPs, a senior GP relocated to the clinic, accepting work as an associate and acting as a clinical lead. He was joined over the next 12 months by three part-time GPs and a GP registrar. The clinic employed a practice manager, a practice nurse and offered rooms for rental by a range of allied health practitioners.

Board members were frustrated by the constraints of government regulations as they sought to build and develop a new clinic in a relatively well-serviced area: 'The bureaucracy of the feds [*sic*] is just unbelievable' [Board Member 1]. After initial construction delays, the Board became increasingly concerned with attracting sufficient patients to become viable. The chosen site had limited street visibility and patient access, and there were several existing general practices nearby. A few months after the clinic opened, concerned about low income, the Board assumed a more active role in the day-to-day operations of the practice and temporarily removed the practice nurse position as a cost-cutting measure.

As months went by, the Board sought new ways to consolidate the clinic and build interdisciplinary chronic disease care. Attempts were made to integrate with the surrounding medical neighbourhood. Space was offered to community groups for health-related meetings, and, building on collaborative relationships with the local hospital network, three mental health programs began to run from the site.

One successful example of collaborative care was a Clozapine clinic for patients with schizophrenia. Patients had previously attended a nearby hospital outpatient clinic for monitoring and clinical oversight. These responsibilities were transferred to the GPSC and coordinated by a GP, reception, nursing and pathology staff, working in close integration. Given Clozapine's potential for causing rapid fatalities, all staff gave particular attention to immediate follow up of missed appointments or blood tests.

Notwithstanding this success, Outertown's challenges with attracting sufficient patients and staff delayed substantial moves towards systematic, multidisciplinary chronic disease care. 'The government has not been realistic . . . the expectation that there will be an influx of patients with chronic disease on day one . . . is mythical' [Board Member 2].

Whereas GPs, nurses, practice management and reception worked cohesively, other professions on site usually worked in parallel. Allied health providers brought their own decision-making and clinical routines, tending to act independently and mostly seeing patients referred from outside the GPSC. For example, the only formal interactions by a private psychologist and an audiologist were to leave a list of their patients at reception on arrival.

Collaboration between clinicians at the centre was further compromised by the absence of shared information systems. Despite an advanced clinical information system being introduced under initial funding, clinical records remained separate between professions. Frustrated by the barriers imposed by confidentiality requirements of the health services, a psychiatrist reflected that: 'I am acting like a private psychiatrist; the GP only sees a letter'.

The fee-for-service model and the nature of GPSC program funding did not adequately incentivise more collaborative routines: 'the reality of the financial funding mechanism has really hit home,. . . because there's no funding, other than through MBS [public Medical Benefits Scheme], at this stage, it does make it difficult to be a bit more innovative and a bit more diversified in the sorts of roles' [Project Manager].

collaboration was sporadic, reflecting differences in disciplinary frameworks, as demonstrated by the osteopath's uncertainty about GPs accepting her clinical judgement.

Despite these contextual challenges, both GPSCs generated examples of more integrated models of primary care delivery, driven by an awareness within both practices of the importance of generating organisational and individual routines distinct from traditional general practice care. Such routines were generated in response to differing local needs, organisational structures and history.

Both GPSCs developed a condition-specific clinic, which flourished. Each initiative arose from a desire for a 'whole of practice' approach to clinical care. Each clinic required additional enablers: leadership, clear role definition, external protocols and incentives, and identification of a distinct patient cohort. Transfer of clinical responsibility for Clozapine patients to Outertown clinic staff was initiated and supported by the regional Hospital Network, whereas the Hillside Diabetes clinic was championed by the GPSC's leadership. These features laid the groundwork for an agreed 'truce' about how practices allocated staff roles, which involved changes to performative routines. Evidence-based protocols gave a clear base for new collaborative routines to evolve; each clinic had specific requirements regarding data collection, monitoring, patient reminder systems and, to some degree, patient self-management.

Discussion

General Practice Super Clinics entered a landscape of minimal change in the infrastructure of primary care in Australia. Apart from the rise of large GP 'corporatised practices' from the late 1990s, general practice care in Australia has mainly been delivered through small, privately owned general practices. The GPSC initiative was the first nation-wide attempt to implement a new model of primary care delivery. Our in-depth investigation of the evolution of two different GPSCs shows that the constraints inherent within the GPSC program, and the lack of effective incentives for collaborative care in fee-for-service MBS items, meant that program objectives for integrated multi-disciplinary care were largely unattainable. Despite diligent and, at times, creative approaches to the implementation of new models of care, neither GPSC could embed meaningful changes in team function and chronic disease management over the 12-month period of our observations. It was difficult to embed new

Box 2. Case study 2 – Hillside

Case study 2 – Hillside GPSC

Hillside's non-clinician owner envisioned a multi-site network that could deliver a new vision of multidisciplinary care. The CEO said: 'my view of what a GP super clinic is . . . about teamwork, collaboration, communication. It's about having a patient-centred view'. The GPSC comprised a 'hub and spoke' model of multidisciplinary health practices in a network spread along 50 km of highway. GPSC program funds were mainly devoted to construction of a hub general practice in one regional town and partly to integration with a series of spokes: a purchased pre-existing GP clinic and five partnered allied and specialist health clinics (Table 2).

Initially, Hillside was developing strong links among the partners: 'we were having group meetings, social events, operations activities, but the government said just get your buildings built' [CEO]. In response to 18 months of construction delays for the hub site, Hillside 'dropped all the things that were keeping the GP super clinic virtually together' [CEO]. It was not until the hub was built that attention could return to building a team suitable for implementing a new model of care – reactivating links among the hub and spoke partners and starting anew with the hub health professionals: 'the main game is the teamwork. All the rest is . . . ho hum' [CEO].

We observed an existing cohesive multidisciplinary team within the spoke GP clinic. During construction of the Hillside hub, much energy was put into the establishment of a diabetes clinic in that pre-existing practice. A nurse was pivotal in introducing electronic patient records and data mining for patient identification. The nurse worked closely with GPs, handling referrals to specialists and allied health practitioners.

The CEO was the driver behind most critical decisions at Hillside. She saw a robust hub as being critical to a new model of care across the network and was convinced that the model depended on recruiting GPs accustomed to multidisciplinary teamwork. She preferred UK-trained GPs: 'training of Australian GPs [is] my fundamental problem . . . in their undergraduate study, they do no team-based stuff. In the UK . . . training they get performance managed on their team management' [CEO].

Her commitment to this vision was seen early in the operation of the hub, which opened with a locum GP following delays with the immigration of the UK-trained lead GP. The locum was asked to leave within a week due to the CEO's belief that he was 'not a team player'. She was 'proud of herself' for placing the aim to build a team-based culture ahead of short-term financial viability.

Well-established relationships between practitioners at the spoke clinic enabled collaborative care; for example, GPs and the osteopath worked closely, cross-referring and seeking second opinions. Although many allied health practitioners maintained separate financial and record systems, all staff were experienced at efficiently using the available MBS items for team care arrangements and health assessments, despite frustration with their limitations.

With longstanding shortages of local GPs, the new hub clinic attracted an immediate flow of patients. Unlike within the spoke GP clinic, professionals within the hub took time to trust each other. Conflict emerged between the different professions, particularly those with overlapping areas of interest. The osteopath spoke of her hesitancy about practice procedures and uncertainty whether GPs would respect her diagnoses: 'bit of an attitude that the GPs are the primary . . . and that Allied is a little bit of frosting on the side . . . feel like the priority is to make sure whatever the GPs need they get'.

routines at the individual health practitioner level when the organisations lacked the structure or capacity to prioritise these changes.

Despite emerging international literature on the varied iterations of the patient-centred medical home (Jackson 2012; Wagner *et al*. 2012; Quinn *et al*. 2013), little has been published on the GPSCs. The literature is limited to several articles that use GPSCs as a setting (Akter *et al*. 2014; Nancarrow *et al*. 2014; Bajorek *et al*. 2015), an outline of one GPSC's model (Dart *et al*. 2010) and an early evaluation of the program sponsored by the Department of Health and Ageing.

That evaluation found concerns about financial viability, disciplinary colocation rather than collaboration and the lack of tools to support multidisciplinary care (Considine *et al*. 2012). Our study confirmed that these issues were ongoing, and adds to understanding the difficulty in changing existing routines without adequate program focus. Some key issues are: the need to establish an agreed division of roles between GPs, nurses and allied health; clinicians under pressure may resist a shift from existing routines of working in a single discipline; it takes time to change routines in busy primary care practices; clinical information systems and standard operating procedures vary between organisations and disciplines.

The GPSC program can be considered in the context of worldwide initiatives to reform the organisation and delivery of primary care services. Jurisdictions have implemented new delivery models (Rosser *et al*. 2010), trained new primary care providers (DiCenso *et al*. 2007) and embedded frameworks of prevention, integration and team-based chronic disease management (Coleman *et al*. 2009). An associated literature is emerging on how primary care practices can best be transformed to accommodate these systemic changes (Wagner *et al*. 2012).

International experiences indicate that practice transformation towards multidisciplinary care takes time, as clinicians and other practice staff adjust established practices and routines (Rämgård *et al*. 2015). Success requires: embedding principles of evidence-based care, relational continuity and patient-centred care; systematic approaches to delivery of comprehensive clinical care (Wagner *et al*. 2012); and active, visible leaders, explicit staff training and quality data (Quinn *et al*. 2013). A supportive medical neighbourhood, quality improvement collaborative groups and outreach facilitation seem to assist. Several authors have emphasised the importance of alignment or re-organisation of financial incentives and how meaningful reform may require 3–5 years (Nutting *et al*. 2011).

Although both GPSCs had strong clinical leaders, willing staff and an organisational vision of a broader model of care, they made minimal progress towards establishing routines supporting integrated multidisciplinary patient-centred care. As the lack of institutional support left practices to fend for themselves, any moves to the system objective of integrated multidisciplinary patient-centred care were serendipitous or as the result of individual passion, interest and of the occasional opportunities provided by the local context.

Limitations

Transferability of findings is limited by the low number of participating clinics, although they were in different states and with different governance structures.

Data collection had a short timeframe, therefore limiting assessment of their evolution, although we could make longitudinal comparisons over 12 months.

Use of a single observer could bias interpretation. However, principal investigators also visited each site several times and emerging findings were regularly reviewed by the research team, including two in-depth data analysis retreats. Case analyses were presented to each clinic.

Our ethnographic approach was well suited for capturing clinic routines and behaviours. Epidemiologic methods would be required to examine the influence of practitioner orientation, practice structure and local context.

Conclusions

Collaborative inter-professional routines develop slowly and require individual, practice and system support (Rämgård *et al*. 2015). Our data showed how preoccupation with financial viability at two new GPSCs could conflict with other objectives, significantly slowing development of collaborative routines for chronic care.

Our data has implications for policymakers and researchers interested in primary care transformation. We suggest that, given the lack of meaningful support for real transformation of the model of care, the GPSC initiative should be considered a program for infrastructure development rather than one of practice-based primary care reform. Future Australian attempts to modify similar aspects of the delivery of general practice care should be mindful of the emerging evidence from other nations where primary care transformation is viewed as a complex domain (Bodenheimer *et al*. 2014) requiring enduring external supports for integrated multidisciplinary patient-centred management of chronic disease (Lebrun-Harris *et al*. 2013).

Author contributions

G. Russell conceptualised the study. R. Lane carried out the field visit, analysis in NVivo and was primarily responsible for drafting the manuscript. G. Russell, E. A. Bardoel, N. Zwar, J. Advocat, P. G. Powell Davies and M. F. Harris, participated in its design, coordination, analysis and helped to draft the manuscript. All authors read and approved the final manuscript.

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