Primary Care and Integration

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Guest editorial

Keeping the faith in integration and primary care

The integration of care is a policy objective that unites most health care systems. It is universal in that it transcends differing system architectures that exist globally, such as those based on state funding and delivery, social-insurance-based systems or private-sector-led health care markets. Put another way, few if any health care systems claim to offer care that is sufficiently “joined up” and designed around the needs of patients and population. This is even the case for systems with developed and comprehensive primary health care—a sector that evidence tells us should support care integration. For example, Harvey et al. within this edition highlight that older people and their carers continue to experience difficult transitions between secondary and primary health care services. Such challenges remain despite significant research highlighting the frustration and anxiety related to such transitions (see e.g. Ellins et al., 2012).

A brief review of the literature reveals numerous studies and systematic reviews that suggest that integrated care can often (though not always) deliver higher quality patient experience, better clinical outcomes and (sometimes) lower health care costs. Indeed, in this edition of the journal we present further examples of the potential for primary care led initiatives to deliver benefits. These papers fall into two broad types. First, are specific initiatives aimed at changing a model of care for specific patient cohorts, such as joint GP-specialist case conferencing for Type 2 diabetes in Australia (Meyerowitz-Katz et al.) and nurse interventions to support isolated elders in South East England (Longstaff et al.). Second, are broader attempts to construct models of inter-professional working based on defined communities such as the Primary Care Home in England (Lewis and Chana), the Health Care Home in New Zealand (Cumming et al.), community-governed primary care organisations in Ontario, Canada (Rayner et al.) and systemic attempts to deliver population health globally (Miller et al.).

Given the broad consensus around the aims and a body of evidence in support, it might be considered curious that the widespread adoption of integrated care has not already occurred and that the exhortations to deliver more integrated care continue. Diagnoses of the obstacles to care integration in practice are well established—financial incentive systems that reward “disintegrated care”, a political (and therefore resourcing) focus on hospitals as the symbols of health system virility, a lack of inter-professional training, shared information technology and so on. Less attention has been given to how whole health care systems reorient themselves from one dominant mode of working to another: we know very little about what is needed for those charged with the planning and delivery of care to make this shift.

The answer to this question is, of course, complex and multifactorial. Some elements (as we suggest above) have been comprehensively considered. However, there are others that we feel worthy of more attention. In particular, four factors stand out as important in supporting health care systems to make this reorientation:

1. A clear conceptualisation of the elements of an integrated care system (rather than taxonomies of integration types, which abound). In particular, how might an enhanced primary health care sector act as a component of such a system; currently primary health care development and care integration are often conflated.

2. An improvement and transformation process and resources that is truly multi-sectoral. Currently, it is often the case that the transformation skills and resources are predominantly located within hospital organisations (and lest concentrated in primary health care).
An approach to evaluation that supports whole system change. The literature is strong in terms of the effectiveness of specific interventions in different care contexts and has many examples of evaluations focussing on how to successfully bring about change. However, the literature offers far less in terms of how interventions in combination or broader system-wide changes might affect patient experience, clinical effectiveness and cost. It is this perspective that is most needed by those planning transformative change.

A political or purchasing entity responsible for governing and funding of primary health care with the strength of character to allow the new approach to have sufficient time to be sufficiently implemented that its value can be properly assessed.

Sharing the concept

Most people recognise the term “primary health care” in association with community (i.e. not hospital) based care. Beyond this affiliation with health, and being outside hospital, there is little consensus. Generalist medical practitioners will usually be central, and often accompanied by nurses and receptionists to configure a general practice. Dependant on the system, this is where many will draw the boundary around primary care. Pharmacy, dentistry, physiotherapy, counselling and community nursing are other health care professions are also commonly included, dependant on the individual and the health system with which they are familiar. Beyond which professionals are included in any conceptualisation of primary care, there is considerable diversity in how their work is organised and governed. Whilst this may seem of only academic concern, it does profoundly affect the way in which patients can access such services. A capitation-based model with no patient fees is a quite different arrangement to fee-for-service with patient charge. These characteristics also have a strong influence on what outcomes or activities the professionals will be rewarded for undertaking or achieving.

There already exists then a lack of clarity about what we mean by primary care. This is only going to intensify as we move into the enhanced models currently under development—health care homes, primary care homes and multi-speciality community provider labels will provide further opaqueness in an already muddled lexicon. The commitment within many of these models to expand or at least connect primary health care services into a wider set of community resources will add further confusion. Where for example, are the traditional boundaries between primary and social care, or between clinical care delivered by formal health bureaucracies and support provided by volunteer-led charities? In many ways, this loss of boundaries is to be welcomed if it is associated with a loss of barriers and a more seamless experience for patients (or should that be service users, customers, clients or people) and their families. If, however, it leads to a lack of certainty about who is responsible for what, and how these models can be best nourished, then it will detract rather than add to the vision of a more holistic model.

Language also has significance beyond the purely descriptive. How we describe something also reveals, and indeed influences, our perceptions. If we start to denote services such as befriending, exercise, education and personal support as primary health care services that can be prescribed, we are identifying these as belonging to the health sector. This is important as it could potentially disenfranchise those organisations best placed to deliver such services. It could also change how people relate to these interventions—for some the endorsement of their doctor will encourage then to consider something new but others may see community organisations as no longer independent. Furthermore, a more pessimistic perspective could be that extending the remit of primary care will extend the power of general practitioners. Such is the centrality of this profession within the functioning of primary care that they are the dominant force with whom even governments meddle with cautiously. This means that they
are often the instigators or the terminators of health care reform. For these new models to work, we do need doctors to be active participants but we also need a sharing of power so that communities and other professionals are able to also make a valued contribution. The language needs to reflect this position.

Making the change
Many initiatives now take a quality improvement approach, emphasising the improvement in quality of care and benefits for patients that might be gained from reform. This approach is a key means of garnering the support of doctors (in particular) for change. It also often now embodies a range of principles and processes drawn from various change management theories and practices. The key factors required for successful change are increasingly well specified—a clear rationale (or impending crisis) requiring change; strong central and distributed leadership; attention to project management; good resourcing including ensuring those affected have time to learn, implement and adapt to change; ensuring new roles are not simply added to existing heavy workloads; and providing evidence along the way to demonstrate the effects of change, in relation to staff work, workloads, experience and satisfaction; clinical outcomes; patient experiences and outcomes; and health system effects (such as reductions in hospitalisations and use of emergency department services, and cost-effectiveness). There can, however, be tensions between the “ra-ra” approach needed to bring about support and change, and the reality that change can take time and that not all initiatives will be successful all of the time.

It is clear that in most health systems there is an imbalance in resources between hospital and primary care sectors, and between health and social care sectors. This pertains not just to service delivery but to organisational capacity and the infrastructure needed to create change. Moreover, primary care is a sector often dominated by relatively small, independent organisations that simply do not have the capacity to transform themselves, let alone take responsibility for wholesale system change. Similarly, much of social care is provided by community and voluntary organisations rather than the huge public institutions that often deliver acute services. Typically, too, it is hospitals that get new government infrastructure spending, with the primary and community care sectors having to rely on their own, limited resources for new investment.

It is tempting in this context to therefore see hospitals as the natural leaders of change. And with hospitals in many systems struggling to cope with the demands of ageing populations, perhaps now is the time when investment in “upstream” services might get universal approval. Yet this risks disabling rather than empowering primary care. Instead, a system-wise transformation capability and capacity is required, along with a strengthening of primary care organisations so that they may take a seat at the table. It is this principle that underpins approaches such as the primary care home that are explored in this edition of the journal.

Evaluating for improvement
The challenges our health systems face are great and we face ever rising expenditure on health care and continued poor outcomes—especially for some populations—if we do not try to deliver a better mix of more integrated services. Yet not all key initiatives are evaluated, or they are not evaluated well, and too many evaluations are inadequately funded over too short a time period to tell us if our approaches to change and our new models of care are making the differences we want to see them make. Scarce research and evaluation funding and expertise is being wasted on too many small-scale and very time-limited pieces of work.

This approach has two obvious disadvantages. First these very specific evaluations often look at interventions in isolation and not in the context of any broader environmental factors (such as changes to financial incentives or local accountability). It is therefore
difficult to understand how their impact may change if a particular intervention was introduced as part of a wider range of service reform (e.g. as part of a sustained effort to improve proactive community-based care). Second, the requirements of research funders often mean that study periods are relatively short before conclusions are reached. This can mean that results are judged at precisely the time when “implementation pains” are most acute. Rarely are interventions revisited to see if, in maturity, results have changed.

So those seeking to reform care have to rely on an imperfect literature that provides little of the guidance that they seek: what combinations of interventions might together change existing patterns of care; and what supportive environment is needed so that these interventions might succeed in the medium and long term?

Too many systematic reviews, for example, rule out too many papers on the grounds of poor quality research for us to be confident that our evaluation resources are being used well. This is not to say that the only approach is to use randomised controlled trials; on the contrary, these are expensive and focus on too high a degree of consistency in service delivery to always be useful for health services research, especially when we know that we need a degree of tailoring in our service delivery if we are to have health professionals engage with change and to have services meet local needs. But we do need more studies that match patients and study change before and after changes have been made; with the changes settled in. Therein lies a problem: how do we get changes introduced and settled in if we do not have the evidence to back them? Perhaps we need an approach with more rapid evaluations of many initiatives and more in-depth support for those that show initial promise.

Keeping the faith
The models and improvements described in this edition are the latest in a long tradition of trying to improve and extend primary care. National or regional governments (depending on the system concerned) have often driven the more radical changes in particular. It is hard not to conclude though that governments are frequently better at suggesting new reforms than they are at implementing them. In particular, they appear to suffer from acute impatience that means that initiatives do not have time to embed so that their worth can be understood (see e.g. Ling et al., 2012). England is a good (or should that be bad) exemplar. Primary care reforms in recent times include practice based commissioning, primary care groups/organisations/trusts and clinical commissioning groups (with the latter widely rumoured to be on the way out later this year). Care trusts were once promoted as the expected vehicle for health and social care integration but were scrapped to ensure purity in the purchaser-provider relationship (Miller et al., 2011). This division is now being blurred through the introduction of sustainability and transformation plans and integrated care systems. This eagerness to reform also means that the results of evaluations are often not known before a policy is scrapped or extended (for example, the total purchasing pilots, integrated care pilots, integrated care and support pioneers). Australia is another serial reformer with recent vehicles including divisions of general practice, super clinics, medicare locals, and primary health networks. On the other hand, the community health centres in Ontario are an example of a model that has been allowed to develop over time. Whilst each centre has some uniqueness due to its connection with its population the model has evolved into a series of principles which are reflected by all. Another with a more stable approach was New Zealand, in which primary health organisations and district health boards have been in operation since 2001/2002. This stability may have been one factor that is enabling the local development of a health care home model of care that is currently slowly advancing across the general practice landscape. Interestingly, however, as this editorial goes to print, the New Zealand government has announced an 18-month review of the health system—seeking to identify what structures might support an increasing emphasis in particular on primary health care.
It is always easy to criticise governments. Whilst this is a legitimate and necessary activity, it must be balanced by an awareness of the complex and uncertain task faced in improving a population’s health and well-being within available resources. Furthermore, politicians respond to the often impatient and unforgiving nature of the populace. Differences between national psyches and the democratic relationship will contribute to the patience that governments demonstrate. Put bluntly, if we are quick to believe the spin of opposition parties, then we can expect knee-jerk reactions. But politicians must also take some of the blame, as they find it easy to be as unforgiving in opposition as they were seeking of forgiveness when in government. The opportunity to damage their rivals generally outweighs the benefits for all of cross-party consensus for sustained effort on health reform. Beyond a change in political behaviour (which seems unlikely in the foreseeable future), there are other improvements to be made. More realistic aspirations in terms of scale and timing of impacts would be one, along with an honest appraisal of implementation and its connected challenges. Robust, independent and longer-term evaluation is a must, with a willingness to publish results and learning (however bad). More deliberative styles of government may also help, as this will provide legitimacy outside of elections and sophistication in understanding.

Conclusion
There are many challenges that will hinder health care systems achieving a transformed primary care system which successfully integrates care around individuals, families and communities and which provides an informed context for improvement and innovation. Our experiences of past reforms mean that we can identify what these challenges will be, and more importantly, the ways in which they can be overcome. Doing so will require co-ordinated and collegiate action between politicians, managers, professions and communities. It will require a ceding of influence, resources and traditional certainties and perhaps this is the real challenge—how much do we want integration and are we willing to give up to ensure that it becomes a reality?

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References


Note from the new Editor-in-chief

After more than five years, the journal is changing its editorial team. Jon Glasby and Robin Miller have led the journal since 2012/2013 pass the baton on to a new team. During their highly successful tenure the journal built on its strengths yet also embarked on new and exciting journeys.

When I spoke to Jon Glasby about the journal for the first time, he stressed the journal’s focus on practice and its close relationship with practitioners. This has always been a unique feature of the journal and one that came with challenges that Jon and Robin were eager to embrace. Under Jon’s leadership, the journal maintained a strong emphasis on how integrated care affects the community of practice. It was Jon and Robin’s conviction that it is important to capture how things look from the bottom up, not just from the top down. This was even more relevant as integrated care was often imposed through central policy rather than organically emerged from local efforts. Their approach has been vindicated over time. The voices of those who “do” integrated care have become ever more important in the conversation.

The result is a journal that prides itself on efficient peer review and speedy editorial decisions. The turnaround time for papers from submission to editorial decision remains one of the lowest in the industry. Achieving this requires dedication, expertise and discipline, something that both Jon and Robin provided consistently over the last five years to the benefit of the journal, its authors and readers.

Just as the journal changed over time, so the field of integrated care has undergone considerable changes. Looking ahead it is important that the journal capitalises on its excellent position in the field and retains its unique character and qualities. There can be no doubt that the change of editorial team will bring challenges as well as opportunities. It is up to the new editorial team to embrace these with the same skill, knowledge and vision as Jon Glasby and Robin Miller, and prove themselves to be worthy guardians of their editorial legacy.

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Transforming primary care: scoping review of research and practice

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Abstract
Purpose – The purpose of this paper is to reflect on research evidence and practice experience of transforming primary care to a more integrated and holistic model.
Design/methodology/approach – It is based on a scoping review which has been guided by primary care stakeholders and synthesises research evidence and practice experience from ten international case studies.
Findings – Adopting an inter-professional, community-orientated and population-based primary care model requires a fundamental transformation of thinking about professional roles, relationships and responsibilities. Team-based approaches can replicate existing power dynamics unless medical clinicians are willing to embrace less authoritarian leadership styles. Engagement of patients and communities is often limited due to a lack of capacity and belief that will make an impact. Internal (relationships, cultures, experience of improvement) and external (incentives, policy intentions, community pressure) contexts can encourage or derail transformation efforts.
Practical implications – Transformation requires a co-ordinated programme that incorporates the following elements – external facilitation of change; developing clinical and non-clinical leaders; learning through training and reflection; engaging community and professional stakeholders; transitional funding; and formative and summative evaluation.
Originality/value – This paper combines research evidence and international practice experience to guide future programmes to transform primary care.

Keywords Integrated care, Primary care, Transformation, Health care home

Paper type Literature review

Introduction
Internationally there is a growing aspiration to rebalance health care systems towards primary rather than secondary care, and for primary care in turn to move towards a population-based model (World Health Organisation, 2015; European Commission, 2017). This reflects common concerns regarding ageing populations, increasing numbers of people living with multiple long-term conditions, negative impacts of lifestyle choices including diet, activity and alcohol consumption, and continuing inequalities within society. There is a recognition that whilst health care services provide a vital contribution, this is only one component of improving the health and wellbeing of communities. Even well-funded health care has a finite capacity and will sit alongside other sources of information, influence and support. Constructive engagement with wider community resources and broader societal institutions is therefore necessary. Peoples’ expectation of the services that they receive or purchase is also changing. Flexibility of access, connection through mobile technology and
transparency of information are becoming the norm within other industries and sectors. Personalised health care will require services that are available at evenings and weekends, connected across sectors and settings, and able to communicate through different media. This will in turn require professionals that are comfortable with such new relationships and processes (Frenk et al., 2010; Needham and Mangan, 2014).

New, or at least enhanced, models of primary care are seen as a response to these demographic and societal changes through providing pro-active, holistic and patient-orientated care. They are often designated by terms such as “primary/health care/medical homes” or similar concepts[1]. Despite variation between national contexts, there is remarkable similarity in their core principles – designated populations of about 30-50,000 to provide sufficient scale whilst maintaining connection with communities; inter-professional teams that include the development of new roles to complement traditional disciplines; stratification of need within a population to enable targeted and appropriate responses; and supporting people to take responsibility for their health and access community-based resources. There remains though uncertainty about how best to implement these in practice to ensure genuine and sustained improvements in personal well-being, population health and use of resources (Berwick et al., 2008). This paper outlines current knowledge regarding such transformation in primary care from research literature and international practice experience.

Methodology
The paper is based on a scoping review of primary care transformation (Arksey and O’Malley, 2005; Anderson et al., 2008) undertaken as part of a critical review of an innovation programme. The methodology combines research evidence with international experience of undertaking primary care transformation. The structure of the scoping review is set out below and whilst these are presented in linear order in practice, there was interaction between stages (Dijkers, 2015). Throughout there was engagement with primary care stakeholders to define the questions of interest, seek response to emerging findings and identify other areas for investigation:

1. Clarification of research questions through interviews with primary care stakeholders. This included policy makers, national health bodies, professional associations, and local health oversight boards.

2. Identification of relevant studies through a literature search by a specialist librarian (Box I).

3. Selection of studies that were based on primary research or reviews of research in line with the inclusion/exclusion criteria (Box I). This resulted in 36 articles being included in the final review. To these articles were added notable articles from peer-reviewed literature connected with large-scale change in health and care systems.

<table>
<thead>
<tr>
<th>Box I. Overview of literature search</th>
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<tbody>
<tr>
<td>Search terms: transformation OR transform OR (transform$ adj3 care AND “primary care” OR “general practice” OR “general practitioners” OR “general practice” OR “primary healthcare” OR “family medicine”</td>
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<tr>
<td>Databases: HMIC; Social Policy and Practice; CINAHL; Web of Science; ASSIA; Cochrane; SCOPUS; and SCO</td>
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<tr>
<td>Inclusion: published between 2007 and 2017; English language; based on primary research; and peer reviewed</td>
</tr>
<tr>
<td>Exclusion: commentary rather than research based; not in English; and not focused on primary care transformation</td>
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(4) Practice experience of undertaking transformation in primary care was gained from those who have led and/or evaluated related projects. A long list of international case examples were identified through the European Forum for Primary Care and the primary care networks of the Health Services Management Centre. The background of potential case studies was gathered through initial discussion via e-mail/or telephone interviews. Final case study selection was based on demonstration of sufficient progress in implementation to provide practical insights of primary care transformation. Further documentation (e.g. strategies, evaluations, published articles) was obtained on each of the case study and between one to three semi-structured interviews completed with people leading and/or evaluating the transformation.

(5) Charting of data from the literature and practice experience by a team of three researchers using nVivo software with regular discussion and clarifications of emerging themes.

(6) Synthesis of research and practice experience which was presented to primary care stakeholders through a series of three interactive workshops. Stakeholders included clinicians, practitioners, community representatives, managers and policy makers. Following these events further data were gathered as required and synthesised into the final analysis.

This paper is structured around the main themes identified through the analysis with each theme synthesising evidence from research and insights from practical transformation programmes. The case studies of transformation are identified through their title being displayed in italics (Table I).

Learning from evidence and practice

*Transformation not just improvement*

The new model of primary care requires new procedures and accountabilities to ensure that the health, care and other services are appropriately organised and incentivised. Quality

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<tr>
<th>Case study</th>
<th>Locality</th>
<th>Overview</th>
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<tbody>
<tr>
<td>Pinnacle Midlands Health</td>
<td>New Zealand</td>
<td>Introduction of holistic model within general practice through co-ordination, new roles, technology, and access centre</td>
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<td>Network</td>
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<tr>
<td>Achieving Clinical Programme</td>
<td>England</td>
<td>Clinically led pilots seeking to achieve more holistic care across primary, secondary and social care</td>
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<td>Wellbeing Enterprises</td>
<td>England</td>
<td>Asset-based working through person centred reviews led by social enterprise</td>
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<td>Shared Care for Diabetes</td>
<td>Australia</td>
<td>Acute – primary care collaboration to enable more community-based care for patients with diabetes</td>
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<td>(Beacon)</td>
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<td>Consonci Castelldefels</td>
<td>Spain</td>
<td>Increasing roles of primary care nurses and reception staff to enable more team-based care</td>
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<td>Agents Salut (CASAP)</td>
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<tr>
<td>Maison de Sante</td>
<td>France</td>
<td>Inter-professional team working in primary care in shared premises</td>
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<tr>
<td>National Association of</td>
<td>England</td>
<td>Integrated health and social care model seeking to both personalise care and improve population level outcomes</td>
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<td>Primary Care Medical</td>
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<td>Home Programme</td>
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<tr>
<td>British Heart Foundation</td>
<td>Scotland and</td>
<td>Patient led model of holistic primary care for those with long-term conditions</td>
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<td>House of Care</td>
<td>England</td>
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<td>Ontario Community Health</td>
<td>Canada</td>
<td>Inter-professional team governed through community engagement</td>
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<td>Centres</td>
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<tr>
<td>MacMillan Cancer Improvement Partnership</td>
<td>England</td>
<td>Strengthening primary care to enable more holistic and primary care orientated cancer pathway</td>
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Table I. International case examples
improvement, i.e. continuous efforts to improve processes through exploring problems, applying remedies, and monitoring impacts, is also important (Irwin et al., 2015). However, an incremental approach which focuses on technical logistics is not sufficient (Nutting et al., 2009; McGough et al., 2017). A more fundamental redesign is required which entails a new vision of its purpose and contribution to the wellbeing of society (Homer and Baron, 2010; Cronholm et al., 2013). This requires medical clinicians, other professionals and primary care organisations developing new "mental models" or "paradigms" about their professional role. It entails a change in emphasis which puts the interests of people and communities at the centre of their work. New relationships between professionals and their organisations will be required in which there is a willingness to be flexible and adaptive beyond their individual interests and histories (McGough et al., 2017). Therefore, it is a question of "transformation" rather than steady enhancement.

In Achieving Clinical Excellence, general practices were given autonomy to deploy the additional funding to respond to the priority needs of their local populations and put in place the enablers for community-based diagnosis and treatment. Despite this being an explicit principle of the programme, it took the general practices several weeks to accept that they had such flexibility. It was only fully recognised following several discussions with the commissioners in the safe environment of a learning set. The Beacon initiative found that a major implementation barrier of the enhanced primary care based diabetes service was the perspective of the general practitioners. If they were not in agreement with the new arrangements then they would be unlikely to recommend that patients should access the enhanced primary care service (Jackson et al., 2017). Based on extensive work in North Carolina, three stages of transformation have been suggested – an initiation phase, an intermediate phase, and an advanced phase (Donahue et al., 2013). Each phase has distinct motivators based on internal and external influences. The initiation phase is the process through which practices decide if they are willing to move towards the transformed state. External motivators include professionals bodies, peer comparison and incentive structures. Internal motivators include a wish to “do the right thing”, recognising an opportunity to improve patient care, and becoming more efficient. Having decided to participate not all practices in this programme went on to achieve sustainable transformation (defined as demonstrating substantial improvement in at least three quality domains). Doing so was commonly associated with collective reflection on data, actively including external improvement experts and participating in multi-disciplinary networking.

Clinical engagement
Primary care involves many more professionals and services than generalist medical clinicians but there is no doubt that they are often at the centre of its organisation and delivery. Their relative autonomy, professional networks and status within society mean that any large-scale change in health care has to consider how to positively engage them in the process (Best et al., 2012). Transformation requires these well-educated professionals to find new ways to communicate and interact with each other as well as with other professionals (Crabtree et al., 2011). This necessitates time and facilitation to reflect on what they do and why they do it. However, the combination of pressured workloads, a culture of autonomy and scepticism on its effectiveness can result in doctors being resistant to investing in such reflection. In Midlands Health Network, clinicians were able to spend time away from their clinical practice to think through the change process. Peer groups were an invaluable forum for undertaking this reflection and in sharing learning about how to overcome common challenges. Team-based approaches help to provide additional capacity and more holistic care but can be particularly challenging for doctors (Nutting et al., 2009; Cronholm et al., 2013; Levesque et al., 2017; McGough et al., 2017). This is connected with "deeply held beliefs that PC doctoring was based in a strong, trusting relationship between a
patient and a physician” (Russell et al., 2017, p. 23). Changing this traditional arrangement requires doctors to reinterpret their role as contributors to a primary care team. This is helped by demonstrating that their work can be safely diverted to other, educating them about the role and competences of other professionals and providing opportunities to directly engage with these other professionals (McGough et al., 2017).

Team working often requires doctors to develop new skills, and in particular new leadership skills (Nutting et al., 2009; Levesque et al., 2017). Traditionally, they were able to adopt authoritarian approaches in which other professionals were instructed as to the required actions to be undertaken. Instead a team needs to be fostered by more facilitative leadership which encourages the contribution of all members. Medical clinicians owning the practice in which the team operates can lead to their continued domination of inter-professional meetings (Cronholm et al., 2013; Russell et al., 2017). In Ontario, Community Health Centres employ all the clinical staff which has helped to develop more team-based cultures. If other professionals and staff within primary care experience their contributions as being valued then this can level traditional hierarchies and encourage further ideas for transformation (Hilts et al., 2012). In the MacMillan programme, pilot sites were required to identify non-clinical champions as well as clinical champions for change within a practice. This provided an unusual but welcome opportunity for practice managers to lead a clinical transformation.

Context
Context is widely recognised as an important factor in successfully implementing transformation (Greenhalgh et al., 2009; Health Foundation, 2014). This is equally true in primary care. For example, the Agency for Healthcare Research and Quality provided grants to 14 different projects that had adopted Patient-Centred Medical Homes to enable them to undertake an evaluation of impact and the connected change processes. The review of these evaluations conclude that “the context within which transformation occurred in the practices studied is critical to understanding their success. Contextual factors are diverse and may include both internal and external factors, many of which may be outside the direct control of the practice” (McNellis et al., 2013, p. 54).

Internal factors include a sufficiency of staff and other resources and information systems to support electronic patient records and accurate performance monitoring (Fontaine et al., 2015). Small practices can find it particularly difficult to generate enough capacity to undertake the necessary actions (Goetz Goldberg, 2012; Scholle et al., 2013). Beyond these practical factors, the attitude of staff towards the transformation and internal relationships are central to positive engagement. The process is made more difficult by personality clashes between clinicians and others, an authoritarian leadership style that does not encourage wider engagement, and low-team cohesion (Arar et al., 2011; Hung et al., 2017; Miller-Day et al., 2017). It is easier for a primary care service that is stable, has sufficient resources, experience of quality improvement and good internal relationships to successfully transition to the transformed model. Better implementation is associated with a belief by the staff concerned that the model has value and builds on existing good practice (Wise et al., 2011; McNellis et al., 2013). This increased the likelihood that clinicians and managers will be willing to commit the additional time, be actively looking for opportunities to learn and be ready to accept associated risks. However, if the new approach is seen as being imposed externally and an unnecessary disruption then the opposite is true. This again underlines the conundrum that it is harder to undertake primary care transformation with the services that are in most need of undertaking such change. This was evident in the Beacon programme, in which the practices that had previously been open to hosting external clinicians and other practitioners were comfortable in greater collaboration with the secondary care diabetes specialists. Similarly the inter-professional model adopted by CASAP floundered when it was imposed on other practices by the Catalan Health Institute.
These practices had not undergone a similar development process and, unlike the staff within CASAP, had not chosen to work in such an environment. This contrasts with the approach taken by the National Association of Primary Care in which general practices volunteer to be part of the programme but do not receive any funding as such (Kumpunen et al., 2017).

External factors out with the control of the primary care service also play a major influence. Monetary incentives are not sufficient by themselves to generate transformation but the financial structures in which practices operate can encourage or block more team-based working (Fontaine et al., 2015; Wise et al., 2011; Russell et al., 2017; Wagner et al., 2017). For example, GP Super Clinics were introduced in Australia as part of the National Primary Care Strategy in 2010. They provided purpose-built facilities that could host multiple disciplines which commonly included mental health professionals, community-based nursing, acute specialists and community education providers. The expectation was that co-location would enable the development of shared governance and clinical protocols which in turn would lead to more co-ordinated care. In reality, the continuation of fee-for-service billing meant that clinicians were not able or encouraged to adopt more team-based practice (Lane et al., 2017). The Macmillan programme only provided limited funding for participating practices but this was seen as symbolically important and a recognition that they were taking on additional responsibilities. The French Ministry of Health and Social Affairs introduced a payment for team-based working between primary care professionals on top of the existing fee-for-service payments. This accounts for almost 10 per cent of group-based practices income in the Maison de Sante and funds the physical estate, management time and multi-disciplinary reviews of individuals with more complex needs.

The political environment, views of professional networks and expectations of the local community influence the readiness of primary care services to consider moving to a new way of working (McNellis et al., 2013; Russell et al., 2017). This relates to both their sense of what is expected, and confidence that the risks associated with new and unfamiliar territory will gain wider support. Wellbeing Enterprises involved the commissioning of a social enterprise to introduce new opportunities for patients to access local resources. This enabled primary care services to draw on a wider range of community assets than was previously the case and opened up opportunities to draw on additional charitable grants and other income sources (Swift, 2017). Facilitation that is external to the primary care service can provide additional insights, capacity and objectivity (Lane et al., 2017). The MacMillan programme recruited three external facilitators to support practices with the practical changes connected with implementing the new cancer pathway. This support was universally appreciated as it provided additional capacity, expertise and objectivity. An inter-disciplinary change management team provided similar support practices adopting the medical home model in the Midlands Health Network programme.

Patient and community engagement

Putting people and their communities at the centre is one of the core principles of the models of transformed primary care. Despite this, the evidence suggests that many practices find it difficult to reflect this principle in reality. For example, one study of smaller practices (i.e. less than five doctors) adopting the medical home model reported that whilst 30 per cent said they had trained clinicians and staff on involving patients or consumer advocates, only 15 per cent of practices actively included patients on quality improvement teams (Scholle et al., 2013). The authors suggest that stronger evidence is needed of the positive impacts which will result from such engagement to convince practices that it is worth the effort. However, research evidence is not that well developed, with one recent review concluding that “there is a paucity of published research on patient engagement at the practice level in
general and in the primary care setting in particular, with very little of the research that has been conducted consisting of rigorous, controlled studies investigating triple aim outcomes” (Sharma and Grumbach, 2017, p. 264). The lack of formal evidence does not mean that there is no impact — rather that there is an insufficient number of rigorous research supported by valid and reliable tools. In Minnesota for practices to receive accreditation as a Health Care Home required demonstration of patient participation (Fontaine et al., 2015). This encouraged innovative ways to enable patients to be engaged such as patient advisory councils and training of “patient partners”. Previously only 32 per cent of these practices regularly provided opportunities for patients to be actively engaged but following the mandate this became 100 per cent. This was connected with interviewees in the study with their own “personal satisfaction and career-renewing energy”. The House of Care pilot sites which invested funding to develop or enhance a patient engagement infrastructure were much more successful in this regard. This was achieved through employing a new member of staff or commissioning an external organisation with skills in this area. In Ontario, the South Riverdale Community Health Centre board is comprised of members of the local community (i.e. those who share the values, live in the catchment area and receive a service) with applications being encouraged from populations who are not currently represented. This followed a previous challenge that the Centre was not sufficiently engaging with local people that resulted in a major refocusing of the culture of the service.

Alongside engagement with the process of transformation is a need for patients to be given support and opportunity to be more engaged and accountable for their own health and wellbeing. This can require a different set of behaviours for some patients and a fundamental change of their identity as a patient (McGough et al., 2017). This means that people’s knowledge, skills and confidence to be an active patient have to be considered. Where they are lacking the necessary competences then training and other support will be required. The inter-professional team will have an on-going role to continually build up the ability and confidence of patients. The House of Care programmes places considerable emphasis on enabling people to be prepared and informed to engage in collaborative care and support planning. Wellbeing Enterprises employed Community Wellbeing Officers who develop a personalised plan for wellbeing with patients. This incorporates how they can incorporate new behaviours in their daily living and facilitating access to other community resources (Swift, 2017).

Redistribution of resources
The strengthening of primary care is seen as a vehicle not only to improve quality and address inequalities but also to deploy the available resources more efficiently. This is largely based on the assumption that enhanced primary care which is more accessible and responsive to people’s needs will lead to reduction in overall activity by health care providers and a diversion of activity from acute to community settings. Despite this being a common expectation, the evidence to support the redeployment of resources and connected financial savings is not always convincing. For example, a review of 27 initiatives to shift the balance of care reports that whilst there is evidence that some can lead to cost savings many did not, and some had led to increased costs (Imison et al., 2017). It concludes that estimated level of savings are often unrealistic due to unforeseen difficulties in removing fixed costs or a failure to take into account the full resources required to introduce a new intervention. Furthermore ensuring there is sufficient capacity in primary care will be essential for most of these approaches to be successful. One of the reasons that it can be hard to release savings is that health care planners in public health systems find it difficult to disinvest in existing services. Challenges include inconclusive evidence, community resistance and disincentives for clinicians (Williams et al., 2017).
Other evidence reviews have come to a similar conclusion that whilst enhanced models of primary and integrated care have the potential to reduce hospital activity, they struggle to do so at the level which can result in major and sustainable savings (Martínez-González et al., 2014; Van den Heede and Van de Voorde, 2016; Damery et al., 2016). In addition to this formal research evidence are case examples in which health care regions report reducing hospital activity through taking a more systems-based approach (Gottlieb, 2013; Staines et al., 2015; Schluter et al., 2016). Whilst often not of a standard that would be incorporated within a systematic review these examples do still at least suggest that it is possible to have a significant influence on previous levels of investment and the quality of a health care system. This requires sustained efforts over long time periods with continuity in senior leadership being a common feature. Starting from a low base, i.e. particularly fragmented relationships and little experience of introducing innovations makes adoption difficult but also leads to more noticeable levels of improvement than areas in which there has already been progress.

Programmes not interventions
A common finding from evidence is that programmes of integration are more likely to lead to a rebalancing of resources from acute to primary care and enabling a more pro-active and less crisis-orientated system (Damery et al., 2016; McLellan, 2017; Miller, 2017). Similarly, primary care transformation requires a co-ordinated programme rather than emphasis of one intervention in particular. Building on the experiences of the case studies, it would appear that there are six elements that are commonly incorporated (Table II):

1. external facilitation to provide additional capacity and expertise in undertaking transformation;
2. supporting the development of local clinical and non-clinical leaders;
3. on-going learning in relation to the development of new skills and reflection on emerging evidence of process and impact;
4. stakeholder engagement, in particular patients, communities and wider clinical networks, through sufficient investment in associated infrastructure;
5. transitional funding to enable continuation of existing activities whilst new approaches are introduced; and
6. robust evaluation which provides formative and summative insights against clear objectives and baselines.

There is a need for such programmes to both be endorsed by senior leaders and provide opportunity for those on the frontline to introduce innovations, i.e. “designated” (senior) and “distributed” (those closer to the frontline) leadership (Best et al., 2012; Perla et al., 2013). Establishing forums which support senior-level decision making can be an efficient means to address potential organisational barriers (Starling, 2017). Similarly within frontline services organising opportunities for all associated staff, not just medical clinicians, to share their perspectives can lead to greater engagement and creative solutions being identified (Hung et al., 2017; Starling, 2017).

Use of data
Programmes also need to be informed by relevant data at the individual, team, clinic and organisation levels. This should include data that reflect the quadruple aim, including clinical performance, patient satisfaction survey and levels of stress
Willingness to actively use such data to drive decision making and influence how a primary care service works is a core behaviour of transformed practices (McNellis et al., 2013; McGough et al., 2017). An “active review of the practice’s performance appeared to help reinforce the value of PCMH, since identifying the gaps in care motivated the teams to work on improving it” (Wise et al., 2011, p. 416). The converse is also true. Practices in which the new model was less well implemented would be much more passive in obtaining and reviewing data (Wise et al., 2011). Data are seen as a crucial element in the Midlands Health Network programme as evidence of positive impact that helps to maintain momentum whilst also identifying further areas for improvement. The ease with which data can be generated, collected and understood is important. It must also be seen as relevant and timely if it is going have influence on wider stakeholders (Greenhalgh et al., 2009).
Conclusion

Many of the components of the new model of primary care are already in existence in most countries—a generalist specialism within medicine, community-based nursing, therapy services and pharmacy services, voluntary organisations responding to different social needs, and public and/or independent organisations which can provide short and long-term domiciliary support. Bringing these together into more integrated and holistic models will require significant reframing by professionals and practitioners and the organisations that they own or employed. This reframing relates to their role, their relationship with others and the resources for which they have lead or sole responsibility. Accountability to and involvement of patients, families and communities will also need a radical overhaul to ensure that people are truly put at the centre of the vision and associated delivery. This scoping review suggests that whilst challenging it is possible to achieve sustainable transformation with a supportive political and social context, and a co-ordinated programme of change. Finally, it could also be argued that whilst these new models of primary care are undoubtedly a step forward they are still limited. Other aspects of primary care such as dentistry and social work are rarely included to any substantial degree, and many of them still expect that delivery will be mainly through medically owned organisations. It will be important therefore that we do not see such models as the end point, but rather another stepping stone on the transformation to more integrated care.

Note


References


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Care transition types across acute, sub-acute and primary care
Case studies of older people with complex conditions and their carers

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Abstract

Purpose – The purpose of the paper is to examine the care transitions of older people who transfer between home, acute and sub-acute care to determine if there were common transition types and areas for improvements.

Design/methodology/approach – A longitudinal case study design was used to examine care transitions of 19 older people and their carers as a series of transitions and a whole-of-system experience. Case study accounts synthesising semi-structured interviews with function and service use data from medical records were compared.

Findings – Three types of care transitions were derived from the analysis: manageable, unstable and disrupted. Each type had distinguishing characteristics and older people could experience elements of all types across the system. Transition types varied according to personal and systemic factors.

Originality/value – This study identifies types of care transition experiences across acute, sub-acute and primary care from the perspective of older people and their carers. Understanding transition types and their features can assist health professionals to better target strategies within and across the system and improve patient experiences as a whole.

Keywords Australia, Older people, Care transitions, Case study design, Sub-acute care

Introduction

The number of older people with multiple chronic conditions is increasing (Mansah et al., 2009) as are emergency department presentations by older people with complex care needs (Ellis et al., 2011). For the older person, a critical health event can precipitate a series of transfers across different settings and levels of care, involving multiple providers (Giles et al., 2009). It can also mark a new level of frailty or vulnerability to functional decline accompanied by a period of uncertainty and lifestyle adjustment (Walker et al., 2015). The care transition involves older people, carers and providers in a process of “negotiation and navigation” (Allen et al., 2016, p. 8) across the system to adapt to changed health and social care needs (Ellins et al., 2012).

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The transition from hospital to home is a time of particular vulnerability. Risks include: delays or lack of information exchange between providers (Dossa et al., 2012; Baillie et al., 2014) or between providers, older people and their carers (Allen et al., 2016; Baillie et al., 2014; Giosa et al., 2014); patient and carer confusion about post-discharge arrangements (Scott, 2010), and access to information and care post-discharge (Dossa et al., 2012); and inadequate patient and carer preparation for new and emerging care responsibilities (Allen et al., 2016; Giosa et al., 2014; Byrne et al., 2011). Frequent transfers and rapid discharges can have a detrimental impact on continuity of care (Toscan et al., 2012). Ownership of the outcome can become diluted as the number of providers increase and older people become disengaged (Toscan et al., 2012) or feel disempowered (Walker et al., 2015). Perceived early discharge from hospital with limited follow-up can result in unmet needs that compromise self-management and independence (Allen et al., 2016) impact on patient safety (Mansah et al., 2009; Coleman, 2003) and increase readmission risk (Mudge et al., 2013).

Interventions to improve older people’s care transition experiences and reduce readmission rates and length of stay have shown mixed results. A recent synthesis of international systematic reviews identified the essential components of successful interventions as: more intensive rehabilitation, working more closely with older people and carers, and a dedicated transition provider to advocate for and facilitate care co-ordination and outreach to patients following discharge from hospital (Sahota et al., 2016). Despite this, an intervention utilising these approaches showed no benefit in reducing hospital readmissions or length of stay (Sahota et al., 2017). In Australia, efforts to improve older people’s care transitions are focused on implementation of the Geriatric Evaluation and Management (GEM) model of care which promotes comprehensive geriatric assessment and multidisciplinary, coordinated care for older people with complex needs in a sub-acute setting (Foster et al., 2017). While not solely focused on transitions, the purpose of GEM is to lay a foundation for an integrated and coordinated care plan after return to community (Lowthian, 2017). Programmes using the GEM model of care have shown promising results in reducing readmissions and length of stay (Bird et al., 2010; Roberts et al., 2007). However, the dynamic and unpredictable nature of care transitions involving a GEM service has also highlighted the need for early intervention across the system, a more systemic approach to service linkages (Harvey et al., 2016) and support for workers to consistently tailor practice to older people’s needs (Foster et al., 2017).

While the emphasis on the hospital community interface seems justified in terms of risk, self-management in the community can be precarious (Harvey et al., 2016) and there is strong evidence that better health outcomes can be achieved through intervention early in older people’s illness trajectory (Beswick et al., 2008). This suggests the need to examine the sequence of care transitions experienced by older people living in the community. The purpose of this analysis is to distil the types and commonalities of care transitions of older people by examining the individual experiences of older people, and their carers, who transitioned from community through acute and sub-acute care to home as a case study of transition. Through this approach, a more nuanced understanding of care transitions as both a series of discrete transitions and a whole patient journey, with unique patient and systemic features can be obtained. Findings from the larger study are presented elsewhere (Harvey et al., 2016).

Methods

Design

A qualitative case study design was used, which is ideally suited to in-depth investigation of complex social issues (Yin, 2014) such as care transitions (Toscan et al., 2012; Beech et al., 2013). The study was conducted in regional Australia within a 531-bed public hospital with an Older Persons Evaluation Rehabilitation and Assessment (OPERA) unit which utilises
the GEM model of care. The OPERA unit is a 32-bed dedicated sub-acute ward within the hospital. Within the OPERA ward, the GEM model of integrated interdisciplinary care is well embedded and fundamental to the success of the programme. However, integrative care across health services in and out of the hospital is more limited. Ethical approval was obtained from the Local (HREC/12/QCH/76-802) and University Ethics Committee (H5460).

Participants and recruitment
Eligible participants were hospital patients with a Mini-Mental State Examination score $\geq 20$ and their nominated carer (excluding paid carers). Patients were approached personally on the ward by the research team and invited to participate. Carers were approached either in-person or by telephone. In all, 20 patients were recruited, one withdrew and one patient and a carer were unavailable for a follow-up interview. A criterion sampling approach was used to commence recruitment. Data were reviewed and purposive sampling was used to identify varied transition experiences. All participants provided written consent.

Participants were 19 people between 64 and 95 years and their carers. The mean age of older people was 83. In all, 12 were male, seven female. Four participants (two patients and two carers) were Aboriginal and/or Torres Strait Islander people. Five were eligible for intensive short-term transition care following discharge. Carer relationships were wife ($n = 4$), husband ($n = 2$), daughter ($n = 8$), son ($n = 2$), niece ($n = 1$), partner ($n = 1$) or friend ($n = 1$). The average length of stay in sub-acute care was 14 days.

Data collection
The "case" for analysis in this study was older people's care transitions across acute, sub-acute (OPERA ward) and primary care. Each transition case study involved semi-structured interviews with the older person on admission to the OPERA ward, before discharge and one month after discharge; and semi-structured interviews with the carer, before and one month after discharge. Interviews explored events preceding the emergency department presentation, acute and sub-acute experiences, hospital discharge and post-discharge experiences. Each interview was conducted by members of the research team who had no clinical contact with participants. To build rapport and enhance data quality, the same interviewer completed all interviews for each case. Data collection ceased when no new themes could be identified from the data and the analysis showed depth and variation of experiences.

In total, 93 interviews were conducted, 56 with patients and 37 with carers. The majority of interviews were conducted face to face ($n = 89$). Post-discharge interviews were conducted at a participant's home, workplace or at the hospital. Interviews were recorded, transcribed and stored for analysis using NVivo version 9 (QSR International) software. Function and service use data were collected by a post-discharge medical chart review.

Data analysis
Two researchers read interviews for the first five cases several times to familiarise themselves with the data. The same two researchers independently coded the interviews for these five cases (25 interviews) line by line. This yielded a number of descriptive codes that were discussed until an agreed coding framework was developed. The coding framework was applied to all interviews by two researchers and illustrative text segments were recorded. Where gaps and new insights emerged, the framework was modified by agreement. The codes were grouped into a smaller number of themes and sub-themes. A single page descriptive account of each case which synthesised relevant data from a medical chart review and analysis of the semi-structured interviews was created to integrate the analysis (Creswell, 1998; Baxter and Jack, 2008). The summaries were compared,
noting patterns and contrasts with a focus on identifying overarching types of transition experiences and distinguishing themes.

Several strategies were implemented to achieve trustworthiness (Lincoln and Guba, 1985) and thereby enhance study quality. These were congruence between the research question and design, purposeful sampling for a variety of experiences, thick descriptions from participants through repeat interviews, multiple data sources, and an accurate audit trail of analytic methods. Coding of data by multiple researchers enhanced the dependability of the analysis (Baxter and Jack, 2008).

**Findings**

All care transitions examined could be classified as three types: manageable, unstable or disruptive (Table I). Notably, the transition types are not fixed as analysis indicated that older people can have different types of experience across acute, sub-acute and primary care due to variations in health status, system responses, local care arrangements and temporal factors. Participant quotations labelled as either P (patient) or C (carer) in chronological order of recruitment are included to illustrate key findings from the analysis.

**Manageable care transitions**

Most transitions from home to acute care and almost half of transitions from acute to sub-acute care and back to community were typically manageable transitions. These featured the willingness and acceptance of the older person, active engagement and trust in the system, and organised continuous support. In a manageable transition, the older person and their carer generally acknowledged the need for transition from home to acute care. This included acknowledgement that a health threshold had been reached which signalled the need for change, being receptive to making a transition and acceptance of the timing of the transition:

I wasn’t too good at home and had this pain in the back […] and then my daughter who is my carer and her brother came and he said “Mum, I think we better get the ambulance” and I didn’t object. I said Ok. Alright. Because I got to the stage where I felt that I did need help (B02P).

Where the transition was associated with trauma such as a fall, there was ready acceptance of the need for timely transfer to a more appropriate level of care, for example, by activating a medical alarm “I went to turn around and sit down and I was on the floor before I knew where I was […] I’ve got a medical alarm system and just press the button and the

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<th>Transition</th>
<th>Manageable</th>
<th>Unstable</th>
<th>Disruptive</th>
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<td>Home to acute care via emergency department</td>
<td>Reaching a threshold</td>
<td>Hesitancy and uncertainty at discharge</td>
<td>Losing control of decision making</td>
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<td>Active engagement and trust in the system</td>
<td>Being rushed through the system</td>
<td>Avoidant or delayed help seeking</td>
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<td>Organised, continuous support</td>
<td>Older person and carer as recipients of care</td>
<td>Delayed system response</td>
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<td>Acute care to sub-acute care</td>
<td>Being part of the care process</td>
<td>Experiencing unmet needs</td>
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<td>Trusting in system response</td>
<td>Floundering in the system</td>
<td>Overwhelming need</td>
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<td>Developing confidence</td>
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<td>Breakdown in continuity of care</td>
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<td>Sub-acute care to home</td>
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Table I. Types of transition experiences and distinguishing characteristics
ambulance comes” (I09 P). Other participants who typified a manageable transition willingly accepted the recommendation of a trusted GP to present to hospital “I had an appointment to see the doctor and when I saw him he said ‘I think we better get you into hospital’” (R18P).

A manageable transition from acute to sub-acute care generally involved active engagement of the older person and trust in the recovery process. This was exemplified by engagement in goal setting and therapy “I have a goal that I want to reach to get home. If you don’t work hard you will never get anywhere, you will be there for longer still” (E05 P). Trust in the system response was underpinned by information sharing “They (OPERA staff) answered lots and lots of questions. One of the physios showed us a DVD about how to look after [older person] when he comes home” (A01C).

Both active engagement and information sharing were part of a preventive approach that featured in manageable transitions. From sub-acute to home this was characterised by system support to adjust to change, avoid risk and resume independence. Most participants who experienced manageable transitions valued being able to resume at least some elements of their former lifestyle as a result of sub-acute care “[…] they taught you at OPERA how to avoid or try to avoid falling over and that sort of thing and so far it has worked. I haven’t fallen over since I came home” (L12 P). Most also reported timely and anticipated commencement of arrangements planned on the OPERA ward, which indicated that manageable transitions featured well-organised continuity of support:

It’s marvellous. They sent someone home with me a couple of days ago to see how I would cope at home and what would be needed, whether I could manage, but she found that I could manage very well indeed (G07 P).

In some instances, however, planned services or arrangements proved unsuitable or inflexible. In these cases, making changes, often negotiated by the carer, led to a smoother transition to home:

I had all these people from the hospital coming to care for him but my father was overwhelmed with so many people coming so I had to stop it all […] So it was very stressful and the transition care did say that we are upsetting your father more by coming here so its best that we just cut this all out […] (N14C).

Interestingly, participants who experienced a manageable transition from hospital to home had varied experiences earlier in their journey. Only some received short-term support from the Transition Care Program. While most had supportive and inclusive experiences of the GEM service, others did not. A consistent characteristic of a manageable transition from hospital to home was the timely adjustment to new or emerging needs, often due to active involvement and advocacy by the carer.

Unstable care transitions
Unstable transition was the second typical type. These types as a whole featured more uncertainty and despondency for older people and their carers and disruptions in the continuity of support. Ten case study transitions from acute to sub-acute care and nine from sub-acute care to home showed the features of unstable transitions.

An unstable transition for the participants was characterised by a sense of being rushed through the system. Some expressed frustration with “being moved from one room to another, to another” (M13C) through acute wards when it was perceived to be due to system problems, such as bed shortages, rather than patient need. In these cases, participants were generally keen to return to their home environment, but were concerned about their readiness for discharge from OPERA and self-management capacity:

Even though I was getting better according to them, I felt that I could have stayed a little bit longer because the treatment – the care they were giving me was good. The people, nurses working 24hours and they give blood pressure and really look after you […] because I wouldn’t be getting that kind of care here [at home] (K11P).
Carers too expressed concerns about readiness for discharge home:

She won’t have raised that concern. She won’t have told anybody […] I think it’s that she’s going to be lonely, and it’s having to do things for herself again. Being in hospital for over three weeks, she’s absolutely become institutionalised […] I thought she should have had more Physio, more Occupational Therapy. I don’t think she’s had very much of that (M13C).

Older people and carers experiencing an unstable transition from sub-acute care to home reported floundering in the system, experiencing unmet needs and a feeling of despondency. These experiences were also associated with minimal, medically focused discharge planning, gaps in implementation of health and social care services in the community and a lack of awareness of how to address emerging needs. One participant who described himself as “just hanging on” recounted his experience one month following discharge from sub-acute care:

I’m finding it very painful to walk. I’m getting a lot of pain at night […] And it has gotten me worried and I don’t know really what to do about it (A01P).

There was a lack of systemised linkages between sub-acute and primary care “I don’t know what’s happening or if anything is going to happen or if they’re just going to leave it to the GP” (J10C) and often an assumed reliance on carers who were also unprepared for a more proactive and demanding role in navigating local services “At the moment I don’t know if that’s gone ahead because I haven’t spoken to Dad for a couple of weeks. I have been really full on at work” (J10C).

**Disruptive care transitions**

A small number of care transitions across the system were characterised as disruptive. Four of these were transitions from home to acute care. Key features of these transitions were losing control of decision making, avoidant help seeking and delayed system response.

Generally, disruptive transitions were crisis driven. In part this was linked to older people’s responses to a change in status. In these cases, participants valued their independence highly and avoided or resisted seeking help until it was absolutely necessary. Together with delays in accessing a GP service at short notice, this resulted in crisis-driven transitions. After experiencing chest pain for over three days and being advised of a two hour wait to see a GP, one participant asked family to call an ambulance saying “I can’t wait that long just go to the […] Hospital” (K11P).

In other cases, an older person’s strident resistance to presenting to the emergency department conflicted with the carer’s preferred response:

On the Sunday morning I phoned and she [older person] wasn’t even out of bed. I went around and just said “This is it, I can’t do this” so pressed her alarm button and the ambos came. She [older person] was yelling at them “For god’s sake just leave me alone” (M13C).

Two transitions between sub-acute care and home were disruptive. Unlike unstable transitions where participants experienced a sense of floundering trying to address unmet needs, disruptive transitions could involve overwhelming needs due to a deterioration in health, a breakdown in continuity of care and relinquishing of independence. In one instance, planned home visits by a therapist and home modifications had not yet commenced when:

He couldn’t walk much. He just sat in the chair. If he wanted to go to the toilet then my brother had to carry him. But we just rang the ambulance to come (K11C).

In the other instance, a carer described the situation shortly after discharge:

He still staggers and he still has pain. Actually he went into hospital one day this week and he couldn’t stand the pain and they monitored him and then he came back late at night but the pain hasn’t gone yet (S19C).
She also expressed concern about options for management of care in the community as “His GP, I don’t think he can do much more. He says if he is bad just call the ambulance and go into hospital” (S19C). In both these instances the breakdown in continuity of care left older people and their families stranded between sub-acute and primary care.

Discussion

This study provides an important insight into care transition experiences both at specific transition points and across the whole patient journey. Many of the issues including communication breakdowns and rushed or ineffective discharges have previously been identified in respect to the transition from hospital to home. The findings of this study extend current knowledge by analysing experiences at three transition points within each patient journey and across all cases. This uncovered common types of transition experiences and associated personal and systemic factors. These findings will enable health and social care providers to plan and adjust interventions to optimise care transitions for older people accessing sub-acute care.

Manageable transitions exhibit features consistent with the goals of the GEM model of care (Ellis et al., 2011) and components of successful care transition interventions (Sahota et al., 2016). Numerous studies have reported the importance of active engagement of patients and the need to make adjustments to care plans based on patient experience (Coleman et al., 2004; Walker et al., 2015; Allen et al., 2016; Cheek et al., 2006) As reported elsewhere (Allen et al., 2016; Baillie et al., 2014; Giosa et al., 2014; Byrne et al., 2011) carers in this study had a critical role in optimising care transitions by seeking out information, negotiating with providers and promoting self-management. As reliance on carers can lead to them feeling overwhelmed by their role (Toscan et al., 2012) the expectations imposed by services and the work of carers in care transitions warrant further exploration. Most of the manageable transitions were from home to hospital and characterised by acknowledgement of the need to transfer, active engagement and trust in the system and organised continuous support. The findings highlight the significant role of the GP in discerning tipping points in older people’s health and wellbeing and the opportunity to pre-plan for transitions before they occur.

The GEM service was important for engaging patients and carers, creating an coordinated care plan and arranging longer-term follow-up. Despite this, most unstable transitions were associated with experiences during sub-acute care and transfer from sub-acute care to the community. Even a supportive and inclusive GEM service experience could be followed by an unstable transition to primary care which led to despondency as patients and carers floundered in addressing unmet needs. Personal factors such as passive engagement in care, reluctance to complain and hesitancy or uncertainty about discharge timing and capacity played a role, as did systemic factors including a sense of being rushed through the system and a lack of systemised linkages between secondary and primary care. The findings reinforce the tendency of older people to disengage from care when responsibility is dispersed across the system (Toscan et al., 2012) or when they have to juggle multiple provider visits (Walker et al., 2015). Identification of warning signs and rehearsing ways to manage exacerbation of a condition form part of self-management education in some existing care transition interventions (Coleman et al., 2004; Bird et al., 2010). The findings of this study suggest that identifying potentially unstable transitions and implementing specific strategies that ameliorate them maybe warranted.

Disruptive transition was the least successful type of transition from a patient and carer perspective. Although small in number, experiences clustered at the home to hospital and sub-acute care to home interfaces. Avoidant help seeking accentuated by a delayed system response led to a loss of control over the decision to present to hospital. This type of help avoidance can be related to maintaining a sense of independence or fear of loss of

Acute, sub-acute and primary care
independence such as precipitating residential care (Cheek et al., 2006). Older people may delay seeking help from services, instead asking friends or family for help (Ellins et al., 2012). In this study conflict between patients and carers also played a role with some carers taking control of the decision despite resistance. Carers have a key role in negotiating and advocating for the care recipient in community settings (Cheek et al., 2006; Nahm et al., 2010) and may not feel adequately prepared for their role, particularly in the case of a medical crisis (Giosa et al., 2014). A disruptive transition from hospital to home was marked by overwhelming need, a breakdown in continuity of care and relinquishing independence. Participants in this study preferred to present to the emergency department when a transition broke down. The findings reinforce the key role of primary care, specifically GPs and specialist geriatric assessment in a community setting (Arbaje et al., 2010) in discerning tipping points in health and coordinating care in the community.

Limitations
Each participant experienced a GEM service, and nominated a carer and GP. Five participants accessed intensive short-term post-hospital care. The experiences of older people who access other models of integrated care or transition to aged care facilities may be different. The findings may also reflect the local health service context. Nonetheless, as the focus of the study is on understanding the experiences of populations whose complex needs warrant a combination of services and supports and who typically experience multiple transitions, the study findings may be applicable to populations other than those with the specific characteristics of the study sample and the study context. The study methods have been described in detail so that the transferability of the findings to other contexts and populations with complex care needs can be assessed.

Conclusion
Care transitions are complex processes occurring in a dynamic health and service context and it is not clear how they can be effectively managed. Most care transition interventions focus on service mechanisms within a transition. Identification of types of transition experiences and the factors that influence them can assist clinicians to consider adjustments to optimise care transitions for older people. The concept of transition types, i.e. a thematic description of transition to different levels and locations of care and experiences at different touch points which incorporates influential patient and system levels is a conceptual approach under development. It could be used with other populations to understand experiences and further develop the conceptual categories which allow us to make sense of different transitions in different contexts and to intervene at appropriate points or levels along the transition.

References


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Effectiveness of joint specialist case conferences for building general practice capacity to enhance diabetes care

A pilot study in Western Sydney, Australia

Gideon Meyerowitz-Katz, Sian Bramwell, Rajini Jayaballa, Ramy Bishay, Ian Corless, Sumathy Ravi, Linda Soars, Xiaoqi Feng, Thomas Astell-Burt, Manimegalai Manoharan, Mark McLean and Glen Maberly

Abstract

Purpose – Type 2 diabetes mellitus has become a major concern of Australian healthcare providers. From rates of barely more than 1 percent in the mid-90s, diabetes is now the leading cause of morbidity in the country. To combat the growing diabetes epidemic, Western Sydney Local Health District created the Western Sydney Diabetes (WSD) initiative. One of the key components of the WSD initiative since 2014 has been joint specialist case conferencing (JSCC). The purpose of this paper is to evaluate the JSCC service including both individual- and practice-based changes.

Design/methodology/approach – The authors evaluated the JSCC program by conducting an analysis of patient-level data in addition to a discrete practice-level study. The study aim was to examine both the effect on individual patients and the practice, as well as acceptability of the program for both doctors and their patients. The evaluation included data collection and analysis of primary patient outcomes, as well as a survey of GPs and patients. Patient data on primary outcomes were obtained by accessing and downloading them through GP practice management software by GP practice staff.

Findings – The authors found significant improvements at both the patient levels, with reductions in BMI, HbA1c and blood pressure sustained at three years, and at the practice level with improvements in markers of patient management. The authors also found high acceptability of the program from both patients and GPs.

Originality/value – This paper provides good evidence for the use of a JSCC program to improve diabetes management in primary care through capacity building with GPs.

Keywords Diabetes, Integrated care, Community care, Multi-disciplinary teamwork, Primary care

Paper type Research paper

Introduction

Type 2 diabetes mellitus (T2DM) has become a major concern of Australian healthcare providers. From rates of barely more than 1 percent in the mid-90s, diabetes is now the leading cause of morbidity in the country with estimates ranging from 6 to 9 percent of the population affected, and numbers are thought to continue increasing at an alarming rate (AIHW, 2014, 2016).

The primary cause of this diabetes epidemic is the increase in obesity in the general population, with the average weight increasing by over 4 kg in the last 20 years (Olds et al., 2009; Vic Health, 2011; AIHW, 2014). This creates an unsustainable burden on the hospital system, with the costs of diabetes projected to skyrocket as the disease burden grows (Vic Health, 2011; AIHW, 2016).

One pressing issue for diabetes management is concerns about primary care, due to the complexity and ever-changing nature of T2DM management. Research in a number of countries has identified that T2D care is often compromised by a lack of experience and
confidence of general practitioners (GPs), particularly regarding insulin initiation and dose escalation (Cuddihy et al., 2011; Polinski et al., 2012; Ishii et al., 2012; Hayes et al., 2008; Harris et al., 2010). Nearly half of Australians with diabetes have an HbA1c level of ≥7 percent, reflecting a wide-ranging lack of expertise in diabetes management at the community level (Ishii et al., 2012). Diabetes requires integration due both to the complexity of managing the disease and the positive benefits integration produces (Zhang et al., 2015). However, integration across a large number of primary practices is extremely difficult, with > 1,000 GPs and > 300 practices in Western Sydney alone.

There are numerous other issues with diabetes in primary care. Common complications of diabetes are often poorly managed due to a variety of factors, leading to potentially preventable morbidity at a later stage (Chwastiak et al., 2017). Moreover, improving care provider knowledge is a key factor in improving care quality and decreasing the negative effects of diabetes in a primary care setting (Stone, 2017). These issues are exacerbated by the short time that primary providers are able to spend with their patients, and the health literacy needs of the patients themselves (Grant et al., 2017). What are initially minor complications, such as incipient retinopathy or abrasions on the foot, can become major issues due to poor management in the primary care setting. Fortunately, these issues can be addressed effectively through organizational initiatives that improve provider understanding and management of diabetes in primary care (Murphy et al., 2017). Case conferencing was introduced on a large scale to the Australian health system in the late 1990s as part of a suite of health planning/assessment tools available for federal reimbursement (David Wilkinson et al., 2002); however, in the intervening period uptake has been sporadic (David Wilkinson et al., 2002). It usually involves a specialist and GP meeting or teleconferencing to discuss the care of a complex patient (David Wilkinson et al., 2002). There is worldwide evidence on the efficacy of GP-specialist case conferencing for complex chronic conditions, with reviews and meta-analyses demonstrating benefits for palliative care (Hollingworth et al., 2016; To et al., 2017), depression (Neumeyer-Gromen et al., 2004), and residential aged care (Crotty et al., 2004), but so far the methodology has only been introduced in a limited fashion for diabetes. Given the complexity of T2DM management, and the evidential support for case conferencing, both federal and state governments have identified it as a potentially useful tool to empower GPs to better manage T2DM in a primary care setting (Australia, C.O., 2017).

This paper focuses on an evaluation of a unique case conferencing intervention carried out in the culturally diverse area of Western Sydney. It looks at acceptability of the intervention from both a GP and patient perspective, as well as a quantitative evaluation of the effect at both an individual and whole of practice level. The paper concludes with a discussion of the limitations and implications that this has for similar programs and broader integration efforts both in Australia and around the world. The purpose of this paper is to review a specific application of case conferencing and discuss how it might be used more broadly as part of a successful integrated care program.

**Context and implementation**

Western Sydney is a large region of the city of Sydney in the Australian state of New South Wales encompassing about one million people that have been identified as a diabetes “hotspot,” with some local government areas having rates of diabetes more than double that of the suburbs to Sydney’s east and north (Astell-Burt et al., 2014). It is a highly diverse area, with not only considerable a socio-economic gap between the lowest and highest quintiles of disadvantage, but also culturally diverse with more than half of the population born overseas (WESTIR, 2015). Estimates of the rates of diabetes in this region vary from 8 to 15 percent, with the previous research in Western Sydney showing that at least one third of patients remain undiagnosed. Thus, it has become apparent that our traditional
hospital-centric models of diabetes care are no longer able to cope with such a huge burden of disease (Hng et al., 2016; Alexander, 2016; Astell-Burt et al., 2014).

To combat the growing diabetes epidemic, Western Sydney Local Health District (WSLHD) created the Western Sydney Diabetes initiative (WSD). This initiative was established in 2012 by WSLHD and their federally funded counterparts in the primary care sector Western Sydney Primary Health Network (WSPHN). It is overseen by the executive management of both organizations, and has a very broad scope covering primary prevention, screening/coaching, community management, and hospital/specialist management of diabetes. The WSD program also includes marketing and social media, in particular a website which contains more specific information about the initiative.

Integrated care is the provision of seamless, effective and efficient care that responds to all of a person’s health needs across physical, mental, and social health in partnership with the individual, their carers and family (NSW Health, 2016). It has recently been identified by the Commonwealth of Australia in a Productivity Commission report as one of the most important strategies in improving patient outcomes whilst minimizing cost to the health system (Australia, C.O., 2017). Community diabetes management has been used by the Commonwealth as a specific example where current models of care are not equipped to support optimal diabetes management in the community (Australia, C.O., 2017). Moreover, integration between primary and hospital services using a locally led program has been put forward as the best solution to drive better patient services in areas such as Western Sydney (Australia, C.O., 2017).

This has led to WSD introducing joint specialist case conferencing (JSCC). It fits within the broader WSD program of community and specialist management, with other initiatives including high-risk foot checks, health pathways, optometrist-based eye checks, a GP hotline, risk-stratification for diabetes and integration programs between hospital and primary care. JSCC is a capacity-building service for general practice (GP) that aims to improve the management of diabetes in primary care, enhance integration between hospital specialists and GP, and ultimately prevent unnecessary complications of diabetes that require expensive and unneeded treatment (Hollingworth et al., 2016; Mitchell et al., 2008).

Methods

JSCC

JSCC is a novel method of care integration involving a specialist team visiting the practices of GPs. There are dual aims; to improve individual patient care, but more importantly to educate GPs about diabetes management and provide a closer connection between GP and the hospital. There is clear evidence that such locally led programs can provide improved patient care at a reduced cost, by linking services and educating GPs at the same time (Australia, C.O., 2017). Practices elect for this program, after being identified by WSPHN. GPs identified patients at varying stages of the diabetes journey from newly diagnosed to having many co-morbidities. Patients are booked in and given minimal information by the GP prior to the appointment, in line with what is generally given by the practice when referring to a specialist. Two to four half day JSCC sessions are conducted each week at different practice locations, with six to eight patients in each 30-minute session. Each visit consists of a joint patient consultation and multi-disciplinary case conference. The team from the Blacktown Hospital Outpatient Diabetes clinic includes a Diabetologist, Registrar, Resident, and Nurse Educator. They meet with the GP, Practice Nurse, Practice Allied Health when available, and patient. As part of chronic disease management of patients in GP in Australia many have a care plan. Either this plan or the doctor’s diabetes management plan is shared with the hospital team in advance. The management plan is reviewed together and agreed between all participants, and a report and treatment plan is generated. GPs are provided with a telephone support line which provides opportunities for ongoing remote support for their decision making, especially around insulin dose adjustment.
JSCC can be distinguished from traditional case conferencing in that it is an innovative way to coordinate patient care, involving not only a GP and specialist, but also a diabetes nurse educator and the patient. This novel technique was initially trialed due to the evidence that patient involvement in care has a significant beneficial effect, and as part of a broader integrated care program aimed at addressing the chronic health issues in WSLHD (Egger et al., 2014; NSW Health, 2016). A similar pilot program has also been attempted, with initial – unpublished – evaluation suggesting significant benefits at the patient level with regards to key biometrics such as HbA1c and weight (Margaret Lynch et al., 2016). In Western Sydney, over three years nearly 1,200 patients have participated in JSCC, involving 150 GPs from 50 practice locations.

The primary aim of the program is to upskill primary care providers – first and foremost GPs and practice nurses – in the care and management of patients with diabetes. For this reason, patients often represent a range of diabetes states, from recently diagnosed to those with significant morbidities. The wide range of patients, coupled with a number of case conferences, thus aims to further the education of providers on key management strategies for diabetes in primary care.

This paper reports an evaluation of the program’s impact in the first nine months on patient clinical outcomes, a follow-up after three years, an examination of the practice-level impact of JSCC and reflections from the GPs involved.

Evaluation

We evaluated our JSCC program by conducting an analysis of patient-level data in addition to a discrete practice-level study. The study aim was to examine both the effect on individual patients and the practice, as well as acceptability of the program for both doctors and their patients. The evaluation included data collection and analysis of primary patient outcomes, as well as a survey of GPs and patients. Patient data on primary outcomes were obtained by accessing and downloading them through GP practice management software by GP practice staff. Ethical approval for the project was gained through the WSLHD Human Research and Ethics Committee.

Recruitment of survey respondents was through convenience sampling, with almost all GPs involved in JSCC and a smaller number of patients responding.

Our first evaluation was conducted in 2014, and repeated in 2017. We used a longitudinal pre-post single cohort design with two follow ups. We collected data on 41 patients from 19 GP practices. The data were collected at three time points, before the implementation of JSCC, three to six months after its implementation, and a further follow up at three years. Our primary variable was HbA1c test results, and we also collected weight, eGFR, cholesterol (triglycerides, TC, LDL and HDL), and blood pressure.

Patient data from the JSCC program were evaluated using multilevel linear regression models adjusted for age and gender. This included weight, HbA1c, eGFR, total cholesterol, LDL, HDL, systolic blood pressure and diastolic blood pressure.

In addition to this patient-level evaluation, we examined the effect that JSCC had on practices as a whole. We collected data using the PAT clinical audit tool (PATCAT) (PenCS, 2015), which is an anonymised aggregator that provides practice-level information on a variety of variables through extraction from GP practice management software. In this part of the study, we collected information on a number of variables six months pre- and post-JSCC, including the number of patients identified as having diabetes, the number of patients with poorly controlled diabetes, the rates of antidiabetic and lipid-lowering medication prescription for patients with diabetes, the number of patients with diabetes who had recent HbA1c tests, and the number of completed care plans for patients with diabetes. All practices that had results for six months before and after JSCC were included in our evaluation. Data from the practice-level evaluation were analyzed using weighted t-tests.
comparing before and after JSCC and weighted by the number of JSCC sessions for each individual practice. Together these two data sources allowed us to investigate both the individual impact of JSCC on patient health and the practice-level impact on GP management of diabetes.

We also conducted evaluations into the acceptability for both GPs and patients. GPs were asked after a session to fill in a short survey asking them to rate JSCC on Likert scales of 1-5 for questions relating to their perceptions, and given the opportunity to make other comments in open text boxes. They were also asked if they would recommend JSCC to a colleague. In total, 75 GPs completed the survey. This survey is given to all GPs at the end of their first conference session (usually involving three to four individual patients), and so represents the experiences of all GPs who took part in the program between March 2014 and July 2017.

Patients were asked to fill out a very brief anonymous questionnaire after the session, using three faces to rate their feelings after JSCC: a smiling face, a blank face and an unhappy face. They were asked three questions relating to their experience. In total, 53 patients completed the questionnaire. This questionnaire was only filled out by patients, who were selected using convenience sampling.

Results

Table I contains patient demographic variables at baseline.

The main body of individual results is shown in Table II. In short, patients who engaged in a single session of JSCC experienced a significant drop in HbA1c of 0.87 (0.39-1.36, \( p < 0.001 \)), a drop in total cholesterol of 0.43 (0.08-0.77, \( p = 0.015 \)) and both systolic and diastolic blood pressure, 6.60 (1.29-11.91, \( p = 0.015 \)) and 4.2 (0.62-7.77) at three to six months after JSCC. These benefits were sustained and indeed exceeded at the three-year mark – aside from systolic blood pressure – with drops in HbA1c, eGFR, total cholesterol, triglycerides, LDL and diastolic blood pressure.

At the individual patient level, there was a clinically meaningful change to a number of important factors influencing patient outcomes.

<table>
<thead>
<tr>
<th>Mean (SD)</th>
<th>Age (years)</th>
<th>56.46 (14.60)</th>
<th>% female</th>
<th>46</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI (kg/m^2)</td>
<td>32.42 (9.22)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c (mmol/L)</td>
<td>8.93 (1.70)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>Baseline</th>
<th>3-6 month review</th>
<th>3 year review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>95.66</td>
<td>-2.09 (-4.44, 0.26) 0.081</td>
<td>-2.30 (-4.65, 0.05) 0.055</td>
</tr>
<tr>
<td>HbA1c</td>
<td>10.39</td>
<td>-0.87 (-1.36, -0.39) &lt; 0.001</td>
<td>-0.93 (-1.43, -0.42) &lt; 0.001</td>
</tr>
<tr>
<td>eGFR</td>
<td>112.03</td>
<td>0.16 (3.67, 3.99) 0.935</td>
<td>-4.35 (-8.14, -0.55) 0.025</td>
</tr>
<tr>
<td>Total cholesterol</td>
<td>5.61</td>
<td>-0.43 (-0.77, -0.08) 0.015</td>
<td>-0.55 (-0.89, -0.22) 0.001</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>1.82</td>
<td>-0.14 (-0.40, 0.13) 0.311</td>
<td>-0.28 (-0.54, -0.03) 0.029</td>
</tr>
<tr>
<td>LDL</td>
<td>3.19</td>
<td>-0.15 (-0.53, 0.23) 0.434</td>
<td>-0.38 (-0.73, -0.04) 0.030</td>
</tr>
<tr>
<td>HDL</td>
<td>1.37</td>
<td>0.06 (-0.05, 0.18) 0.280</td>
<td>-0.01 (-0.11, 0.10) 0.885</td>
</tr>
<tr>
<td>Systolic blood pressure</td>
<td>112.37</td>
<td>-6.60 (-11.91, -1.29) 0.015</td>
<td>-1.68 (-7.07, 3.71) 0.542</td>
</tr>
<tr>
<td>Diastolic blood pressure</td>
<td>88.90</td>
<td>-4.20 (-7.77, -0.62) 0.021</td>
<td>-4.61 (-8.24, -0.98) 0.013</td>
</tr>
</tbody>
</table>

**Note:** Italic = "statistically significant," i.e. \( p < 0.05 \)
Practices

We analyzed the results of 19 practices before and after JSCC. When weighted for the number of JSCC sessions that each practice had engaged in (between 1 and 21), there was a reduction in the proportion of patients who had not had an HbA1c test recorded in the last year of 7.5 percent (3.7-11.4, \( p < 0.001 \)) as well as an increase in the proportion of patients on lipid-lowering medication of 3.5 percent (0.1-6.8, \( P = 0.43 \)). There was a non-significant increase in the proportion of patients identified as having diabetes, the proportion of patients on antidiabetic medication, as well as an increase in the proportion of patients who had poorly controlled diabetes (Table III).

At the practice level, there were indications of significant improvement in diabetes management after JSCC sessions. This is supported by the implementation, which remained the same throughout the evaluation period – the initial team of specialist, registrar and diabetes educator did not change. The resident medical officer rotated every ten weeks; however, this is unlikely to have significantly influenced the implementation. There is some inherent variation between practices using PATCAT, as it is an opt-in service that not all practices take up or use regularly; however, the 19 practices surveyed all had submitted data for the period before and after JSCC, indicating that their use of the system was mostly regular.

Acceptability

Our two acceptability surveys had high response rates for both doctors and patients. The response rate for GPs was 100 percent, whereas patients responded about 50 percent of the time. All doctors who have so far engaged in JSCC in Western Sydney have been surveyed at the end of case conferencing, with 75 responses. On a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), most doctors either agreed or strongly agreed with the six questions asked rating the JSCC program. Figure 1 displays the results from this survey. Questions 1, 2, 3 and 6 received almost universally positive responses, with GPs slightly more uncertain about whether JSCC had helped them to improve their confidence in managing diabetes and whether it would decrease the number of referrals that they made to a specialist.

From the patient questionnaire we saw similarly positive results, with only a single patient reporting negative outcomes on any of the evaluations. Figure 2 contains these results, with patients finding that JSCC made them feel happy, was useful, and taught them a lot about managing their diabetes (Table IV).

Overall, there was a very high level of agreement between patients and clinicians involved in the JSCC program that it was useful and effective.

Discussion

It is known that Western Sydney has one of the least healthy populations in Australia with a total of 57.3 percent of residents having one of four risk factors leading to a much higher

<table>
<thead>
<tr>
<th>Practice-level results before and after JSCC</th>
<th>Table III.</th>
<th>Note: Italic = “statistically significant,” i.e. ( p &lt; 0.05 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage poorly controlled (HbA1c &gt; 7%)</td>
<td>35.3</td>
<td>(-1.6 (-3.71, 0.42) 0.117)</td>
</tr>
<tr>
<td>Percentage with no HbA1c recorded for 12 months</td>
<td>18.7</td>
<td>(-7.5 (-3.65, -11.43) &lt; 0.001)</td>
</tr>
<tr>
<td>Number of diabetics identified</td>
<td>309</td>
<td>(-21 (-91, 50) 0.563)</td>
</tr>
<tr>
<td>Percentage on antidiabetics</td>
<td>82.1</td>
<td>(-1.1 (-3.02, 0.90) 0.289)</td>
</tr>
<tr>
<td>Percentage on lipid lowering</td>
<td>64.9</td>
<td>(-3.45 (-5.79, -0.10) 0.043)</td>
</tr>
</tbody>
</table>

Baseline 3-6 month review

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean difference after JSCC (95% confidence interval) p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.3</td>
<td>(-1.6 (-3.71, 0.42) 0.117)</td>
</tr>
<tr>
<td>18.7</td>
<td>(-7.5 (-3.65, -11.43) &lt; 0.001)</td>
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<td>64.9</td>
<td>(-3.45 (-5.79, -0.10) 0.043)  (p &lt; 0.05)</td>
</tr>
</tbody>
</table>
incidence of diabetes and respiratory diseases for local citizens. The study found that individual patients improved significantly after a single session of JSCC, and that this improvement was sustained at the three-year mark. Patients experienced clinically significant drops on a range of key markers for diabetes control, and most importantly dropped their HbA1c by 0.93 mmol/L three years after JSCC. This improvement is linked to significant drops in major complications of diabetes such as amputations, retinopathy and
heart disease. This provides evidence that JSCC is effective for the management of individual patients, and moreover that the benefits can be sustained for a very significant length of time after only a single session.

We also found that there were improvements in key markers of diabetes management for practices that engaged in case conferencing. Not only did they improve their identification of and testing for diabetes, but they also managed the patients more appropriately who had diabetes in terms of medications. There was, however, a non-significant trend toward having more patients with a poorly controlled HbA1c of > 7 for practices that engaged in JSCC. We theorize that this is due to the increased testing that we conducted; as practices test all of their patients for diabetes, they reveal a bigger proportion of poorly managed patients who require more intensive care.

Importantly, we identified that both patients and their doctors were strongly in favor of JSCC. Virtually all patients who responded reported that they were happy with the service and thought that it would be useful for them in managing their diabetes. Doctors were almost universally pleased with the program, and often wrote quite lengthy endorsements on their response sheets. Whilst it is always difficult to engage busy clinicians, we found that once we had done a single session of JSCC it was actually harder to move on to another practice. There are some issues here for scalability – although doctors are very happy with the service, it may be important to set a pre-specified number of JSCC sessions to ensure that they do not come to rely on it as a long-term solution for T2DM management.

Combined with the individual patient and practice-level results, this study provides a good case for JSCC as an integrated care intervention that enhances diabetes management in GP. Further quantitative evaluation – in particular a randomized-controlled trial – will be necessary to support these findings more robustly. Whilst there have been a number of evaluations that have demonstrated a benefit for similar case conferencing interventions (Gillett et al., 2015; Hollingworth et al., 2016; Mitchell et al., 2008; Margaret Lynch et al., 2016), we believe the present study to be novel in approach, in particular with respect to the running of case conferences with full patient and clinician involvement. Further study is, therefore, required to determine the number of sessions per participating GP that leads to sustained behavior change as this will be critical in ultimately informing the cost-effectiveness and sustainability of the JSCC work.

We attribute this in part to the comprehensive nature of the WSD initiative, which encompasses considerably more than just a single intervention. In particular, a part of the successes in this program is likely due to our GP hotline, which allows GPs to call up and speak to a hospital clinician whenever they have an issue involving diabetes management.

A key goal of the JSCC program is to improve practice capacity to manage diabetes care. There is evidence that case conferencing is effective and cost-effective at the individual patient level (Hollingworth et al., 2016; Mitchell et al., 2008; Margaret Lynch et al., 2016); however, there are an estimated 130,000 people living with diabetes in Western Sydney. Seeing every patient is simply not realistic. What can be done is to engage the majority of GPs, educate them through a limited number of case conferences, and move on to practices that have not yet benefitted from the program.

The practice management and integration component is even more important when considered in the broader context of Australian – and indeed international – community healthcare reform. Around the world, integration between hospital and GP practices is being linked to better health outcomes, cheaper healthcare and more acceptable care for patients (Australia, C.O., 2017). The essence of our program is local leadership, with both local primary and tertiary organizations being vital to the successful implementation of our JSCC initiative. Without support from local GPs, and without extensive consultation between WSLHD and WSPHN, we would never have been able to reach such a large number of
patients across the region. This has important implications for generalizability and scalability of our program. Whilst it is likely possible to undertake a similar initiative, the best results will only be seen in an environment with good integrative practices. For example, the current funding structure of the Australian health system has made scaling up JSCC across WSLHD extremely difficult (Australia, C.O., 2017). To bring a JSCC program to the masses, there must be appropriate funding, partnership between hospital and primary care, community support, and most importantly patient by-in. Lacking these elements will likely result in a program that is poorly accepted and as such less effective in the community environment.

Implementation of the program was mostly smooth, with good implications for scaling up or implementing a similar effort elsewhere. Both GPs and specialist teams reported great satisfaction with JSCC, and despite the large number of individual practitioners involved the number of sessions has steadily increased. With the low cost of an individual session – 30 minutes of GP/specialist/educator time – and the demonstrable long-term benefits, there is clearly a place for JSCC in an integrated care approach to diabetes. As the Productivity Commission noted, funding sources do present a challenge (Australia, C.O., 2017), but as GP moves toward a more integrated value-based-care system, it is likely that funding will more closely align with JSCC in the future.

Limitations
There are some limitations to our evaluation. First, this is a simple before/after study with no control group. Whilst the results are striking, it is possible that they are part of a broader improvement in clinical care across Western Sydney that has been taking place in the past few years. This methodology was taken as a pragmatic approach with limited resources, and adds a significant level of uncertainty to the results obtained. Future research may involve linking these patients to a control set and conducting a randomized-controlled trial, which was not possible given the limited resources of the JSCC program in previous years.

It may also be difficult to directly attribute the results to the intervention, given the complexity of the situation and whether the outcomes that were measured are likely to be useful as a guide for a similar effort elsewhere (Datta and Petticrew, 2013).

Given the small number of specialists and diabetes nurse educators involved in this case conferencing program, it was not considered feasible to conduct a quantitative appraisal of acceptability of this program. Future research might use a qualitative methodology to examine the experiences and impacts of JSCC from the point of view of the non-GP clinicians involved in this program.

There are limits to the generalizability of our results. Whilst the patients represented a range of practices from across Western Sydney, we did not collect detailed demographic information and so cannot ascertain how applicable these results may be to different populations.

The practice-level evaluation was based on quite a small number of practices. Whilst there is an effort to look at the effects on a bigger sample, the use of the PATCAT tool has been limited until recently in the region and so accessing the data poses significant issues. The PATCAT tool itself also only offers a small snapshot of the data that we could possible collect to better understand diabetes management improvements in JSCC-engaged practices. We are looking to address this in future studies using a more comprehensive data collection over a longer time-period that will capture more information on the practices involved.

Conclusions
With the number of patients with diabetes skyrocketing across Australia and indeed the world, it is fast becoming impossible to manage each patient through specialist-centric care.
Patients in Western Sydney consistently rate their experience below the state average identifying potential to improve health literacy, self-care and capacity to navigate services to the right care at the right time in the right place. JSCC is an effective and well-accepted tool to improve the management of diabetes in the community, manage difficult patients better, and generally provide a more integrated model of care for diabetes. There remain questions as to how significant the practice-level effects are, but in general it appears to enhance GP capacity to provide diabetes care, and significantly improves the outcomes for individual patients who are engaged in the service.

Despite some limitations, our evaluation provides evidence that JSCC is a useful tool for a more integrated diabetes management program in an Australian setting. Anecdotally, hospital specialists and GPs have reported that the JSCC program has made enormous improvements in their relationships, and has resulted in more integrated patient care across the board for patients living with diabetes in the community.

This paper represents a small but important step in improving diabetes care in the community. With the current funding structures in Australia, there are limitations on scalability of JSCC; however, the current redesign of primary care funding from a fee-for-service model to a value-based-care arrangement brings great implications for expanding this program in the future. Moreover, any location utilizing a value-based-care model would find implementation of a similar program both easy and rewarding; patients may be able to have a single appointment and see long-term benefits in their diabetes care.

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Case study of home care for isolated and frail elderly patients by general practice nurses

A controlled 17-month study, to May 2016

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Abstract

Purpose – In a novel approach, two part-time “Link Nurses” within an NE Hampshire practice of 16,500 patients were funded by a local charity, to assess and manage unmet needs of isolated frail elderly patients at home. The paper aims to discuss these issues.

Design/methodology/approach – Patients in this vulnerable group with no recorded healthcare contact for a prolonged period were identified from practice computer records. One group was to be assessed at home, and appropriate interventions effected. Follow-up visits or telephone contacts also offered support to carers as well as isolated individuals. A matching quasi control group was identified but not visited, to assess the overall impact on the patients, GP and other healthcare contacts. Difficulties with the control group were encountered and addressed.

Findings – Important unmet healthcare needs were found amongst the visited patients, which the nurses were able to address themselves, or refer to the GPs or appropriate agencies. The control group demonstrated greater demand for out-of-hours, GP and district nurse contacts, and more unplanned hospital admissions.

Practical implications – Besides dealing with unmet needs at home, ongoing support by local GP nurses may reduce bed-blocking by moving away from “crisis management” of patients in this vulnerable group.

Originality/value – Few other trials have employed practice nurses to see and manage frail elderly patients in their homes.

Keywords Care and support, Community care, Frail elderly isolated non-responders, Home visiting by GP nurses, Reduced unplanned hospital admissions

Paper type Case study

Introduction: context and origin of this study

The project is in keeping with other current efforts in the NHS to identify unmet health needs and inequalities amongst frail elderly and housebound patients, in this case by adapting the role of the practice nurse. It is in keeping with the NHS Five Year Forward View (2014) suggesting more care to be delivered locally, using pro-active “expert generalists” to target patients such as the frail and isolated elderly, and efforts made to evaluate new care models. NICE Clinical Guideline G56 (2016), with an emphasis on multi-morbidity, encourages first the identification of those who may benefit (giving a practice-based register of those with complex needs), then appropriate principles of assessment, and delivery of care. However, an integrated care team (ICT), or multi-disciplinary care team (MDT) as usually configured for community health projects could not be assembled for this study. The Whitewater Health practice has no allocated social worker (there is a general shortage of social workers in this locality). Furthermore, the district nursing service is severely attenuated. Hence, this paper attempts to assess a new role for general practice nurses visiting patients at home. It arose out of comprehensive reviews in the practice of ambulatory care-sensitive conditions (ACSCs), such as diabetes, heart failure, and asthma, which had been ongoing and previously only available to those who could attend the surgery. There was concern in the practice that poor diabetic control and other co-morbidities in non-attenders may add to fraility especially in elderly and
isolated patients, for whom a domiciliary review visit by a general practice nurse might prove beneficial. Tian et al. (2012) recommended targeting this vulnerable group to reduce emergency hospital admissions. The link nurse title reflects an extension of this domiciliary review process into one of managing care for such vulnerable isolated elderly patients in their homes.

**Link nurse appointment**

Two nurses shared the full-time equivalent post funded by a local charity for two years. One was already working in the practice, addressing ACSCs, besides the usual variety of clinical activities, while the other half of the “team” had district nursing experience with expertise in tissue viability problems and wound care. A pre-existing role in the practice was clearly beneficial. But external funding also gave vital protected time and a level of autonomy to ensure that they were not unduly distracted from their project role, by other inevitable practice contingencies. They operated from a room in the surgery and were supervised by SL and JR; though since patients were trawled from the whole practice all the GPs were involved.

**Methodology**

*Case selection and controls*

*Target group.* Besides those with chronic diseases and unable to access GP services for their annual checks, patients targeted in the study were those who rarely contacted health services, lived alone, were unable to “get out”, elderly and considered to be frail (employing the wide concept discussed by Bouman et al., 2008) or in cognitive decline. In other cases, resident partners or carers were themselves in need of assessment, additional support, or were failing to manage. A few lived on the rural outskirts of the practice, and/or in social isolation. Most were selected from GP lists, with additional DN referrals. In addition to the original case criteria, a small group of elderly patients were selected because they frequently contacted the surgery, but seemed to require further home assessment to determine their needs.

*Control patients and ethical considerations.* From the overall target group, matching control patients with similar morbidities and unmet needs, who would have been referred to the link nurses, were listed but not contacted. Their records were checked at intervals to note any telephone calls, GP contacts, visits, DN or out-of-hours (OOH) interventions. It seemed reasonable to assume that the control group were not in greater danger of neglect than they were prior to the project. Any need for intervention for them was dealt with in the conventional way by whatever practice or health agent – such as doctor, nurse, ambulance – who would have attended before the project began. The same ethical decision was taken in a large study carried out in the Netherlands to evaluate an interdisciplinary primary care approach to community – dwelling frail elderly people, to reduce disability and prevent decline (van Haastregt et al., 2000), and similarly in an earlier Italian randomised study of integrated care for older people living in the community (Bernabei et al., 1998).

*Structure of visits and ongoing activity.* From an initial list of around 100 patients, alternate names were entered on visiting and control lists. At the first visit (agreed by telephone; overall, only two declined), using a check list, basic observations and holistic assessments were made, including tissue viability. Chronic disease reviews for ACSCs were carried out as required, and medication, compliance, and dosette systems reviewed. Immediate treatment was given where needed, and any other interventions were effected, some involving the doctors, or an occasional MDT. Additional support was offered where appropriate (and available), from DN, social and voluntary services (such as befriending),
day-centre, and equipment ordering. Subsequent visiting or telephone calls depended on need until any problems were stable or referral arranged. An early busy visiting schedule consisted of around five to six visits per day, and often more telephone calls. This progressed over some months to a manageable three to six visits and calls. A pattern of monthly reviews with the doctors (SL and JR) was set up. The initial assessment of link nurses patients, plus all interventions and follow up, including any other agencies within or outside the practice, was recorded on the practice Emis computer system, which also provided all information regarding control group patients.

Teething problems and progress
The link nurses were given broad outlines for their project and considerable autonomy. However, despite preparatory discussions, clarity within the practice for this new project role took time to become routine. This partly involved the expectations of GPs, or distinctions with regard to the (somewhat over-stretched) local DN service. It became clear that, in the view of their GPs, some individual “control” patients could not be left unattended if suspected of requiring urgent attention. Any such patients were dealt with, but not recorded for the study. Sometimes a “safe” matching replacement (for the patient removed from the control group) was not always easily found. Control group numbers consequently varied slightly, but the aim was to maintain 40 in each month. This matched what became a manageable number of patients spread over the month, including a target case load of nine new patients plus follow-up patients. Numbers inevitably were affected by the holiday periods of one or other nurse. The project originally commenced in September 2014, but the first three months were needed to deal with those patients causing concern, and to establish patient allocations between control and link nurse groups. Clearly a “process evaluation” period (e.g. Metzelthin, Daniels, van Rossum, Cox, Habets, de Witte and Kempen, 2013) should have been anticipated. During the implementation period between January 2015 and May 2016, the total number of new patients seen was 150, and the number of all link nurse visits reached 1867. Multiple re-visits were sometimes required: weekly, monthly, or less often depending on the level of support required. In many situations, ongoing support by telephone calls or occasional visits was considered necessary. A patients questionnaire was offered to all those visited in the first year, and substantial benefit was reported by patients and carers. The overall impression was of gratitude for care and support that gave confidence to remain at home. No negative feedback was received from the numerous responses. Occasionally, it was deemed appropriate to be involved in end of life care. In the second year, drop-in clinics at care homes within the practice area revealed several patients with significant undiagnosed or incompletely managed conditions. This important finding was taken up by the practice GPs (a similar finding is discussed by Morris, 2012). Further, six monthly reviews were undertaken with the doctors. By May 2016, there seemed to be overwhelming evidence of benefits from intervention, so a decision was taken thereafter to include the control group for link nurse visiting.

Case history
An elderly married couple were visited by the link nurses. The lady was morbidly obese, housebound and had poorly controlled diabetes. She was unable to support her own weight and required hoisting. Her husband had been her main carer in the past but his own health was now in decline with poorly controlled diabetes, heart disease, dementia, frailty and occasional aggression. They had carers four times a day to help with personal care and to assist with preparing meals. The couple were frequently contacting the GP, district nurses (DNs) or the out of hour’s service. The carers were also often concerned about managing the couple. The link nurses were tasked with trying to support the situation and to liaise with
other members of the ICT. This included GP, social services, occupational therapists and care providers. There were several benefits from the link nurse involvement: better diabetic control and some weight loss, fewer calls to 111 service, GP, and DN; and carers feeling more confident that the couple could continue in a safer home environment. The link nurses also introduced dosette systems for medication, and referred the husband to the memory clinic. The couple were adamant that they wanted to stay together in their own home for as long as possible, and in supporting this plan the link nurses remained a reliable point of contact, especially on the first visit of new carers. The couple currently have a live-in carer, and require intermittent support.

Previous research and emergence of link nurse role
Among the many trials and studies since Bernabei et al. (1998), which attempt to ameliorate decline in health and functionality in the elderly, the majority involve an integrated or MDT. The team may include a GP or geriatrician, health visitor or nurse, case manager, and usually a social worker. Most of these preventive trials tend to exclude non-responders to offer of assessment and intervention, while concluding that there is little or no benefit from such efforts. Of three papers from Maastricht University, van Haastregt et al. (2000) and Bouman et al. (2008) found no benefit from preventive home visits, while Metzelthin, van Rossum, de Witte, Ambergen, Holma, Sipers and Kempen (2013) demonstrated a similar result to their “prevention of Care” approach. In relation to similar British trials, there is an interesting comment from Bouman, echoed by Metzelthin, that “standard healthcare in the Netherlands is already at a high level”, suggesting that improvements there may be near the optimum achievable. The systematic review and meta-analysis of Elkan et al. (2001) raised another important matter pointing forward, namely “the evidence we reviewed suggests that those in poorer health benefit more from intervention”, and similarly “interventions targeted more intensively on those identified as having problems are more effective”. The influential study conducted by Fletcher et al. (2004) in 105 British practices found no significant benefit from offers of different kinds of intervention. However, in so far as the conclusion applied only to the eligible 81 per cent who responded, perhaps a caveat should be applied. Various exclusions were also made in the Maastricht trials, namely the very sick, the bed-bound or terminally ill, the severely psychologically impaired, and those unable to speak Dutch. Such rigorous selection, exclusion, opting out or failure to opt in is perhaps more severe in the Canadian study by Ploeg et al. (2010): of the 84 per cent who completed postal questionnaires, 65 per cent met risk criteria, of whom 45 per cent agreed to participate, and 93 per cent of the latter were randomised. Later, studies tend to reflect a different approach to non-responders.

A study by Lyndon (2007) prefigures the link nurse project more closely than others. The model had been operating successfully in Cornwall & the isles of Scilly for several years, and involved a Community Matron working with an integrated social worker. This combination is described as “the lynchpin of an integrated approach to care and management of patients with complex needs and multiple long-term conditions”. The similar mini-team plus a GP case manager was deployed in the Castlefield Care study by Lyon et al. (2006), which was replicated by Keating et al. (2008). Keating had an 82 per cent response in the practice to an initial personalised questionnaire addressed to those frail elderly patients with complex needs. A crucial difference from earlier preventive trials mentioned above, lay in the intensive follow-up of non-responders, which constituted 62 per cent of the very high-risk patients finally identified. It is this same group among the vulnerable elderly that the link nurse project identified and pursued by telephone call and visit. Beacon (2015) reported a similar conclusion from the work of multi-disciplinary practice integrated care teams in a deprived area of Manchester. Selected high-risk patients demonstrated “improved patient outcomes” with “an overall reduction [in hospital admissions] in patients the teams have been
working with. And “such work enabled practitioners to make a positive shift away from crisis management to more preventive approaches”. The DN service for Tower Hamlets, London, has an innovative pilot in progress (Tower Hamlets Together, 2016). Based on the Netherlands Buurtzog model, it is a self-managed constituent of an MDCT. Operating in a deprived area, this project is on a larger scale than the link nurses who work in a semi-rural environment. But it is similarly focussed on the needs of vulnerable elderly frail and isolated patients. Interim reports suggest a reduction in unplanned/unnecessary admissions. However, in the link nurse study, there is a specific local factor necessitating a different design from all those mentioned so far. No social worker could be allocated to the Whitewater practice, so the usual concept of an ICT could not apply. In consequence the link nurses, with their mix of skills and experience, provided a broad assessment-come-intervention and nursing support role. Nevertheless, working from the practice base, and backed by the GP’s they could liaise with support agencies including care providers, a befriending service, DN and SW (when and where available), and occasional help from a clinical rapid response team. Indeed as experience and confidence in the link nurse activity progressed, they sometimes gave the latter agencies assistance or advice in providing appropriate patient care. A definite patient advocate role also emerged. Such “enhanced confidence” in new roles (Workman and Pickard (2008), and “nurse leadership authenticity” empowering decisions, were also noted by Wigens (2016). Other examples of a similar central role are described by Harvey (2017) in Queensland, where they developed, implemented and evaluated “nurse-led integrated person-centred care with long-term conditions”.

**Results for study period January 2015 to May 2016**

Each month the figures for control and link nurse patient groups were compiled by outcome. These are summarised in Table I, shown as patient numbers (Qty) and as percentages of the outcomes within each group (Figures 1 and 2).

<table>
<thead>
<tr>
<th>Outcome results</th>
<th>Link nurses Qty</th>
<th>%</th>
<th>Control group Qty</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone consultations</td>
<td>960</td>
<td>86</td>
<td>278</td>
<td>45</td>
</tr>
<tr>
<td>Admissions</td>
<td>41</td>
<td>4</td>
<td>44</td>
<td>8</td>
</tr>
<tr>
<td>111 calls</td>
<td>44</td>
<td>4</td>
<td>86</td>
<td>14</td>
</tr>
<tr>
<td>GP home visits</td>
<td>65</td>
<td>6</td>
<td>203</td>
<td>33</td>
</tr>
<tr>
<td>Overall totals</td>
<td>1,110</td>
<td>100</td>
<td>615</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table I. Outcome results**

![Figure 1. Bar Chart Summary of Outcome results – January 2015 to end of May 2016](image-url)
Primarily, this study found considerable unmet health needs amongst isolated frail elderly patients living in the community, who for various reasons could not attend the surgery. The instance above of an aged spouse/carer struggling to look after a partner sometimes near to crisis (and both with co-morbidities) was fairly extreme, but there were similar if less challenging situations. It was possible to manage most situations at home, either by the link nurse interventions alone, or with the help of other supporting agencies. Second, in this study over a period of 17 months, compared to the control group, there was a marked reduction in the need for home visits to link nurse patients by practice GPs, also in 111 calls, and unplanned hospital admissions. Incidentally, this may also suggest that assessments by the nurses rarely underestimated critical morbidity. Ongoing telephone support was also particularly appreciated (see also the recommendations of Tian et al., 2012). Attention is drawn to the patients prioritised for early intervention during the initial months from September 2014 mentioned above. If left unvisited by the link nurses they might otherwise have slightly increased GP visits, 111 calls or admissions of control patients (besides diluting the remaining pool of unmet need).

Limitations of this study
The beneficial results of link nurse intervention in the care of frail isolated elderly patients found in this project involved only one practice of 16,500 patients (an offer to extend the study to an adjacent practice with a similar patient profile was not taken up). There were some difficulties encountered in exact matching of the control group. To avoid these problems, an alternative method of testing the effects of intervention among frail elderly patients would be to examine the notes of the (whole) identified group, comparing recorded significant events during (say) 12 months prior to link nurse activity, with those during a subsequent period of active intervention.

Conclusion and implications
Significant improvements in the home care of isolated frail elderly patients with complex conditions can be achieved by extending the role of general practice nurses, even where an ICT cannot be deployed. This study suggests that, while offering some continuity from the small team, improvements in home care achieved by link nurses can generate increased security in patients and carers. A reduction in demand on GP and OOH visits and 111 calls follows, together with fewer unplanned hospital admissions. In addressing the needs of these vulnerable patients in the community, a re-vitalised and more stable platform of care and support is provided. This should also promote better communication between link nurses in the practice and hospital.
staff seeking to discharge the elderly frail. Earlier discharge to a safe home environment would be encouraged, thereby reducing “crisis management” and bed-blocking. A small reduction overall in Care/Nursing Home occupation might also be expected, though this was not examined in the study. While additional input from an allocated social worker would no doubt expand the range of assistance provided, the results demonstrated in this project justify further testing of this nursing role in other practices. However, link nurses could not entirely replace the wider spread of work covered by a DN. One full-time equivalent link nurse seems to be adequate for a practice of 16,500 patients. However, two part-time nurses may be more efficient (especially where they possess different special skills), and allow those who need part-time employment to find a fulfilling if demanding role in the community. Evidence has been put forward that “Autonomous home care nursing staff are more engaged in their work and less likely to consider leaving the healthcare sector” (Maurits et al., 2015). The move towards “associating” practices to form populations of around 35,000 patients might well allow further testing of the match between numbers of vulnerable patients and a full or part-time link nurse. Finally, any benefits achieved in this case study must be set against the cost of one full-time practice nurse equivalent undertaking weekday home visits and telephone calls (up to six of each daily). However, with community services already stretched, it would be difficult to provide real improvement in home care without additional funding from some quarter.

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Further reading


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The primary care home: a new vehicle for the delivery of population health in England

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Abstract

Purpose – The purpose of this paper is to consider how the evolving concept of the “primary care home” (PCH) that is developing in England might be an effective vehicle for the delivery of the goals of “population health”. The authors examine evidence from earlier initiatives to achieve similar objectives of primary care-led health system planning and care integration to understand relevant lessons for the PCH.

Design/methodology/approach – This paper is based on a descriptive review of the PCH using documentary sources and a non-systematic review of literature relating to primary care commissioning initiatives and recent initiatives to deliver general practice services on a larger scale.

Findings – The PCH is likely to bring forth relatively high engagement from general practitioners due to its neighbourhood scale, voluntary nature and its focus on professional partnership, personalisation of care and outcomes. It is important that participants have sufficient autonomy to act and that financial incentives are aligned with the goals of population health. It is also important that, unlike some earlier primary care initiatives, the PCH is given time to develop to maturity.

Originality/value – The PCH is a recent phenomenon that is developing in England and elsewhere. This paper locates the PCH within a historical context and draws conclusions from a relevant evidence base.

Keywords Population health, Primary care home

Introduction

“Population health” is a concept that encompasses the proactive and multi-disciplinary management of the health and well-being of a defined population. It embodies notions of planning, population segmentation and disease prevention and management.

Population health has long been a goal of public health champions but has hitherto been less successful in becoming fully embedded in health care policies for the NHS in England, where the focus has been predominantly on the performance of health care organisations and improving access and experience for patients at the level of individual.

For nearly three decades, one strand of government policy has been to develop the role of the general practitioner and wider primary care team as leaders in the planning, design and budgeting of care, in part at least, to deliver the objectives that have now become understood as population health. Key national strategies have included enhancing the primary care team in terms of scale and clinical scope, establishing formal and informal integration with professionals in other care settings and taking collective responsibility for health and care resources so that primary health care plays a significant role in the shaping and commissioning of wider health care services for defined populations.

There has been a near-constant evolution of organisational models that might act as vehicles for this vision for primary health care. The primary care home (PCH) model developed by the National Association of Primary Care (NAPC) (2018) has emerged as a new staging post in the journey towards integrated care and the delivery of improved population health.
health. The PCH seeks to provide a vision and structure for both the delivery of comprehensive, team-based care for a population of 30,000-50,000 people as well a focus for the planning of wider health care resources to achieve optimal health outcomes for that population.

The PCH has developed in England as part of a broader strategic initiative within the NHS, the Five Year Forward View (NHS England, 2014). This initiative, among other things, aims to improve health and the use of health and care resources through different models for organising and integrating primary, secondary and social care (known as “new care models”). While the PCH is not formally a “new care model” it has gained the support of NHS England (2018), as a means by which the principles of integrated care set out in the Five Year Forward View might be implemented at a more local level.

The various antecedents of the PCH can provide insights into how the PCH might be enabled (and what obstacles might be avoided). In this paper, we describe the concept of population health and briefly examine the evidence relating to earlier primary care models. We then describe the PCH and consider what insights might be drawn from the historical evidence to support the development of the PCH. Our perspective is drawn from our experience as a primary care practitioner and leader of a national primary care interest group (NC) and as someone who carries out research into primary care and supports ongoing development (RL).

Understanding population health
Population health has been defined as the health outcomes of a group of individuals, including the distribution of such outcomes within the group (Kindig and Stoddart, 2003). In practice, a focus on maximising population health involves proactively segmenting the population into groups defined by a common symptom, condition or characteristic, assessing needs and then targeting interventions that are suitable for the people in that particular segment (Gray, 2016).

However, there may be some threats to this approach associated with a fragmentation of care delivery around specific subsets of population (Rosen, 2018). Notwithstanding this, health care leaders within the NHS are recognising the importance of developing a population health approach and the importance of a value dimension to health care. This is because of the increasing burden of patient and population need given the constraints of the resources available to meet those needs (Gray, 2016).

If population health is to succeed, a shift in activities, measurement and accountability is needed away from simply improving health care processes and towards overall improvement of health outcomes (Gray, 2016). It is also becoming increasingly clear that a focus on health service provision alone is unlikely to deliver the desired gains in population health. Several studies have estimated the impact on health outcomes because of the broader determinants of health. A King’s Fund (2013) report summarises some of the key studies, one of which (McGinnis et al., 2002) states that health interventions alone only contribute to 15 per cent of health outcomes, while a further 40 per cent are amenable to lifestyle behaviour patterns, and the remaining contribution comes from societal and environmental factors.

Therefore, it is important at a population level to think of broader systems of care and support which can address immediate health care needs, lifestyle-related behaviours and, through partnership with other agencies such as local government and the third sector, broader social needs. This multi-agency approach builds on the notion of viewing communities as “assets”. Kretzmann and McKnight have proposed an approach to community development that emphasises building the capacity and capability of local communities to enhance their strengths and resources, tackling the issues that matter to them, and using existing resources and expertise to achieve improvements locally (Kretzmann and McKnight, 1993).
However, while improving health outcomes is a key aim of population health, it is necessary to take account also of patient experience (through personalisation of care) as well as of the overall value provided within the health care system. This approach has been popularised through the Triple Aim which seeks to optimise health system performance (Berwick et al., 2008).

Gray (2016) considered three dimensions of value in relation to populations. The first relates to allocative value, that is the effectiveness of care at a programme level. The second relates to technical value such as the implementation of evidence-based interventions at a disease level. The third dimension relates to personal value, which are the outcomes that matter to an informed individual.

Primary care systems have the potential to improve all three dimensions of value. Starfield considered the characteristics and impact of primary care systems on population health and, in particular, dealing with health inequalities. She characterised primary care as providing accessibility for first contact care for health needs, long-term person-focused care (longitudinality), comprehensiveness of care, and coordination of care in instances in which patients have multiple care inputs. Systems built around primary care have been demonstrated to be associated with better health outcomes with lower inequalities, lower costs and higher satisfaction (Starfield, 2005).

The policy antecedents of the PCH

As described above, neither the notions of population health nor the importance of primary care development are new to the NHS. Indeed, since 1990, government policy has consistently identified as important the development of an enhanced model of primary care, increased general practitioner involvement in the delivery and design of health care services and a leadership role for primary care in the management and allocation of health care resources (Lewis, 2004).

The leadership of general practitioners and wider primary care in the overall management of population health care resources (more generally known as “primary care led commissioning”) has proved an enduring and important feature of health care policy for more than two decades. Here, the intention is to use the unique position of the general practitioner (with their registered lists and “gatekeeper” role over onward referral to specialist services) to provide greater care management as patients transit through the NHS system, ensuring appropriate and higher quality specialist services and investing in services that would improve the health of their registered population (and, by extension, disinvesting in lower quality providers or services).

Since 1990 there have been numerous policies aimed at constructing the right architecture for this role. These include the GP fundholding initiative, “total purchasing pilots”, Practice-based Commissioning, Primary Care Groups and, most recently, Clinical Commissioning Groups. All of these initiatives share some basic characteristics that are highly relevant to the PCH model. They involve leadership by general practitioners, some form of influence or control by general practitioners over population-based health care resources, a desire to enhance the proportion of services that are delivered in community settings and an objective to improve the integration of care across health settings (e.g. hospital, community and general practice care) and across the health and social care boundary. While some of these initiatives have focused at least initially on individual general practices as the organising feature and have therefore been relatively small scale, most have either evolved, or have been designed from the outset, to develop collaborative arrangements linking multiple general practices together to serve larger populations.

While primary care commissioning was concerned with the design and purchase of health care, in practice it bridged the gap between commissioning and provision of care. This related particularly to the development of extended primary and community care
services. By handing over commissioning responsibilities to primary care it was expected that this would ensure the transfer of resources and care from hospital to community settings and from “downstream” treatment to “upstream” prevention and care management.

Therefore, primary care commissioning can be seen as a development highly aligned with allied policies to develop primary and community care providers; in particular, efforts to create larger scale units of primary care delivery through organisational collaboration.

Primary care organisations and population health – what does the evidence tell us?

Attempts to develop and coordinate the delivery and commissioning functions of primary care have met with mixed success (Smith et al., 2004; Miller et al., 2012). The rapid succession of similar, although distinct, initiatives in this realm suggest that, while successive policies shared a basic agreement over the ingredients of success, there was far less consensus over the precise recipe.

Models of enhanced primary care and primary care commissioning, in theory at least, draw efficacy from their ability to both empower and align clinical professionals (in particular, from GPs who by the decisions they make, commit a resource). It would therefore seem axiomatic that the success of these models would in part rely on their ability to draw forth clinical leaders and for those leaders to engage with and influence the broader clinical group. There is ample evidence on which to draw.

Engagement with general practice

Historical evidence is, perhaps unsurprisingly, mixed in this regard. Under GP fundholding, participants enjoyed significant autonomy which appears to be a factor in the comparatively high levels of GP engagement with this initiative. It is likely, however, that this is also linked to the fact that fundholding practices were generally single practices or small scale groups (Miller et al., 2012). Engagement within this context proving more feasible, less costly in terms of time and effort and therefore more successful.

In contrast, more collegiate approaches to primary care commissioning struggled with engagement beyond the leadership cadre. The era of Primary Care Trusts (relatively bureaucratic structures with a somewhat constrained role for clinical decision makers) prior to the introduction of “Practice-based Commissioning” in 2005 has been identified as a “historical low point” in terms of clinical engagement (Miller et al., 2012, p. 13). Primary Care Trusts were arguably the most “bureaucratic” model of primary care commissioning in terms of the relative powers of clinical and non-clinical management (with clinical leaders confined to a “professional executive committee”). This in part was a consequence of the wider range of statutory duties that PCTs had to discharge and their status as formal public bodies.

Practice-based Commissioning reintroduced notions of local GP practice “ownership” and decision making, although over time many practices formed consortia and operated jointly. The level of GP and practice engagement under this initiative was very variable (Audit Commission, 2007). This is likely to reflect the very varied powers that were assigned to practices in different local contexts.

Clinical Commissioning Groups arguably fared better. The national “tracker survey” found engagement among GPs on the governing body relatively high, but falling over time (from 83 per cent feeling engaged in 2013 to 64 per cent in 2016). Those GPs not in leadership roles were significantly less engaged or optimistic about the role of the CCG. Only 38 per cent felt that the CCG made their working life more fulfilling and only 20 per cent felt that they could influence the work of the CCG. A majority of GPs felt that CCGs had not made changes to referral patterns or quality of care (Holder et al., 2016).
While autonomy enjoyed by GPs within a supra-practice endeavour is likely to impact on engagement, so too is the size of enterprise. As has already been noted, early models of fundholding tended to focus on single practices and with a relatively constrained scope of authority. This made engagement relatively easy, but undermined the ability of fundholders to influence services outside of the direct scope of the scheme (broadly elective care services) or to address strategic issues of health service reconfiguration across larger populations.

There is little conclusive evidence about the “ideal” size for a primary care organisation, and certainly not that bigger is necessarily better for all functions (Bojke et al., 2001; Wilkin et al., 2003). However, the genesis of any shared enterprise between primary care professionals is probably important in its subsequent performance. Configurations that are mandated “top down” (e.g. to fit pre-existing geographical boundaries or some other template) are more likely to lead to clinician disengagement and lack of innovation than those that are allowed to develop organically (Pettigrew et al., 2016).

Impact of incentives
All models of primary care commissioning introduced a range of incentives aimed not only at engaging general practitioners but also at influencing their clinical decision making. A great deal of attention has been given to the use of financial incentives in primary care. These have included reimbursement of GP time spend in planning/commissioning activities, quality payments for certain outcomes and the ability to redirect NHS resources to develop services (particularly shifting resources from secondary to primary care).

Certainly, financial incentives have been associated with improvements in the delivery of structured disease management programmes in primary care (although the effectiveness of these incentives may plateau over time (Campbell et al., 2009)). There is evidence that financial incentives were to some extent effective in influencing behaviours under GP fundholding, where budget surpluses were available for reinvestment in general practice services and facilities (Dixon and Glennerster, 1995; Croxson et al., 2001).

The strength of financial incentives varied across the different models of primary care commissioning. In particular, this was affected by the level of direct control over the wider health care resources that was devolved to GPs. The most control over resources was enjoyed by GP fundholders compared with subsequent models. GP fundholders held legal budgets with the autonomy to spend against them with prior authorisation. Other initiatives involved only indicative allocations with the actual purse strings held by formal NHS bodies. Under Practice-based Commissioning, for example, the devolution of budgets was often nominal with GPs enjoying little actual control over the spending of the budget (Miller et al., 2012). Moreover, their ability to direct resources to new clinical settings was constrained with 62 per cent of leaders reporting that they had not been given access to any of the budgetary savings with the remainder only having access to 60 per cent of those savings (Department of Health, 2009).

However, the application of incentives to clinical professionals is complex and goes far beyond the simple use of financial incentives. Early GP fundholders, for example, were predominantly motivated by the desire to improve the quality of patient services (Glennerster et al., 1992). Other GPs took part in alternative models as, among other things, a sign of hostility to GP fundholding and the perception that it was creating a “two-tier” system (Miller et al., 2012).

While financial incentives appear to shape behaviours, they may also simply “crowd out” internal “moral” motivations. That is, by applying financial incentives to clinicians they may detract from, rather than add to, internal incentives such as professionalism, peer respect, concern for quality, etc. (Marshall and Harrison, 2005).
Changing patterns of care

Prior models of primary care commissioning demonstrated some impacts on clinical practice (and, by extension, on expenditure). Most types of primary care organisation were able to develop a wider range of primary care based services and quality assessment/improvement processes. Indeed, it was here that they were most successful (Smith et al., 2004).

However, the impact of new types of primary care organisations on relationships outside of primary care is less clear, in particular with hospital specialists. Total purchasing pilots, for example, faced obstacles in influencing hospitals but had successes in delivering examples of integrated care between primary and community services (Miller et al., 2012). In addition, a significant minority of GPs within CCGs reported better relationships with professionals outside of primary care (Holder et al., 2016).

There was mixed evidence on the impact of primary care organisations on secondary care utilisation and expenditure. However, the rate of increase of elective admissions was lower for fundholders, particularly the early adopters (Dusheiko et al., 2006). Total purchasing pilots managed to reduce the bed days and admissions for emergency hospital care (Wyke et al., 2003).

The findings relating to primary care commissioning arrangements have also been mirrored in some reviews of collaborative arrangements between general practitioners as providers of primary care (such as “federations” of general practices or large scale “super practices”). Here, patient benefits such as improved access to primary care have been delivered through shared clinics for groups of practices (Rosen et al., 2016).

In addition, there is also evidence relating to the development of integrated care provision in community settings regardless of the commissioning context. A systematic review by Powell Davies and colleagues demonstrates that a majority of provider integration strategies involving primary care as one of the parties improved health outcomes and a significant minority improved patient satisfaction. A much smaller minority had positive impacts on cost (Powell Davies et al., 2006). Integrated care pilots focusing on proactive care management implemented in the English NHS had positive impacts in terms of staff views of care quality and their own job satisfaction as well as reductions in some forms of hospital care and overall hospital costs. However, perhaps surprisingly, some aspects of patient satisfaction diminished (Roland et al., 2012).

Case studies carried out by the King’s Fund suggest that the introduction of specialists into community settings lead to a better patient experience and have the potential to help patients manage better their long-term conditions. Rosen et al. (2005), however, also highlighted that the creation of extended clinical roles for GPs can lead to hostility from hospital specialists.

The PCH

The English NHS has developed the concept of “new care models” as part of a national strategy to address identified gaps in health and well-being, quality and resources (NHS England, 2014). At the heart of a number of these new care models is the concept of population health management, in that there is a commitment to an integrated care system focused on defined populations, with budgetary alignment across providers with responsibilities to deliver improved health outcomes. There is an expectation that the techniques of population health (such as population segmentation and proactive disease management) will be implemented within the new care models (NHS England, 2016a, b).

Different care models have been described based on integrated care systems for defined populations. Two examples are the Multispecialty Community Provider (MCP) (a horizontally integrated system of care incorporating primary, community and out-of-hospital services) and the Primary and Acute Care System (PACS) (horizontally and vertically integrated care systems providing all or the majority of services for a given population) (NHS England, 2014, 2016a, b).
Whilst some of these care models are being implemented at large population scale (e.g., there is an expectation that PACS models will encompass a population size of at least 250,000 (NHS England, 2016a)), there is also interest in models based on smaller population sizes at the level of a neighbourhood to understand better the optimal level for integration of care. The concept of the PCH has gained traction as a means of organising care and teams around similar principles to those set out in the MCP new care model but focused on smaller neighbourhoods and communities in the belief that this is a more optimal scale for those activities. The PCH can be used as a local means of organising care within a larger entity such as an MCP or developed as a local enhancement to existing provider arrangements.

The PCH is a systemised approach to improve population health, utilising increased capacity within and leadership from primary care. A model of the PCH for England has been described by the NAPC (2018) with four key characteristics built around a population defined by the registered lists of general practice:

1. an integrated workforce, with a strong focus on partnerships spanning primary, secondary and social care;
2. a combined focus on personalisation of care and improvements in population health outcomes through proactive and preventative services;
3. aligned clinical and financial drivers through the collective management of resources with appropriate shared risks and rewards; and
4. provision of care to a defined, registered population of between 30,000 and 50,000.

The PCH involves both horizontal integration (collaboration between general practice organisations and between general practice and other community-based services) and vertical integration (enhanced team working between primary and secondary clinicians, including the development of specialist services provided in community settings as well as generalist services in acute settings such as ambulatory care).

Commencing in January 2016 there are now more than 200 sites across England, covering approximately 16 per cent of the population (NAPC, 2018). It is notable that the majority of GP practices joining the PCH programme to date are doing so voluntarily rather than being required to do so (though it is possible that this may change as a result of policy pressure to spread primary care networks more broadly (NHS England, 2017)).

The PCH model offers a greater breadth of provision of care within primary and community settings, supported by multi-agency working through a team-based approach. It requires some scaling of general practice provision in order to secure some of the benefits of collaboration (such as the provision of more specialist services within a community setting). However, the model seeks to retain a neighbourhood sense of belonging for patients and staff. Examples of early initiatives that are being adopted by the PCHs in England are set out in Table I.

Within the PCH approach, teams are formed to deliver services to specific population groups, but are then aggregated to a “whole” to ensure that the entire team responsible for the total PCH population functions in an integrated way. The approach being taken to population segmentation is shown in Table II.

An engaged clinical leadership takes responsibility for the collective management of (health care) resources at this level; key to this is the alignment of clinical and financial...
responsibility which enables the clinical team to be responsible for the stewardship of resources, as well as clinical effectiveness, quality and safety, these being essential elements of leadership of population health care (Gray et al., 2017).

Will the PCH deliver improved population health?
The PCH is a model of integrated care provision. Yet, it very clearly builds on the experience of different models of primary care commissioning as well as the broader development of primary health care built around the registered list of general medical practice.

Early results from the PCH approach are encouraging, with reports of impacts in the test sites such as improved employee satisfaction, staff reported patient satisfaction and some areas of reduced secondary care utilisation rates (PA Consulting, 2017). Initial evaluation findings indicate benefits to inter-professional working but highlight the need for sufficient resources to enable primary care to implement changes and for good quality data to demonstrate any financial benefits of the model over time.

However, these findings are tentative and relate to the very early stages of PCH development. PCHs need to develop and the evidence from earlier models can be instructive in thinking about that development path.

Certainly, there are reasonable grounds to believe that levels of engagement of GPs with the PCH will be high. The current organic development of PCHs by volunteers

<table>
<thead>
<tr>
<th>Beacon Medical Group</th>
<th>Larwood and Bawtry</th>
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<tbody>
<tr>
<td>Pharmacist and GP supporting patients in care homes with medication review, ward rounds, discharge summaries</td>
<td>Pharmacist medication review to care home residents</td>
</tr>
<tr>
<td>Expanded Urgent Care team with additional Nurse Practitioners and new triage model</td>
<td>General Practice-based Community Advisory acting as patient advisor and navigator for community services</td>
</tr>
<tr>
<td>Reconfigured “virtual ward”, with greater voluntary sector and community group involvement</td>
<td>Colocation of primary, community and voluntary services</td>
</tr>
<tr>
<td>Psychiatrist-led mental health clinics in general practice</td>
<td>Social care clinic in primary care setting</td>
</tr>
<tr>
<td>Influenza vaccination campaign</td>
<td>Integrated team working between community and practice nurses</td>
</tr>
</tbody>
</table>

**Table I. Examples of PCH initiatives**

**Table II. Examples of patient cohorts targeted by PCHs and subsequent interventions**

**Source:** Adapted from PA Consulting (2017) and NAPC (2017) case studies

**Source:** Adapted from Kumpunen et al. (2017)
appears likely to facilitate relatively this engagement (or at least avoid presenting a barrier to engagement). This “volunteerism” would change if membership of a PCH becomes mandatory.

In terms of their scale, PCHs are significantly smaller than current Clinical Commissioning Groups. At a scale of around 30,000-50,000 population, PCHs have located themselves well within the extremes of the population size that is characteristic of other primary care models. Indeed, in size they are most similar to total purchasing pilots which had a mean population size of 33,000 (Bojke et al., 2001). However, while small scale may predispose to high levels of engagement, a key issue will be whether PCHs are able to collaborate effectively at larger population levels to implement more strategic developments. Or, put another way, will the drive to deliver major strategic goals by working at a larger scale serve to undermine clinical engagement at the level of the individual PCH?

It is also important to understand the incentives that may successfully influence the behaviour of general practitioners on the basis that the aims of the PCH are likely to rely on their leadership and involvement. PCHs need to be firmly rooted in purpose, quality improvement and clinical excellence if they are to marshal the potential powerful “internal” incentives discussed above and ensure that primary care clinicians are to consistently participate in and deliver the desired outcomes and behaviours. This view appears to be consistent with recent research in US accountable care organisations (which share similar aims as the PCH). Here, factors such as social purpose and the mastery of professional skill were more important motivators of physician behaviour than financial incentives (Phipps-Taylor and Shortell, 2016).

Therefore, a successful strategy for PCHs would be to ensure that incentives seek to align professionals with the goals of population health rather than personal or individual provider gains.

However, this does not preclude PCHs having meaningful control (or at the very least significant influence) over population resources. Indeed, this would be needed to ensure sufficient autonomy and engagement to allow innovation in service delivery. This control does not have to be in the shape of a formal budget (indeed, that may prove difficult in the current regulatory framework) but instead through relatively unconstrained involvement of clinicians in decision making.

It is also the case that the accountability for the management of resources will need new measures, which are applied over longer timescales, if the aims of population health are to be delivered by PCHs. Improvements to health outcomes, and shifts in the distribution of those outcomes within populations, are unlikely to be amendable to single year monitoring.

The development of greater integration between primary and secondary care services remains probably one of the most challenging areas given the degree of current physical and functional separation. The creation of a whole population budget may assist here as this may attenuate some of the potentially perverse outcomes of specialists collaborating with primary care. This includes the sometimes dramatic loss of hospital income as a result of shared care in community settings as can happen under simple case-based payment systems. It will also be important that PCH strategies to reshape hospital services take into account all aspects of any service and do not just cherry pick particular elements. It is also possible to address the barriers between primary and secondary care through the use of digital technology to improve and speed communication between these sectors.

**Conclusions**

The PCH is a new attempt to systemise population health through integrated care constructs that build on the role of registered list-based primary care in the NHS in England.
They can be seen as an evolution of previous models of enhanced primary care and population planning, albeit in a national policy context that is now more conducive to the aims of population health. The growth in PCHs nationally has been rapid.

Evidence from prior models provides a guide to enablers and pitfalls that should assist with the successful development of the PCH. It is clear that engagement of front line practitioners and the recruitment of suitable leaders are crucial. The evidence tells us that engagement is a function of autonomy and a driver of innovation. In this regard at least, the PCH, as a rapidly growing and voluntary activity, based on neighbourhood level populations, appears set fair.

However, one interpretation of the almost constant reinvention of primary care organisations over the last 20 years suggests that, in the minds of successive policy makers at least, hoped for levels of effectiveness have not yet been reached. An alternative hypothesis is that no one model has had sufficient time to establish itself and that the protagonists in primary care have been laid low by “change fatigue”. In this case, perhaps the most important prescription for the PCH is sufficient time to develop to maturity.

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Delivering primary health care as envisioned
A model of health and well-being guiding community-governed primary care organizations

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Abstract
Purpose – For over 40 years, Canadian and international bodies have endorsed comprehensive primary health care (PHC), yet very little work has been done to describe how services and programs are delivered within these organizations. Because health equity is now of greater interest to policy makers and the public, it is important to describe an evidence-informed framework for the delivery of integrated and equitable PHC. The purpose of this paper is to describe the development of a “Model of Health and Well-being” (MHWB) that provides a roadmap to the delivery of PHC in a successful network of community-governed PHC organizations in Ontario, Canada.
Design/methodology/approach – The MHWB was developed through an iterative process that involved members of community-governed PHC organizations in Ontario and key stakeholders. This included literature review and consultation to ensure that the model was evidence informed and reflected actual practice.
Findings – The MHWB has three guiding principles: highest quality health and well-being for people and communities; health equity and social justice; and community vitality and belonging. In addition, there are eight attributes that describe how services are provided. There is a reasonable evidence base underpinning the all principles and attributes.
As comprehensive, equitable PHC organizations become increasingly recognized as critical parts of the health care system, it is important to have a means to describe their approach to care and the values that drive their care. The MHWB provides a blueprint for comprehensive PHC as delivered by over 100 Community Governed Primary Health Care (CGPHC) organizations in Ontario. All CGPHC organizations have endorsed, adopted and operationalized this model as a guide for optimum care delivery.

**Keywords** Health and well-being, Multi-disciplinary teamwork, Holistic approaches to care, Integrated health care, Primary health care

**Paper type** General review

**Background**
Ontario, Canada has a population of 14,193,384, spread across 1,076,395 square km. Population centers vary from Toronto, with over six million inhabitants, to small hamlets and remote communities. Health care is mostly publicly funded, and primary care is mostly delivered by groups and individual physicians running private practices which conform to different payment and delivery models. Barbara Starfield’s (1998) classic definition of PC describes most models for PC in Ontario: “that level of a health service system that provides entry into the system for all new needs and problems, provides person-focused (not disease-oriented) care over time, provides care for all but very uncommon or unusual conditions, and coordinates or integrates care provided elsewhere by others.” At the same time, most Ontario PC delivery models would not embody the broader concept of primary health care (PHC), which is an approach to care that includes services delivered to individuals and communities with a focus on health promotion, disease prevention, health equity, and community involvement (Muldoon et al., 2010; Aggarwal and Hutchison, 2012). This focus on PC and not PHC exists despite many reports and position papers (Mable and Marriott, 2012; Hutchison et al., 2011) extolling the virtues of the broader PHC approach. There is little to guide the work of policy makers looking beyond PC in order to ensure health equity through more comprehensive PHC.

Ontario’s PC/PHC landscape is complex due to a multiplicity of funding and delivery models (Table I). The complexity of the system and its heavy reliance on private practitioners who do not form part of a province-wide delivery system inhibit collective action, performance management, quality improvement, collaborative long-term planning, and collective data sharing.

<table>
<thead>
<tr>
<th>Community Governed Primary Health Care (AHACs, CHCs, CFHTs, NPLCs)</th>
<th>Family Health Group (FHG)</th>
<th>Family Health Network (FHN)a</th>
<th>Family Health Organization (FHO)a</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physician reimbursement Governance</strong></td>
<td>Salary (CFHTs – blended salary)</td>
<td>Blended fee-for service Physician led</td>
<td>Blended capitation Physician led</td>
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<tr>
<td><strong>After-hours requirements</strong></td>
<td>CHCs only</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Accountability agreements with LHIN</strong></td>
<td>CHCs and AHACs</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Community outreach and health promotion Interprofessional teams</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes (FHTs only)</td>
</tr>
</tbody>
</table>

**Table I.** Primary care models in Ontario (Health Force Ontario, 2017, family medicine compensation)

**Note:** aFHNs and FHOs may be part of a Family Health Team (FHT)
The PHC approach puts a conception of people and communities first – rather than a model of funding or of service provision – and represents an innovation in thinking for Ontario’s health care system. By placing people at the center, this approach moves away from privileging service providers and can facilitate the people-centered health systems transformation envisioned under the provincial government’s “Patients First” agenda (Ministry of Health and Long-Term Care, 2017). It also addresses ongoing concerns, about the appropriate “mix” of funding models for PC in Ontario: a focus on PHC allows for innovative funding models to arise over time while keeping the focus on the role of PHC in advancing population health, health equity and individual and collective well-being (Office of the Auditor General of Ontario, 2017).

Despite Canada’s commitment to provide high-quality health care, health inequities remain a pressing concern. Of concern are the persistent health care inequities affecting marginalized populations (Brown et al., 2012; Health Council of Canada, 2010). Paradoxically, those who have the greatest health and social complexities sometimes have the least access to care (Brown et al., 2012; World Health Organization, 2008).

In Ontario, Community Health Centres (CHCs) and other community-governed PHC models (such as Aboriginal Health Access Centres (AHACs) some Community Family Health Teams (CFHTs) and some Nurse Practitioner Led Clinics (NPLCs)) address the equity gap by providing care to populations who experience barriers to accessing health care (AOHC, “Membership”). Ontario CHCs are community-governed interprofessional PHC organizations that have existed for over 40 years and serve over 600,000 people in 110 communities throughout Ontario (AOHC, “CHC fact sheet”). AHACs were established in the mid-1990s, followed by CFHTs and NPLCs in the early 2000s to fill gaps in service to certain communities and population groups. People who attend one of these organizations may receive interprofessional care from doctors, nurse practitioners, nurses, dietitians, social workers, and other kinds of clinical health providers. In addition to individual-based care, when funding is available, health promoters, community workers, and others respond to health problems triggered by social, environmental, or economic factors through services, community programs, and advocacy.

In order to describe their approach to care provision and improve the quality of care, a group of these organizations developed a common evidence-informed roadmap, referred to as the Model of Health and Well-being (MHWB). This model is based on principles adapted from the World Health Organization and the 14 social determinants of health (underlying conditions that help determine a person’s health status, such as income, education, employment, food insecurity, housing social exclusion, gender, race, and disability). The MHWB contains eight attributes that taken together highlight the importance of an upstream, systemic perspective in the delivery of comprehensive PHC (see Figure 1). The model is based on the premise that people and communities who face barriers to health need access to integrated services that respond to the many different factors that have an impact on their health status. While the model originated in CHCs, the organizations that have endorsed and implemented the MHWB serve diverse populations based on the needs of their communities and include all Ontario Community Governed Primary Health Care (CGPHC) organizations (CHCs, AHACs, NPLCs, and CFHTs).

Methods
The MHWB was created in 2013 by a team of sector leaders, health care practitioners, community developers, and health promoters. They started with the concept of people-centered health, from the World Health Organization (2009). The concept of the person became front and foremost and from there a series of values and attributes were included into a proposed model applicable at the organizational level. This iterative process was undertaken to confirm values, attributes, and definitions through a series of face-to-face meetings and interviews with stakeholders and clients.
Each version of the framework including definitions, attributes, and values was presented to sector leaders to ensure that the model was comprehensive and reflective of actual practice in the CGPHC organizations. Feedback was collated and revisions made to inform the next version of the model. This iterative process continued until the model was fully endorsed and adopted. A literature review was conducted to ensure that it was evidence informed.

**MHWB**

The MHWB consists of three overarching goals: highest quality people and community-centered health and well-being; health equity and social justice; and community vitality and belonging. In addition to overarching goals, there are eight attributes that describe how services are provided. Definitions for the attributes are summarized below. Each attribute is supported by evidence underlining its importance to health and social care. Each attribute may be operationalized differently based on community need; however, specific service delivery has been provided as examples.

**Based on the determinants of health.** A common element in CGPHC organizations is the recognition of the influence of the DOH – upstream, non-clinical factors – on the health of the people they serve. There is an increasing body of evidence about what makes people healthy (Adler and Stewart, 2010; Marmot, 1999). These include key factors such as: income and social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetics; health services; gender; and culture (Public Health Agency of Canada, 2010). Each of these factors is important on its own, but they are also interrelated. There is growing social and biomedical evidence including relevant knowledge, documented associations, pathways and biological mechanisms to explain the interrelated impact of the DOH on health outcomes (Braveman et al., 2011). There is also a growing body of literature demonstrating how the DOH operates at the individual and neighborhood levels (Macintyre et al., 2008). Approximately 50 percent of population health outcomes in Canada are attributable to social and economic determinants which tend to cluster in particular communities (Keon and Pépin, 2009). In Ontario, there are many cases of avoidable illness and premature death because thousands of people simply cannot access the necessities to keep them healthy (Health Council of Canada, 2010).
Most CGPHC organizations have activities, advocacy and initiatives to mitigate the impact of poverty. In addition, childcare, transit, food boxes, and community gardens are found in many centers providing increased access to transportation and healthy food. Social isolation and increasing a sense of belonging is a priority across the CGPHC organizations and several have activities to bring people together.

Population needs based. The Public Health Agency of Canada defines the population health approach as “an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups”. This approach recognizes the importance of the DOH and focuses on the distribution of health across the populations. The population health approach recognizes the importance of intersectoral partnerships at the community level, across and among different levels of government and among health care providers and other professionals who have a role in influencing health (Dunn and Hayes, 1999; Neuwelt et al., 2009). This is operationalized through partnerships between CGPHC and groups such as public health, libraries, shelters, home support services, youth programs, etc.

Anti-oppressive and culturally safe. Anti-oppressive practice includes the adoption of a set of non-discriminatory behaviors or skills, and an ongoing awareness of service providers’ own biases, judgments and potentially inequitable actions and their impact on the care that is provided (Larson, 2008). This reflective approach on the part of the provider is an important step toward minimizing the inequalities in care experienced by racialized groups. These practices are undertaken with the understanding that discrimination occurs in a variety of conscious and unconscious ways in everyday life. Oppression is reinforced not only by a series of overt actions but also by a range of subtle cues such as language choices and images. This approach is an important step toward mitigating unequal power relations that contribute to disparity in health outcomes.

Several researchers have suggested that indigenous people are often not provided health care within a culturally safe environment and experience high levels of systemic racism (Health Council of Canada, 2012; O’Sullivan, 2013; Shah and Reeves, 2012). Despite investments and efforts in health and socio-economic sectors within indigenous communities, current population studies reveal significant gaps in health outcomes compared to non-indigenous populations and high levels of systemic racism (Gracey and King, 2009; Smylie et al., 2011; Allan and Smylie, 2015).

Compared to non-racialized Ontarians, racialized communities (both immigrants and Canadian born) face higher risk for particular health issues, including diabetes, heart disease, HIV/AIDS, and certain cancers (Hyman et al., 2013; Nestel, 2012). Poor health is compounded by socio-economic barriers and inequities faced by many in racialized communities: poverty, precarious employment, social isolation/exclusion, and discrimination (Premji et al., 2010; Smith and Mustard, 2009).

Attention to the DOH is critically important to address the health inequities faced by racialized communities and vulnerable immigrants/refugees. Newcomers are on average healthier than Canadian-born residents when they arrive but they lose this advantage over time (Setia et al., 2012; Vang et al., 2015). Compared to the overall Ontario population, immigrants, refugees, and racialized communities are less likely to access specialist care and mental health services (Hyman et al., 2012).

Anti-oppressive practices are operationalized in organizations through attention to the spheres where discrimination manifests in everyday care. This emphasis on non-judgmental care delivery is also seen in the development of a harm reduction approach that is used with clients. This approach strives to meet clients “where they are” recognizing that all people have rights to care. This encourages providers to recognize that the human dignity of their client always presupposes the social barriers that bring them in for care. By taking this
view, the client is transformed from the so-called “drug addict” to the person with a substance abuse disorder who requires a complex array of services. Recently, CHCs have housed the first supervised-injection sites in Ontario. Organizations seek to provide a culturally safe space so that diverse groups feel respected and engaged. This includes a reflection on the space itself such as images on posters, safe spaces, provision of food and childcare, and understanding individual learning styles. Staff training in anti-oppression and cultural safety is provided in many CGPHC. Various services are also provided by community health workers and peer workers delivering services.

*Grounded in a community development approach*. This attribute emphasizes that health care is more than treating illness; it is about optimizing all the factors that allow people to live, learn, work, and play in their communities. Community capacity building has greater potential than clinical- or behavioral-based services to generate long-term sustainable improvements to the health of communities as a whole (Hawe, 2009).

Community development is the planned progression of all aspects of community well-being (economic, social, environmental, and cultural). It is a process whereby community members come together to take collective action and generate solutions to problems (Frank and Smith, 1999). The community development approach builds on community leadership, and the life experiences of community members to contribute to the health of their community. MHWB organizations work with communities to increase their capacity to improve community and individual health outcomes, and as a result their services and programs become more responsive to local community initiatives and needs. Examples are wide and varied and include projects such as community gardens and laundry co-ops. Pathways to Education is another example. This award-winning program was established at an urban CHC to provide support to students in an attempt to reduce the dropout rate. From 2001 to present, the dropout rate has been reduced from 56 to 10 percent; 95 percent of eligible high school youth have been enrolled in pathways and increased the university/college enrollment from 20 to 80 percent. An independent review suggested that the return on investment as from $25 to $1 (Boston Consulting Group, 2011).

*Community-centered/community governance*. MHWB organizations involve communities through a range of mechanisms, including focus groups, needs assessments, program planning, and board governance. A study by Church et al. (2006) suggested that CHCs provide a range of opportunities for “citizen participation” not seen in other parts of the health system leading to improvements in programs and services that better meet the needs of the community, increased community capacity, increased levels of trust in the community, and higher overall satisfaction.

Community-centered PHC systematically identifies and acts on community health needs using principles from epidemiology, PHC, preventive care, and health promotion (Longlett et al., 2001) and stresses that the community context plays a role in the health of individuals (Muldoon et al., 2010). Early evidence from as early as the 1940s showed that this model could have a substantial effect on the health of communities (Mullan and Epstein, 2002). Haggerty et al. have described community-centered PHC as existing almost exclusively in CHCs. Haggerty distinguishes between “community models” in which the populations served are defined by local geography vs the people who are served by “professional models” in which the populations served are the patients in the practice. The community-centered approach is described as being the most effective, providing the highest level of services and demonstrating the best possibility for controlling costs (Lamarche et al., 2003).

All organizations that have adopted the MHWB are not for profit and governed by community boards. This provides a mechanism to be responsive to local needs and ensure representation and democratic ownership at the highest level of the organization.
In addition, many organizations have community advisory councils that ensure more voices are heard at the leadership level. These councils provide ongoing feedback, raise concerns, priorities, and provide guidance for organizations.

*Interprofessional, integrated, and coordinated.* There is a robust body of evidence showing that interprofessional teams can improve health outcomes and access for people with chronic and complex conditions (Jacobson, 2012; Katon et al., 2011). These benefits include significant improvements in health and wellness for people with chronic conditions and risk factors, compared with care provided by solo care providers (Dinh and Benajim, 2013). Interprofessional teams develop care plans, address the medical and social needs of their patients, and provide better coordination of care (Goldman et al., 2010). According to a study on the impact of PC teams on processes and outcomes of care, respondents who had access to an interprofessional team, particularly those with chronic conditions, were more likely to receive health promotion, disease prevention, and better coordination of care (Mable and Marriott, 2012).

All organizations that have adopted the MHWB work within collaborative interprofessional teams. They also seek to develop strong partnerships with external providers and community services. Often these organizations hire system navigators to identify and reduce barriers to care, diagnosis, and treatment. These staff identify, anticipate, and alleviate barriers to health and ensure that all internal and external services are coordinated.

*Accountable and efficient.* This model emphasizes accountability and efficiency as key attributes because in order to maximize resources and the services available, centers must emphasize continuous quality improvement and use resources effectively. All organizations are accountable to their communities, their funders and local health authorities. Each organization has accountability agreements with benchmarks and targets related to clinical care, service provision, and financial management. All CGPHC organizations participate in year quality improvement target setting and reporting. Most organizations are also accredited as well. The results of accreditation are public and validate that a commitment has been made to learning and improvement as well as demonstrated quality and appropriate risk management.

*Accessible.* Accessibility emphasizes access, equity, inclusiveness, and social justice. The MHWB stresses the importance of accessibility beyond usual working hours and includes ensuring access for people who encounter a diverse range of racial, cultural, linguistic, physical, social, economic, and geographic barriers which contribute to the risk of developing health problems. Removing barriers to accessibility includes the provision of culturally appropriate programs and services, programs for the non-insured, optimal service locations, and design of sites that are in compliance with accessibility legislation and offer extended hours and after-hours on-call services. Materials are written using plain language and are often translated into multiple languages. For example, in one urban area the client experience survey is offered in 17 different languages to ensure that all people can respond. Other examples include the provision of transportation (transit tickets, mobile units, volunteer driving programs). Often services are delivered in parks, schools, and shelters.

**Conclusion**

There is ample evidence supporting each of the attributes included in the MHWB, especially for populations that experience barriers to care. The literature supports each attribute and while there are some overlaps, each of the attributes occupies a unique space. Each CGPHC organization has implemented the MHWB to reflect the needs of its population served and it was not difficult to find examples of how they have operationalized and implemented the model. Barriers to full implementation have primarily been funding.

PHC models that embody the upstream approaches and blend them with interprofessional care such as that of the MHWB has been shown to demonstrate positive outcomes.
Studies include superior chronic disease management (Russell et al., 2010), lower than expected emergency utilization (Glazier et al., 2012), and higher than average cancer screening (Glazier and Rayner, 2015). There is less evidence describing how each attribute independently contributes to outcomes. Moreover, there is little evidence demonstrating how complex interventions addressing a number of the attributes act interdependently.

The MHWB is a living document and may be adapted in the future to ensure relevant to the changing world; however, the core principles and values will likely remain the same. Organizations that serve indigenous populations have refined this model to include cultural teachings and traditional practices. Future studies include in-depth case studies and ethnographic research to further understand the process of delivery and the impact of delivering comprehensive primary health care through this delivery model as well as summative evaluation to further examine overall impact of the model.

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Further reading


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The health care home in New Zealand: rolling out a new model of primary health care

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Abstract

Purpose – The purpose of this paper is to report on the origins, development and early impacts of a Health Care Home (HCH) model of care being rolled out around New Zealand (NZ).

Design/methodology/approach – This paper draws on a literature review on HCHs and related developments in primary health care, background discussions with key players, and a review of significant HCH implementation documents.

Findings – The HCH model of care is emerging from the sector itself and is being tailored to local needs and to meet the needs of local practices. A key focus in NZ seems to be on business efficiency and ensuring sustainability of general practice – with the assumption that freeing up general practitioner time for complex patients will mean better care for those populations. HCH models of care differ around the world and NZ needs its own evidence to show the model’s effectiveness in achieving its goals.

Research limitations/implications – It is still early days for the HCH model of care in NZ and the findings in this paper are based on limited evidence. Further evidence is needed to identify the model’s full impact over the next few years.

Originality/value – This paper is one of the first to explore the HCH model of care in NZ.

Keywords Evidence-based practice, Evidence-based policy, Management of change, Whole systems, Primary care/primary health care

Paper type Research paper

Introduction

Many countries around the world are undergoing periods of transformation and reform in primary health care (PHC). These often draw on similar principles (Starfield’s four pillars of primary care practice, Starfield, 1992; Starfield, 1998; and Bodenheimer’s ten building blocks of high-performing primary care, Bodenheimer et al., 2014) in response to a familiar list of challenges: increasing demand for services (partly as a result of a growing and ageing population living with more complex needs) alongside workforce shortages, unmanageable workloads, rising consumer expectations of care, and, particularly in recent years, financially constrained circumstances.

New Zealand (NZ) is no different. In 2001, a Primary Health Care Strategy (PHCS) was released by the government, seeking to strengthen the role of PHC, widen the range of health professionals involved in care, and improve integration, within PHC, between PHC and hospital services, and between PHC and social services (funded in NZ through central government and delivered by a mix of public and private providers) (King, 2001). Through the PHCS, the government invested significant new funding to reduce the fees people pay when they use services, and to extend services.

The PHCS signalled an increased focus on PHC that has remained an important part of health policy in NZ ever since. However, an ongoing concern has been that little has changed in the models of care (ways in which services are delivered) in spite of the new funding and policy attention being paid to PHC.

In recent years, however, one of the key models of care that has emerged in response to ongoing challenges is the Health Care Home (HCH). The NZ model was first developed by a
Primary Health Organisation (PHO) located in the Midlands provincial region in the North Island of New Zealand (PHOs are meso-level organisations that support PHC providers, see below). The model’s expansion and implementation has been driven from the “middle out”, with PHOs leading and providing support to general practices. This involves a package of changes being rolled out at practice level that aims to make “better use of technology, better use of a range of roles in the health care team and more efficient business processes” to ensure “practices can offer more convenient high-quality care as well as ensuring services are more sustainable in the long term” (NZ Health Care Home National Collaborative, 2017b, p. 2).

Here we report on the HCH experience so far in NZ – its origins, progress to date, and early indications regarding impact, concluding with some reflections on the model and its future development. This paper draws on a literature review on HCHs and related developments in PHC, background discussions with key players, and a review of significant HCH implementation documents.

The NZ health care system
The health of New Zealanders rates well internationally – with an average life expectancy of 81.7 years for those born in 2015 – but there remain inequities in health status, with the indigenous Māori population, Pacific peoples, and lower income New Zealanders having poorer health than other New Zealanders (Ministry of Health, 2017). NZ’s health system is generally seen to provide good value for money and good quality care, but, as with other countries, it faces challenges (Cumming et al., 2014). Ongoing concerns over rising levels of expenditure, an ageing population with rising numbers of people with long-term conditions, unmet needs, and a desire to reduce inequities, currently drive much NZ health policy (Cumming et al., 2014; Ministry of Health, 2014, Minister of Health, 2016a, b; The Treasury, 2014).

The NZ health system is predominantly publicly funded, with around 83 per cent of funding from government sources (Cumming, 2017). The system underwent major reforms in the 1990s, establishing a purchaser-provider split (or “quasi”-market) with stand-alone purchasing authorities and a wide range of health care providers contracted to deliver services. As a result of these reforms, the many independent, small, and predominantly general practitioner (GP)-owned general practices banded together (in the form of Independent Practitioner Associations) to contract collectively with purchasers, but also to begin to develop new ways of funding and expanding PHC services (Barnett, 2001). The purchaser-provider reforms were short-lived, being overturned in 2001 (Cumming and Mays, 2002). At that point, 21 (now 20) District Health Boards (DHBs) were established to plan and deliver health services for their geographically based populations. DHBs deliver hospital services themselves, and they contract other providers to deliver PHC and community-based services.

The 2001 Primary Health Care Strategy (King, 2001) led to not-for-profit PHOs being formally established as meso-level organisations to sit between the DHBs and general practice services. IPAs typically became partners in PHOs, but many also retained a separate identify, providing management services to the PHOs (e.g. negotiating contracts, allocating funding, supporting general practices as businesses, establishing specialised services to work across general practices). Government funding changed from targeted to universal funding, and from fee-for-service for GP services to weighted capitation for PHOs. PHOs then contract with general practices (and other providers) to deliver care.

From 2008 on, the emphasis has been on strengthening the capability of PHOs, and on delivering “Better, Sooner, More Convenient” services through new, integrated models of care, “closer to home” (Ryall, 2007). A significant reduction in the number of PHOs resulted from these changes (there are now 32 PHOs), while new Integrated Family Health Centres (IFHCs) were established in some parts of the country to better integrate care. Since around 2013, new “alliances” have been established to bring DHB and PHO decision makers together in partnership to jointly develop and fund PHC services in their districts (Cumming et al., 2014).
A 2016 “Update of the NZ Health Strategy” (Minister of Health, 2016a, b) continues to emphasise the need for new models of care to “integrate pathways” through the health system. It also envisages a system that is people-powered, delivering services closer to home, offering value and high performance, with enhanced teamwork and smart systems to make better use of information, including evaluation of performance.

It is from this historical context (see Table I) that the HCH model has begun to be rolled out in NZ.

The HCH model internationally

The HCH has its origins in the USA. There, the Patient-Centred Medical Home (PCMH) is a model of care that is designed to be: patient-centred; comprehensive; co-ordinated; accessible; and committed to quality and safety (Patient-Centred Primary Care Collaborative, 2008; Hefford, 2017). Led by family medicine organisations, the model sits within the context of a very limited and poorly supported PHC role within US health care (Donaldson et al., 1996). The overarching model is gaining traction in the USA (Jabbarpour et al., 2017), although the actual models implemented vary widely in practice. The latest systematic review of such models finds that some initiatives have transformed the overall delivery of health care in some US states, but not all studies show positive outcomes, nor reductions in overall costs, with any savings made sometimes offset by the costs of enhanced primary care service delivery (Jabbarpour et al., 2017). This does mean, however, that there are examples of new models of care generating better value for money from health expenditure.

<table>
<thead>
<tr>
<th>Time period</th>
<th>Milestone</th>
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<tr>
<td>The 1990s</td>
<td>GP-owned general practices band together to form Independent Practitioner Associations (IPAs) to collectively negotiate contracts for services on behalf of individual practices Funding for primary and secondary care is integrated in regional purchaser budgets Some GP budget management agreements are negotiated between regional purchasers and general practice organisations for pharmaceuticals and laboratory testing Maori and community-orientated services become more established</td>
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<tr>
<td>The 2000s</td>
<td>21 (now 20) District Health Boards (DHBs) are established as integrated purchaser/providers for health services In 2001 the Primary Health Care Strategy leads to Not-for-profit intermediate organisations – Primary Health Organisations (PHOs) – being established to commission and manage primary care services Primary care funding moves from fee-for-service for GP services to weighted capitation to PHOs who pass on funding to general practices All patients are required to enrol with a PHO through their general practice; general practices choose which PHO to join New funding for PHC services</td>
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<td>From 2008 onward</td>
<td>“Better, Sooner, More Convenient” policy direction is launched which aims to improve integration, increase the use of primary and community care and provide services closer to home Growth in PHC funding begins to level off PHOs are consolidated (falling from around 80 in 2007 to 32 by 2015) New Integrated Family Health Centres (IFHCs) are established in some parts of the country In 2013, DHBs and PHOs are required to enter into “alliances”, which involve joint planning of district services by DHBs and PHOs with joint accountability The 2016 NZ Health Strategy envisages a health system that is people-powered, provides services closer to home, is designed to deliver value and high performance, and that operates as one team in a smart system</td>
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</table>

Sources: Cumming (2016), Downs (2017) and Smith (2018)
The latest review concludes:

[...] the [PCMH] has demonstrated improved outcomes in terms of quality, cost and utilization, but not uniformly. It also confirms important lessons for payers and policymakers: like any form of evolution, meaningful transformation takes time, is dynamic in nature, and displays considerable variations in quality, cost and utilization outcomes. The evidence also reveals some concrete modifications to the initial model, learned from best practice PCMHs over the past 10 years, which have improved primary care and its outcomes. For example, it is quite clear that team-based interventions, including case management, and having a usual source of care have positively impacted the patient experience. That said, there is no single “implementation manual” that meets the needs of all (Jabbarpour et al., 2017).

Variations of the model are now being introduced in England (National Association of Primary Care, 2017), Canada (Carter et al., 2016) and Australia (Australian Government, Department of Health, 2016, 2018; Jackson and Hambleton, 2017) through test sites. However, they do differ significantly across countries. What seems to unite these models of care is the way they bundle a number of ideas (but equally have a leading innovation that becomes the presenting change when being described by others). The combination regularly includes a focus on personalisation of care (particularly for those with long-term conditions or deemed “at risk”), new team-based structures including integrated care partnerships and multi-disciplinary teams, quality improvement initiatives and the use of new technologies to change the way the practice operates to improve access and co-ordination of care.

The models are generally too new in these countries to be clear on their achievements. Some evidence in England shows the Primary Care Home model being trialled can improve care and reduce hospitalisations in the English context (PA Consulting, 2017). A recent report provided a range of recommendations to improve performance, noting the importance of time (“it should not be expected that the [...] test sites will deliver significant changes in the use of wider services within the first few years”), noting that the external context (e.g. other initiatives and relationships between organisations) “may help or hinder their formation”, and also emphasising the importance of appropriate investment, organisational development support and integrated information technology (IT) infrastructure (Kumpunen et al., 2017). The Australian model has only recently been rolled out (MacKee, 2017) but is seen to offer the promise of significantly improved care, particularly for those with long-term conditions (Jackson and Hambleton, 2017).

In Canada, primary care reform initiatives introduced in provinces and territories since the early 2000s have varied, with some implementing specific models and others introducing overarching policies aimed at changing behaviours and practice (Hutchison et al., 2011; Levesque et al., 2015). In 2011, the College of Family Physicians Canada presented the Patient’s Medical Home “as a vision for the future of family practice in Canada”. This “made-in-Canada vision” is defined by ten goals, with variation across the provinces in the degree to which practices are meeting the PMH goals (The College of Family Physicians of Canada, 2016; Katz et al., 2017).

The HCH model in NZ

The original HCH thinking and development in NZ was supported by central government in the late 2000s, with the (now named) Pinnacle Midlands Health Network (PMHN) (a network of PHOs) one of nine business cases identified to develop new models of care as part of the “Better, Sooner, More Conveneient” policy direction (although no new funding was provided to support the initiatives) (Downs, 2017). It is based on the Medical Home model developed by Group Health Cooperative (now part of Kaiser Permanente) in the USA in 2006 (McCarthy et al., 2009; Reid et al., 2010). Following a visit to Group Health in Seattle in 2010
and “inspired” by what they saw, PMHN ran a series of workshops to customise and develop a model of care tailored to the NZ context (Midlands Health Network, 2010, 2011). The resulting model was launched and implemented in 2011 at three proof-of-concept sites in Hamilton (at this point, the sites were called “IFHCs”).

Since 2011, roll out in PMHN has continued, “other PHOs began making changes along the HCH model lines” – led initially by the “Network 4” PHOs (ProCare, Compass Health, Pegasus and PMHN) – and the model has been “refined and further adapted, based on implementation learnings” (Ernst & Young, 2017). Adoption has been voluntary, and practices have enrolled in tranches with support from PHOs and in some regions, DHBs (Hefford, 2017). The model is now governed by a Health Care Home Collaborative, made up of several DHBs and PHOs and supported by General Practice NZ (a network of PHOs), the Royal New Zealand College of General Practitioners, the DHB national CEO and Planning and Funding groups and the Ministry of Health.

In 2017, the HCH Collaborative published a “model of requirements” document, setting out the characteristics of a HCH practice “over and above the traditional model” (NZ Health Care Home National Collaborative, 2017a). This outlines four domains – ready access to urgent and unplanned care; proactive care for those with more complex need; better routine and preventative care; and improved business efficiency and sustainability. Each includes a set of service elements and characteristics on which a practice is scored from 1 (low maturity) to 4 (high maturity). For example, within Domain 2 proactive care for those with more complex need, Service Element 3 is “Proactive assessment, care planning and co-ordination to support those with complex needs” and includes Characteristic 3.1: Care plans. A Level 1 practice would not routinely develop or record such plans, while a Level 4 practice would develop the plans collaboratively with the consumer, include self-management and clinical management goals, and the plans would be shared with other health care providers (NZ Health Care Home National Collaborative, 2017a).

This document also outlines a credentialing and certification process for “signing off” a practice against the model of care requirements (with a third “accreditation” level to be developed in conjunction with the Royal New Zealand College of General Practitioners) (NZ Health Care Home National Collaborative, 2017a).

The key elements in the HCH in NZ are set out in Figure 1. As of October 2017, there were 113 practices working towards (or planning to implement) the HCH model of care across a number of districts in NZ, including Northland, Auckland, Waikato, Wellington, and Canterbury (NZ Health Care Home National Collaborative, 2017a, b). Currently, there is no national funding supporting the model, its implementation or diffusion, and the level of funding and funding model varies across the country, with some DHBs providing funding, while in other areas, only the PHOs are involved in providing

**Figure 1.**
Key elements in the Health Care Home model of care

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<tr>
<th>Health Care Home common model of care elements</th>
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<tbody>
<tr>
<td>• Advanced call management</td>
<td>• Consultations over the phone and via secure e-mail</td>
</tr>
<tr>
<td>• GP phone triage and clinical management</td>
<td>• Web and smartphone-based patient portals</td>
</tr>
<tr>
<td>• Same day appointment capacity</td>
<td>• Enhanced layout and composition of General Practice facilities to support new ways of working with more effective use of physical space</td>
</tr>
<tr>
<td>• Extended acute treatment options</td>
<td>• Community Health Service Integration</td>
</tr>
<tr>
<td>• Increased hours of access</td>
<td>• New professional roles to expand the capacity and capability of General Practice</td>
</tr>
<tr>
<td>• Person-centric (varied) appointment lengths</td>
<td>• Application of lean quality improvement processes</td>
</tr>
<tr>
<td>• Care planning for patients with high needs or at risk</td>
<td>• Clinical and administrative pre-work to improve the efficiency of time spent with patients</td>
</tr>
</tbody>
</table>

**Source:** Hefford (2017)
funding to support the development and spread of the model of care (Hefford, 2017). There are also variations in how the model is being established in each region, to best meet the needs of local communities (Hefford, 2017).

The impact of the HCH model of care in NZ

In 2016, Ernst & Young carried out an evaluation of the HCH model based on: a meta-analysis of previous evaluations carried out between 2012 and 2015, a two day workshop, analysis of results provided by four practices that applied a tool developed as part of the evaluation to measure progress towards becoming a HCH, and quantitative analysis of secondary care activity data based on six practices (two in Hamilton, three in rural Waikato, one in Christchurch) that had been running the model from 2013 or before. Overall, the evaluation found that “...it appears, from the perspectives of both patients and providers, that the model has achieved positive changes” (Ernst & Young, 2017).

Regarding implementation, the evaluation described how the “model has been evolving since its initial conception” and highlighted the considerable investment in time and effort required to implement and embed the multiple changes required. Overall the evaluation reported positive results for patient experience (though not across all domains and it was noted that it took time for some patients to get used to the new model), with improvements including saved patient time and improved telephone access. Staff generally rated the model higher than the traditional model of general practice, though there were “initial misgivings” from some practice staff. A key finding was evidence of increases in clinical capacity reported by practices. New roles (including medical centre assistants and clinical pharmacists) were reported to increase team-based care and reduce reliance on the GP, allowing them to work at “top of scope”. The financial performance of PMHN practices was reported to have been maintained or improved; however, there were no significant differences in secondary care activity between HCH and control practices. However, the evaluation included a number of HCH practices in NZ that were in very different stages of implementing HCH reforms. Early adopters’ results were mixed with more recent adopters’ results. This undoubtedly diluted the results although the extent to which this occurred is unknown (Downs, 2017).

An internally produced report from Compass Health in Wellington, reflecting on the first year of implementation in that region, states that the “early findings are encouraging” and indicate that overall the model appears to have had positive impacts for both patients and practices, with faster rates of improvement – including reduced hospitalisations – in HCH compared with non-HCH practices” (Compass Health – Health Care Home Development Team, 2017).

Where next for the HCH in NZ?

Although NZ health policy recognises that there are often pockets of innovation in health care delivery, many new models of care fail to diffuse more widely than their original site. The HCH, however, appears to be different.

The diffusion, dissemination, and implementation of health service delivery innovations is determined by an array of factors, including elements of the external context, such as the presence of interorganisational networks and norms (Greenhalgh et al., 2004). There are early signs that networks for diffusing ideas and learning in PHC are becoming more established in NZ and that this may in part explain the current expansion of the HCH model of care. In early 2016, the “Network 4” PHOs established the NZ HCH Collaborative which has since grown its membership, with other PHOs and DHBs joining. The Collaborative is supported by national organisations and funded by participating PHOs. Its role is to “support the establishment and ongoing development of the Health Care Home model across New Zealand by: setting minimum standards; encouraging continuous improvement and...
peer review; developing a national benchmarking programme; training in effective implementation; and sharing learning on best practice and effective models of care” (Hefford, 2017). A further key likely factor in the diffusion of the HCH is that the structure of the NZ health system itself has remained fairly stable over many years, with DHBs in place since 2001 and the current configuration of PHOs in place since around 2011.

Other regions have also recently announced plans to introduce the HCH model of care. For example, the HCH was a key development in the new “Southern Primary and Community Care Strategy” (Goodwin, 2018) and in Hutt Valley in the Wellington region the first tranche of practices working towards being a HCH got underway in late 2017 (McMillan, 2017). Other areas are expanding the programme (Northland District Health Board, 2018).

The expansion of HCH in tranches in different regions reflects the reality that PHOs can only move as fast as their member practices are prepared to go in introducing new models of care. General practices in NZ are a hybrid of public and private interests spanning salaried staff working in centres of high socio-economic need, to smaller owner operated practices and larger corporate models. GPs need to be part of a PHO to receive government funding, but the decision on which PHO to join is voluntary. Setting realistic goals for practice change is an important consideration for PHOs which are aware that HCH as an innovation needs to fit with a practice’s existing values, norms, and ways of working (Greenhalgh et al., 2004).

Figure 2 displays some of the policy settings that have fostered the system readiness to adopt this new model of care. At the macro level the high trust planning environment being implemented through an Alliance framework, along with the ability to combine previously separate primary care funds (alongside capitation funds) into one flexible funding pool, has given more scope at the meso-level for PHOs to introduce new models of care. Combining separate funds for primary care, the flexible funding pool was initially created as part of a process of developing pilots showcasing new models of care but has since become mainstreamed into the work of the different district alliances. At the micro level the need to work with the diversity of general practice ways of working is recognised in the resources

![Figure 2. Summary of policy settings](image-url)
being provided by the HCH Collaborative maturity matrix to help practices map their current model of care systems against the HCH developmental scale.

In late 2017, the Ministry of Health and Health Research Council of NZ launched a joint initiative to fund a piece of evaluation research into the effectiveness of three different general practice models of care currently in use in NZ: the medical home model (including the HCH), the corporate ownership model (characterised by low patient fees, accessibility, acute episodic treatment and serving large population catchment areas) and the traditional model of GPs with support from nurses (Health Research Council of New Zealand, 2017).

Given the limited research about PHC in NZ since the late 2000s, this HRC/MoH research – due to start in mid-2018 – provides an important opportunity to fill in some of the substantial gaps that exist in knowledge and evidence about what works and for whom, and which initiatives have best addressed the objectives of access, equity, and integration (Downs, 2017). Of particular interest, given the wide plurality of general practice forms in NZ, is to what extent practices are prepared to introduce new models of care.

Conclusions – some reflections
Health systems around the world are facing similar challenges, and PHC is one area where there is significant change occurring, with a view to helping people stay well and out of hospital, improving integration, and ensuring the workforce delivers the best care possible. There is still much to learn about the HCH model in NZ, including how well the model works and for whom. Here we provide some early reflections on its spread.

First, the model has emerged from the middle out/bottom up – rather than as a result of central government or national body policy. As a result, models are being tailored to local needs and individual primary care practices.

Second, a key focus in NZ seems to be on business efficiency and ensuring sustainability of general practice – with the assumption that freeing up GP time for complex patients will mean better care for those populations. This contrasts with, for example, Australia where the focus is on providing better care for those with long-term conditions, and England where there appears to be a stronger emphasis on integration.

Third, we hypothesise that the model relies on practice manager competencies, as well as the support provided by PHOs. This suggests that any further roll out will need further upskilling and more support, particularly as the next tranches may be less likely to include the early adopters.

Fourth, it is unclear how the model tackles major equity concerns, particularly relating to the health of Māori and Pacific New Zealanders, and unclear how Māori-led and Pacific-led practices respond to the model.

Fifth, it is unclear how the model will support greater teamwork, with GPs still likely dominating service delivery, and how it will support enhanced integration with other PHC, hospital, and social services; it often appears to be very internally focused on general practice services (although integration with other services is also a focus in Wellington and Northland, for example).

Finally, there are major differences in the models internationally and differences in the contexts into which new PHC models of care are introduced. This means that NZ needs its own research to assess its implementation and achievements. And given the diversity even in NZ, there is a need for clarity about the components being implemented in different practices, and about who the model does or does not work for. There is particularly a need for more in-depth evidence on how New Zealanders respond to the model, including those with lower health status (Māori, Pacific, and lower income New Zealanders).
References


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