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TE WĀHANGA TĀTAI HAUORA

TAKING STOCK: PRIMARY CARE INNOVATION.

A REPORT FOR THE NEW ZEALAND
PRODUCTIVITY COMMISSION

Lesley Middleton,
Phoebe Dunn,
Claire O'Loughlin and
Jacqueline Cumming

June 2018

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Health Services Research Centre

Faculty of Health

Victoria University of Wellington

Wellington

New Zealand

hsrc@vuw.ac.nz



Executive Summary

This report takes stock of primary care innovation in New Zealand. It is based on a synthesis of available research, supplemented by our analysis of insights from key stakeholders. Due to the paucity of large-scale research in New Zealand since the evaluation of the Primary Health Care Strategy (2003-2010), the conclusions we reach can only ever paint a partial picture of what is happening in New Zealand.

Nevertheless, our argument is that the current diffusion of the Health Care Home (HCH) model of care illustrates a number of features about the current receptiveness to innovation in New Zealand's primary care system. A distinguishing feature of the HCH model of care is its 'whole-of-system' design: a design that works with human and social change processes, as well as supporting general practices to adopt new technological innovations.

In making judgements about the New Zealand health system's receptiveness to innovation, we have drawn on a model developed by Trisha Greenhalgh and colleagues that considers the many components that support the diffusion of health service innovation.¹

Our conclusion is that there is strong evidence to suggest that the following features are **enabling innovation in primary care**:

- ***Stability in the organisation of the New Zealand health care system.*** District Health Boards (DHBs) have been in place since 2001 and (for the most part) the current configuration of Primary Health Organisations (PHOs) in place since around 2012. This has provided supportive conditions for innovation to emerge from the middle of the health system. The organic nature by which PHOs have evolved has avoided some of the downsides experienced by other countries that have tried to force particular configurations of primary care organisations from the top.
- ***The capability of Primary Care Organisations to facilitate change.*** Some PHOs are acting as facilitators of innovation, ensuring new primary care services are developed in ways that align financial and professional incentives for general practices. In some parts of New Zealand they are acting alone, in others (such as Northland and Capital Coast) they are working in partnership with DHBs. These partnerships have helped PHOs provide seed funding to those practices willing to step up and trial new ways of working, but equally where funding has not been forthcoming from DHBs, PHOs have still been able to make progress. Those PHOs implementing the HCH bundle of innovations (and their partner DHBs where applicable) are putting considerable thought into the change management capability different practices need to implement the new model of care.
- ***The emerging collaborative network between the PHOs and partner DHBs setting standards and sharing learnings around the implementation of the HCH innovation.*** This is enabling the acceleration and spread of the HCH model of care. Consequently, patients across New Zealand are more likely to receive a consistent experience of this new model of care.

Areas where we have less certain evidence include:

- *The benefits of the current light-touch policy directions as enablers of primary care innovation.* We did hear arguments from those that we interviewed that the lack of central leadership in the health system has meant innovation is not being supported as well as it could be. Yet, we could also see a case can be made that the current light-touch policy directions from the top of the system, coupled with enthusiastic leaders able to build on a historical legacy of strong local relationships, has supported the emergence and ongoing refinement of the HCH model of care. The grassroots nature of the HCH initiative could well have made it more sustainable, especially in times of government change.
- *Suggestions that injections of funding support at key stages have supported incremental progress towards new models of care.* Our historical overview did find that past 'Better Sooner More Convenient' funding streams provided some momentum for the broader rollout of the HCH model of care; a momentum that also continued with the introduction of flexible funding for PHOs. That said, there has been little policy 'prodding' from the top of the system that would encourage those less interested in picking up new models of care. For many of those interviewed, more active backing from the top could have accelerated the rollout of the HCH model of care.
- *Claims that the HCH model of care as an innovation possesses a number of attributes that suggest it is more likely to be taken up by potential adopters.* These include such attributes as: relative advantage, compatibility with values and ways of working, observability, and potential for reinvention. This finding still needs to be tested, however, by more in-depth research with both those PHOs who have chosen this model of care and those who have chosen other models of care.

With respect to the **barriers** to primary care innovation we identified strong evidence to suggest that:

- *Primary care patient co-payments are a barrier to primary care innovation.* Those practices that rely on patient co-payments have continuing incentives to maintain patient volumes in traditional face-to-face interactions. Any new service innovation (such as telephone triage or on-line consultations) needs careful change management support to ensure practices maintain their expected level of income. This issue needs to be addressed in any review of primary care funding.
- *History matters.* Those locales able to draw on a strong past collaborative relationship between DHBs and PHOs are likely to have moved faster in implementing new models of care. In some areas of New Zealand the complex and overlapping relationships between PHOs and DHBs have been a barrier to innovation.

Other barriers where we have less certain evidence:

- *An under-developed evidence base exists to help other potential adopters assess the benefits of particular innovations.* The HCH Collaborative is starting to fill this gap, but it is unclear for example, how the HCH 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. Whilst our interviewees gave examples of experiences that suggest the HCH model of care is a good fit for those providers seeking improved care for Māori, a more rigorous assessment across a wider breadth of Māori and Pacific providers is needed.
- *The plurality of types of general practices and PHO ownership structures hinders the adoption of new models of care.* This issue needs further exploration. New Zealand general practices have traditionally taken on a gatekeeping role whereby patients first consult their GP before being referred to specialist services. This report has identified leading examples of practices taking on additional roles co-ordinating care for both individuals and populations, yet how far interest in these additional roles is driving the management decisions of the bulk of practices in New Zealand is not known. It is not known if new models of care requiring the support of different types of primary care professionals are being widely implemented, nor the extent to which enhanced integration with other primary care services, hospital and social services is becoming business as usual.

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Glossary

Capitation funding – A method for funding health care services, including the reimbursement of providers, that pays a fixed amount per person for an agreed period of time. It is not linked explicitly to the level of service provided. Capitation funding may be weighted to better support the needs of higher needs groups in the population or it may be a straight per-person payment.

Co-payments – Fees that the patient must pay when they use a medical service; designed to discourage over-utilisation. It must usually be paid out of pocket.

District alliances – Local leadership teams that include the District Health Board along with those Primary Health Organisations providing health services to the population of the relevant district. The Alliance is responsible for collectively identifying a shared vision and key objectives for the District and then agreeing and implementing a System Level Measures Improvement plan.

District Health Boards (DHBs) – Currently 20, responsible for implementing the health policies of the Government, for funding the provision of health services in their districts, and for ensuring the delivery of health services, either through their own provider-arms, or through contracts with other health service providers.

Fee-for-service – Historically, New Zealand general practitioners made a fee-for-service, General Medical Services (GMS) claim to the government when they saw a patient, to cover the cost of treating that patient. Fee-for-service claiming has been progressively replaced by capitation. A fee-for-service subsidy claim now remains only where a general practice or after-hours treatment provider sees a child or adult who is not enrolled in a PHO or cannot access the practice they are enrolled with during business hours or after hours (such patients are known as 'casual patients').

Health Care Home (HCH) – A model of care in general practice which bundles together several evidence-based elements – including GP phone triage, care planning, online patient portals, new professional roles, and application of lean quality-improvement processes – sequenced in an order determined by local contexts.

Independent Practitioner Associations (IPAs) – GPs formed IPAs in order to negotiate contracts during the 1990s health reforms. They comprised networks of (30-40) doctors conducting contract negotiations with Regional Health Authorities for the delivery of primary health care services, including general medical services, maternity services and immunisation. Approximately 30 IPAs existed in 1996.

Primary health care (PHC) – health care provided in the community, usually from a general practitioner (GP), practice nurse, nurse practitioner, pharmacist or other health professional working within a general practice. Covers a range of services, including diagnosis and treatment, health education, prevention and screening.

Primary Health Organisations (PHOs) – Currently 32, responsible for ensuring the provision of primary health care services, mostly via general practices, to those people enrolled with the PHO. PHOs are funded by district health boards (DHBs).

Purchaser-provider split – A health reform strategy in which a public organisation which both purchases and provides services is reorganised so as to separate the two roles. The separation is undertaken with a view to enhancing priority setting and purchasing decisions and encouraging competition and contestability between health services providers.

System Level Measures (SLM) framework – A set of six outcome measures set nationally through a clinically led co-design process to form the basis of a series of regionally developed improvement plans. These plans identify the current baseline and the actions necessary to make improvements and are given effect by District Alliances who take joint responsibility for making changes that will improve the outcomes listed.

Very Low Cost Access (VLCA) scheme – a voluntary scheme which supports general practices with an enrolled population of 50% or more high needs patients (New Zealand Deprivation Index quintile 5, Māori or Pacific) whereby the practice agrees to maintain patient fees at a low level.

Whānau ora – A cross-government programme that puts families/whānau at the heart of service delivery, requiring the integration of health, education and social services with the aim of improving outcomes for New Zealand families/whānau.

1. Introduction

1.1 Purpose of this report

To support their broader inquiry into New Zealand public sector productivity, the New Zealand Productivity Commission requested an account from the Health Services Research Centre (HSRC) of system-level developments with respect to primary care innovation in New Zealand. In light of this context, the purpose of this report is to take stock of how the environment for primary care has developed since the introduction of the Primary Health Care Strategy in 2001. We have focused particularly on the extent to which the current take-up of the Health Care Home (HCH) as a new model of service delivery is illustrative of broader themes with respect to primary care innovation.

The innovativeness of the HCH model of care lies in the bundling together of several evidence-based elements – including GP telephone triage, care planning, online patient portals, new professional roles, and application of lean quality-improvement processes – sequenced in an order that aims to ensure that ‘practices can offer more convenient high quality care as well as ensuring services are more sustainable in the long term’.² One hundred and twenty-eight practices across New Zealand (covering 890,000 enrolled patients) are now using some or all of the Health Care Home model of care.

Rather than concentrating on implementing a specific digital innovation or designing a bespoke model of care for those with high needs, the distinguishing feature of the HCH model of care is its ‘whole of system’ design. A recent King’s Fund report on innovative models of general practice,³ grouped the new models they were investigating into categories that included new team-based ways of working, new technologies such as e-consultations and telephone triage, and new community-centred approaches. The HCH model of care as developed by Pinnacle Midlands Health Network was discussed in this report under the title of a ‘whole of system’ design innovation, along with the work of HealthPartners in the United States and the recently developed Primary Care Home partnerships in England. While not advocating one model of care over another, this report stresses the importance of applying a number of design principles to ensure the successful implementation of new model of care. To some extent, these design principles have characterised the rollout of the HCH model of care.

1.2 Sources of information

This report presents judgements on the enablers and barriers to primary care innovation in New Zealand, drawing from:

- (i) Research assessing progress since the introduction in 2001 of the Primary Health Care Strategy. This research includes international comparisons on how policy developments in New Zealand primary care compare with international developments, as well as recent reports on the ways in which

primary care could be improved in New Zealand (see for example Downs, 2017⁴).

- (ii) Expert opinion from the Health Services Research Centre (HSRC), built from a body of evaluative research investigating new models in primary care since 2001ⁱ (refer Appendix 1).
- (iii) Reflections from selected stakeholder interviewees on what the current diffusion of the HCH model of care reveals about the readiness of the primary health care system to take up new innovation (n=5). The insights from these stakeholder interviews have been calibrated against notes from interviews the New Zealand Productivity Commission held with key players on the broader theme of primary care innovation.

1.3 Limitations

This report can only ever be a partial account of innovation in primary care because there is much about health care innovation in New Zealand that is not documented. Whilst the HSRC has a body of research evaluating progress, this is often limited to particular periods when the appetite for evaluative information was high, and to the parts of New Zealand prepared to take a critical look at how they were progressing.

In the time available to produce this report (between April and May 2018) and in recognition of the prominence of general practice activity across New Zealand (approximately 1013 general practices), we have concentrated on innovation in general practice. We recognise this is only one part of the primary care sector, with innovation also happening in pharmacy, with whānau ora and fanau ola providers, as well as with laboratory and community services. Our ongoing work on community pharmacy is investigating the expected changes to pharmacy services over the next five years, including the extent to which the expansion of roles is successfully occurring and identifying the enablers and barriers to this progress,⁸ but key findings from this research will not be available until later in 2018.

1.4 What we do know about primary care

From international evidence, we know that primary care is associated with better health, a more equitable distribution of health in populations, and lower health costs.⁶⁻⁸ New Zealand is not alone in experiencing pressures for change in primary care delivery.

ⁱ Key reports include Evaluation of the Integrated Care Pilots (2001), evaluation of the eleven primary health care nursing innovation projects (2007), the implementation of the primary health care strategy (2005 and 2013) including outcomes for Māori (2013) and the experiences of Pacific PHOs (2013), the Better Sooner More Convenient initiatives (2014) and evaluation of change initiatives at Counties Manukau District Health Board including the At Risk Individuals model of care (2016).

which are driven by an ageing population with complex needs, a view that more integrated services would better meet those needs and that more could be done to intervene early through screening, monitoring and follow-up in primary care.⁹ While primary care can be understood more broadly as an intersectoral concept, for the purposes of this report we are referring to the professional response when patients first make contact with the health care system through general practices.

In New Zealand, primary care services are funded by DHBs, and there is very little robust trend data available about how funding for these services has changed, or regarding activity or demand for these services. Analysis and collation of the information that is available suggests the following (see Appendix 2 for a more detailed description):

- Primary health care accounts for around 5% of Vote Health (\$920m in 2017/18).¹⁰
- Subsidies to support access to first-contact primary health care services as a proportion of DHB and total funding fell between 2008/09 and 2015/16.¹¹
- At the general practice level, the proportion of revenue from patient co-payments and capitation funding can vary considerably, but capitation funding rates 'have not increased in line with inflation' and so 'the proportion of general practice funded by Government is decreasing and the proportion funded by patients via co-payments is increasing'.¹²
- The total number of GP visits increased by nearly 12% between 2008 and 2016, from 11.8m to around 13.2m – with the largest increases among those aged 5-14 years and 65+.¹³ The total number of practice nurse visits rose by nearly 132% over the same period, from around 1.4m in 2008 to around 3.3m in 2016. Over the same period, the estimated resident population grew by 10.2%.¹⁴
- In very-low-cost-access (VLCA) practices, adult fees declined by between 18.5-19.7% in real terms between 2008 and 2016, while in non-VLCA practices fees rose by between 19.8-24.7% over the same period, with fees rising most for most adults of prime working age (25-64) in non-VLCA practices (HSRC analyses based on¹⁵).
- Nearly 30% of New Zealand adults reported having experienced one or more types of unmet need for primary care in the last round of the New Zealand Health Survey (2016/17) – this was higher for Māori and Pacific peoples and those living in the most deprived neighbourhoods, and among some age groups.¹⁶
- Around half of GP respondents in the latest RNZCGP survey were over the age of 52 and just over half were female. Twenty-seven percent intended to retire within the next five years (almost double the figure in the same survey in 2014), and 47% within the next 10 years. Almost a quarter reported feeling burnt out.¹⁷
- Results from the pilot of the patient experience survey highlight both positive experiences of care and some issues in terms of continuity and coordination, and communication around medications, with some groups routinely reporting less positive experiences (for example, those with a mental health diagnosis).¹⁸
- New funding was provided in the Budget 2018 to increase the number of New Zealanders eligible for a Community Services Card, and to introduce VLCA levels of funding in general practices for all those holding such a card.

1.5 Diffusion of health sector innovation model

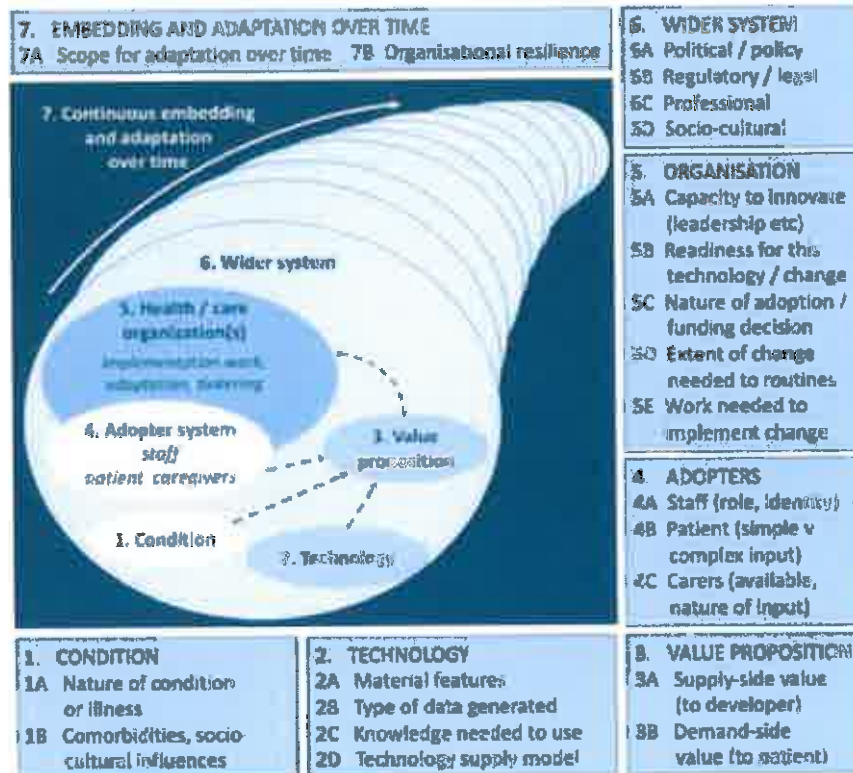
Greenhalgh and colleagues' 2004 model of service innovation¹ is used as a frame for the judgements made in this report. Based on a systematic literature review of studies on the diffusion of innovation, the authors define innovation in service delivery as:

a novel set of behaviours, routines, and ways of working that are directed at improving health outcomes, administrative efficiency, cost effectiveness, or users' experience and that are implemented by planned and coordinated actions.¹ (p.582).

This definition of service innovation has been applied throughout this report. The model is wide ranging, covering six interacting components: (1) the innovation itself; (2) the intended adopters; (3) communication and influence; (4) the inner organisational or system context, comprising general antecedents for innovation-specific readiness for a particular innovation; (5) the outer (inter-organisational and environmental) context; and (6) the implementation process. We have concentrated on those aspects of the model most relevant to understanding the enablers and barriers to innovation across the primary care system, which has led us to focus most on components (4), (5), and (6).

An update of the literature review in 2010,¹⁹ and again in 2017,²⁰ placed greater emphasis on the adoption and mainstreaming of technological innovations. A seventh component was added concerned with the interactions and adaptations over time (see Figure 1). Of key interest was the insight that a failure to move from a successful demonstration project (heavily dependent on particular champions and informal workarounds) to a fully mainstreamed service (scale-up) that was widely transferable, often related to the wider institutional and sociocultural context.²⁰ In this report, we have drawn most on the features known to influence the wider institutional and sociocultural context for primary care innovation.

Figure 1: A framework for theorising and evaluating Non-adoption, Abandonment, and Challenges to the Scale-Up, Spread and Sustainability of Health and Care Technologies.



Source: Greenhalgh et al. (2017)²⁰

1.6 Structure of this report

The remainder of the report is set out in three sections. Section Two presents the recent history of primary care policy as context for understanding current policy settings. This is supported by an appendix detailing the underlying activity trends from primary care data (Appendix 2).

Section Three investigates the roles of PHOs as facilitators of innovation. PHOs have increasingly given organisational form and strength to the general practice component of the health system.

Section Four presents more detail on how the HCH model of care is being implemented in New Zealand. A number of those we interviewed reflected that the HCH model of care appeared to be 'taking off' across New Zealand. We have sought to investigate why this may be the case and why this may be occurring now. The HCH model of care (see Box 1, p.38) has an international provenance as a new approach directed towards improving health quality, improving value and extending the role of primary care. Appendix 3 briefly outlines the HCH's international antecedents and highlights where New Zealand is positioned within a number of different variants of the model.

The conclusion (Section Five) reflects on the enablers and barriers to innovation in primary care and provides an assessment of the relative strength of the evidence that supports each feature as either an enabler or barrier to change.

2. Primary care innovation in New Zealand: the policy settings

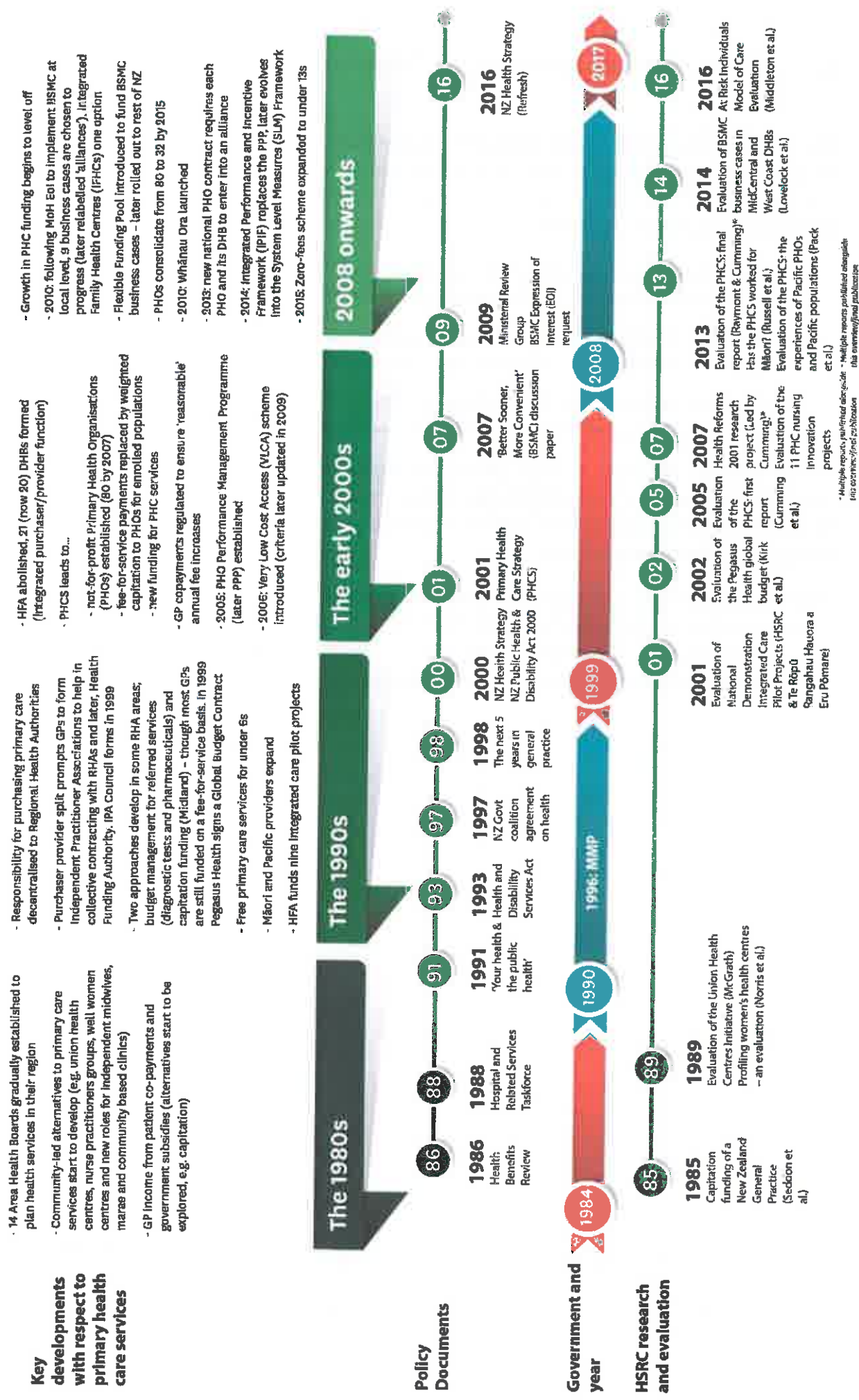
The New Zealand public health system has undergone a series of reforms over the past 25 years, many bringing structural change alongside a shift in policy direction. For the purposes of this paper, we focus on historical developments in relation to primary care innovation across three periods:

- i. The 1990s, characterised by the purchaser-provider split and the formation of Independent Practitioner Associations (IPAs) and other networks.
- ii. The early 2000s, focusing on developments resulting from the 2001 Primary Health Care Strategy, including the creation of PHOs and the move to capitation.
- iii. 2008 on, including the 'Better, Sooner, More Convenient' policy approach and business cases, and the move to mandated DHB/PHO alliances.

We close with a summary of more recent developments. Key changes, policy documents and HSRC evaluations – which form the basis for our historical conclusions in this paper – from the 1980s up to the present day are summarised in Figure 2, shown alongside changes in central government.

The historical context and legacy for innovation is vital to understand, as many of the initiatives progressing in 2018 have had a long lead-in time. This also helps frame our understanding of the current policy settings and the environment and structural arrangements that primary care organisations operate within today.

Figure 2: Summary of key developments, policy documents, HSRC evaluations and changes in government in NZ, 1984 – present



Sources: (1) 'Key developments' boxes: 31-38 (2) Policy documents: 34-44 (3) HSRC research: 35-43-38

2.1 Historical overview

(1) The 1990s – The purchaser-provider split and 1993 reforms lead to groups of GPs forming Independent Practitioner Associations

The 1990 election of a new government marked the start of a set of significant reforms and restructuring of the health sector. Building on ideas set out in two reviews undertaken in the late 1980s,^{34 35} proposals in the 1991 green and white paper, 'Your health and the public health',³⁶ and subsequent legislation led to a series of significant changes from 1993. Chief among these was the separation of purchasing and provider functions and the establishment of four Regional Health Authorities (RHAs) as standalone purchasers, free to purchase services – including primary care – from a variety of public and private providers on a competitive basis. Twenty-three government-owned Crown Health Enterprises (CHEs) were also set up as hospital providers and operated as stand-alone businesses.²³

As a result of these reforms, particularly the move to contracting for services, groups of (30–40) GPs banded together to form Independent Practitioner Associations (IPAs) and other networks to strengthen their collective negotiating hand and to capitalise on the opportunity to develop new ways of funding and delivering primary care services. By 1999 there were more than 30 associations representing over 75 per cent of GPs⁵⁶ and an IPA Council was formed, which became the negotiating body for the majority of IPAs in the 1999 contracting round.²⁴ The development of IPAs as a 'jolt' to the system and a means of energising some of the sector is seen by many as a key point in the recent history of PHC in New Zealand.

The reforms resulted in two approaches to managing demand-driven expenditure being employed in some RHA areas. In Midland RHA, the focus was on developing capitation funding (a form of population-based funding whereby practices essentially get paid per head rather than per visit) for general medical services,²⁶ a funding model that had first been trialled in Otumoetai Health Centre in 1979⁴⁵ and subsequently in other practices (particularly union health centres) in the 1980s. The other three RHAs placed more of an emphasis on budget management of referred services – namely diagnostic tests and pharmaceuticals.²⁶ By 1999, nearly all IPAs were budget holding for these services⁵⁷ (with favourable, though limited, evaluations²⁴). Pegasus Health signed a contract for a global budget, covering general practice services, pharmaceuticals, laboratories and administration.⁴⁹ In 1996 around 20 per cent of GPs were funded through capitated arrangements.⁵⁷ A survey in the same year found that more than half of IPAs supported capitation, and that there was strong support for formal patient registration, which would enhance accountability through clarity over the patients that each practice was responsible for.⁵⁷

Community-based providers also grew in number during this period, with the number of Māori providers – many of whom provided primary care services – increasing to 200 by 1997 and the first Pacific-led providers also being established.^{25 33}

Further structural change took place later in the decade, with the advent of the first Mixed Member Proportional (MMP)-elected coalition government in 1996. As well as

introducing free care for children aged under six, in 1998 this government combined and centralised the four RHAs into one national purchaser – the Health Funding Authority (HFA).²³

The HFA set out a vision in its strategy document *The next five years in general practice*,³⁷ including transitioning to capitation, encouraging practices to join larger networks or primary health service organisations, working in multi-disciplinary teams and integrating services. It also put out a call for and funded nine national demonstration integrated care pilot projects. These comprised new initiatives and projects that were already contracted for, and spanned child health, mental health, diabetes management and care for the elderly.⁵⁸ According to Mays,⁵⁹ the idea was that some pilots would involve IPAs and other organisations taking responsibility for a devolved budget for ‘a wide range of primary and community health care for people with chronic conditions’ (p.17). There was interest that this might evolve into ‘more fully vertically integrated, publicly capitated, health care organisations similar... to Kaiser Permanente in the US’ (p.17) that could offer choice and compete for patient enrolments. Those that applied for devolved budgetary responsibility, however, were rejected and so none followed this approach as a way to change and link services.

The HFA (and the pilots) were short-lived, a change of government in 1999 marking the end of both the HFA and the purchaser-provider split. Following a restructure, responsibility for funding the integrated care pilots was transferred to 21 new District Health Boards (DHBs), which served as integrated providers and purchasers of services for their region.²³ DHBs (now 20) are still in place today, responsible for planning services in their districts, for delivering hospital and hospital-related community services, and contracting for primary care and community care services.

(2) The early 2000s – The Primary Health Care Strategy results in new meso-level organisations, capitated funding for enrolled populations, and an injection of funding

In 2001, the government published the Primary Health Care Strategy (PHCS).³⁸ This created a strong organisational framework for primary care in New Zealand,⁶⁰ and signalled an increased focus on primary care that has remained an important part of health care policy in New Zealand ever since. Implementation of the strategy led to a series of important changes:

- GPs were encouraged to join new meso-level, community-oriented, not-for-profit organisations called Primary Health Organisations (PHOs).
- There was a shift from fee-for-service for general practitioners to (largely) weighted capitation for PHOs, and from targeted to universal funding for primary care.
- Significant increases in funding (the government promised an additional \$2.2bn over seven years from 2002/03) were to accompany the strategy in order to reduce the fees that people paid and to extend the range of services provided by PHC providers.

The PHCS outlined that PHOs would:

- Be funded on a capitation basis by DHBs for ‘the provision of a set of essential primary health care services to those people who are enrolled’ (p.5).
- Involve all providers and practitioners in their decision-making.
- Be ‘expected to involve their communities in their governing processes’ (p.5).
- Be not-for-profit bodies ³⁸ (replacing the more profit-orientated model of some of the IPAs that came before).

IPAs typically became partners in, or established themselves as PHOs, but many also retained a separate identity, providing management services to the PHOs (for example, negotiating contracts, allocating funding, supporting general practices as businesses, and establishing specialised services to work across general practices). The first PHOs were established in 2002 in the Counties Manukau DHB area, and by mid-2008 there were 80,⁶⁰ with considerable variety in the make-up of different organisations. Enrolled population size ranged from just over 3,000 to more than 350,000 and the number of general practices associated with PHOs ranged from just a handful to over 100.⁶¹

Evaluations of the PHCS suggest that there were significant gains, including a high level of enrolment across the New Zealand population, reduced user fees and increased consultation rates, as well as increased service provision.⁶⁰ PHO performance against key targets (such as screening and vaccination rates) had also improved. But while ‘there [was] no doubt that some PHOs and their primary health care providers [were] bringing about changes in services consistent with the objectives of the Strategy... the rate and extent of change appears to have been variable’ ⁶¹ (p.26). Concerns were raised around the variation between PHOs in terms of their size, governance, management arrangements, roles and responsibilities, the ‘variable and tentative’ nature of co-operation and co-ordination of activities between practices and other services⁶⁰ (p.12), and a lack of progress towards population-based approaches and more integrated, team-based models of care.^{60 62}

In addition to these changes, in 2006 a Very-Low-Cost-Access (VLCA) scheme was introduced whereby participating practices were allocated additional funding in order to maintain low patient fees. The criteria for VLCA practices were later updated in 2009, so that only those with enrolled populations that were at least 50% high needs were eligible. A PHO Performance Management Programme (later renamed the PHO Performance Programme or PPP) was established in 2005.³⁰

(3) 2008 on – A focus on ‘Better, Sooner, More Convenient’ care and an alliancing approach

Based on a pre-election discussion paper, the policy focus of the new government of 2008 was around achieving Better, Sooner, More Convenient (BSMC) primary care, with services that are integrated and delivered ‘closer to home’.⁴⁰ The idea of Integrated Family Health Centres (IFHCs) – centres involving co-located multi-disciplinary teams providing a range of services – was introduced as one option for achieving these goals.

Other themes included a focus on clinical leadership, quality improvement, and on reducing administrative duplication.³¹

To pursue these aims, an expressions of interest process was launched in 2009, requesting proposals from primary care providers around the country to implement BSMC at a local level.⁴² Of more than 70 received, nine were chosen to progress to the business case stage, including proposals to develop 'Integrated Family Health Centres (IFHCs), more nurse-led services... the development of more multi-disciplinary teams and greater co-operation with hospitals' and also 'fewer primary health organisations (PHOs), meaning more resources moving to the front-line'.⁶³ One area trialling IFHCs in response to the BSMC initiative was the Midlands region, in addition to launching a Patient Access Centre (PAC) and introducing an online patient portal³² – developments which form the foundations of the HCH model employed today.

Those chosen to progress to the business case stage (later renamed 'alliances' as each used an alliance governance structure) did not receive any new funding.⁴ They were, however, given access to a new flexible funding pool (FFP) established by combining a number of existing PHO funding streams.²⁷ The FFP was later rolled out to the rest of the country as part of the new PHO Services Agreement. Little is known about how the business cases or IFHCs progressed or how successful they were in achieving their goals.⁵⁹ An evaluation focused on two areas was 'undertaken at a point in time that could be considered a very early phase in the ongoing development of the Business Cases' (p.16) and reported that:

- The objectives were often referred to as 'aspirations' (p.11), and overall none of these were fulfilled in full at the time the evaluation was carried out.
- Although many aspirational goals were not realised, some work streams did produce results and some participants highlighted other positive changes, such as improved communication between primary and secondary health providers.
- The 'pivotal role assigned' to IFHCs 'in facilitating greater integration was compromised because most of the proposed Centres were not established' (p.12).
- The business cases were thought by many to be too wide in scope and involved too many initiatives, 'at times seen to be inadequately resourced, had inadequate oversight, and an absence of measures in place to evaluate progress' (p.12).
- Working in an environment of 'endless change' (p.12) had a negative impact on, for example, staff retention and an inability to maintain momentum on some initiatives.⁶⁴

Similar developments already in train also took advantage of time-limited BSMC funding – for example, Counties Manukau DHB grouped local health providers into four geographical localities to create new networks with responsibility for local planning, design and delivery. An evaluation found slow progress in creating budget holding arrangements within each of these localities. While the DHB had hoped to create four entities that would be governing bodies in their own right, the PHOs had stronger incentives to maintain what they described as 'their own sovereignty'.⁶⁵

At the same time as the BSMC alliances, the government sought a reduction in the number of PHOs.⁶⁶ In addition to the business cases that involved amalgamating PHOs, some areas were requested to make changes, and others consolidated due to reductions in management fees,⁶⁷⁻⁷⁰ bringing the total number down from more than 80 in 2008 to 32 by 2012.

In mid-2009, a Whānau Ora Taskforce was established to develop a policy framework for 'a new method of government interaction with Māori service providers to meet the social service needs of whānau'.⁷¹ After a period of consultation, the Taskforce published its final report in 2010. Later that year, 25 provider collectives (bringing together 158 providers across New Zealand) were announced to develop and deliver Whānau Ora services across the country with support from Te Puni Kōkiri, the Ministry of Social Development and Ministry of Health, and with funding totalling \$134m over four years^{72 73} (see also ⁷⁴). The Budget in 2011 invested a further \$30 million to develop providers in regions of high need where no collectives existed.⁷² From 2014, implementation moved to three non-government Commissioning Agencies so that 'funding decisions are made closer to communities' and to allow 'for flexible and innovative approaches to meet the needs and aspirations of whānau'.⁷⁵

In 2013, the PHO Services Agreement required all DHBs and their respective PHOs to form alliances, with alliance agreements developed based on the experience of the nine BSMC business cases.⁷⁶ Alliances 'are local partnerships between health providers, organisations and funders' and 'provide a high trust forum for service development that reflects shared responsibility for a whole of system approach'⁷⁷ (p.45). In some areas, membership goes beyond the DHB and PHO – for example the Canterbury Clinical Network involves 12 partners, including organisations from home-based healthcare, community health, community pharmacy, radiology, nursing, diagnostics, ambulance and midwifery as well as the DHB and three PHOs.⁷⁸

There was also a change in performance management, with the PPP being replaced in 2014 by a new Integrated Performance and Incentive Framework (IPIF).⁷⁹ This later evolved into the System Level Measures (SLM) framework in 2016, which aimed to stimulate a 'whole-of-system' approach and requires collaboration between health sector partners across a local area (responsibility for implementation lying with the alliances). Associated funding is 'to be used to build quality improvement and analytic capacity and capability in primary care'.⁸⁰ A quarter of this funding is provided 'up front' to PHOs, half on approval of an improvement plan, and a quarter is 'at risk' based on performance against a subset of measures at the end of the year.⁸⁰

These developments represented an important shift in the way primary care performance is monitored and incentivised, moving away from a pay-for-performance approach based around process and output targets to a set of outcome measures (some of which are chosen by the alliances themselves) spanning a range of services, and aimed at encouraging integration and continuous quality improvement.²⁹ However, 'there remain considerable challenges to successful implementation . . . [including that] the strength and functioning of collaborative relationships between organisations vary considerably'²⁹ (p.831), and little is known about the effectiveness of the alliances on which the SLM framework relies.

2.2 Implications for current settings from this historical overview

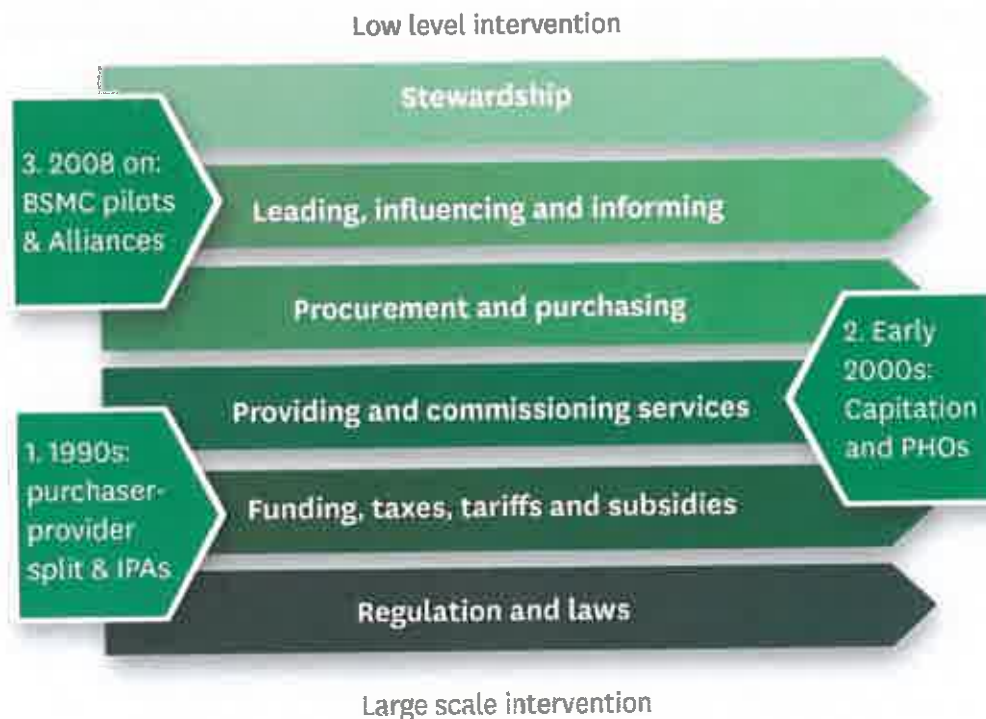
The New Zealand health system has now, in 2018, experienced a period of relative stability in recent years, with DHBs in place since 2001, the current configuration of PHOs in place (in most areas) since at least 2012, and district alliances since 2013. Recent policy has re-emphasised and built upon the previous direction of travel, the latest – the 2016 *New Zealand Health Strategy* – centred around ‘a system that is people-powered, provides services closer to home, is designed for value and high performance, and works as one team in a smart system’⁸¹ (p.13). Key themes include integration of services both across health care and with wider public services, early intervention, better use of data, taking advantage of innovations and new and emerging technologies, and a recognition that the current model of providing health services is unsustainable in the long term.

During the three periods of primary care development presented in this section (i.e. the 1990s, the early 2000s and 2008 onwards), policy makers were using different combinations of policy tools to drive change. At a greatly simplified level, these tools were more likely to involve larger scale interventions (for example, new purchasing structures embedded in legislation) during the 1990s, fiscal incentives to generate new thinking in the early 2000s, and softer influencing tools after 2008 (for example, new alliances aiming to create high trust environments). There are many frameworks available showing the variety of ways policy-makers might use their power to influence people’s actions and behaviours. Figure 3 presents one of these frameworks as a set of graduated styles of interventions (from low-level interventions through to more active, larger scale interventions) and maps the three periods of primary care developments against this continuum.

We conclude with this framework as a way of introducing what we refer to as the current ‘light-touch’ or permissive policy environment through the rest of this report. A light-touch policy environment generally looks first to low-level interventions such as connecting networks to co-create change or acting as a catalyst by creating test beds, often recognising that innovation cannot necessarily be mandated from the top. Others have pointed out that national bodies are often ill-placed to determine which health service innovations would deliver greater value within different local systems.⁸²

Interviews conducted by the New Zealand Productivity Commission, and a recent assessment of the Ministry of Health’s performance,⁸³ have pointed out the need for the Ministry of Health to do more to lead the system. The latter noted that the Ministry of Health is yet to devise a commissioning framework that is ‘sufficiently permissive and yet robust to support innovation and collaboration’⁸³ (p.14).

Figure 3: Styles of government intervention mapped against three periods of key developments in primary health care



Source: adapted from Siodmok (2017)⁸⁴

2.3 Key points

This section has provided an overview of key developments with respect to primary health care policy and services in New Zealand from the 1990s to the present day, with a view to understanding the historical context in which the HCH and other primary care innovations originated. We observe that:

- There have been several points in time where changes have created new opportunities and energised (at least part of) the primary sector, including the creation of meso-level organisations from the bottom up, in the form of IPAs in the 1990s and later PHOs in the early 2000s.
- Other key changes include the introduction of capitated funding following the PHCS, a flexible funding pool to enable the BSMC business cases to progress, and most recently, the requirement for DHBs and PHOs to enter into alliances.
- Relative to historical developments and restructures, the health system has, in 2018, experienced a period of relative stability, with DHBs and PHOs in place in their current arrangements since at least 2012 (in the majority of areas).

- In contrast to other periods described here, the current policy settings in which DHBs, PHOs and their local partners operate can be described as 'permissive' or 'light touch'.

In the following section, we look in detail at the current policy settings with respect to primary care and discuss the ways in which primary care innovation has emerged from the actions of PHOs, in partnership with DHBs, from the middle of the system.

3. PHOs as facilitators of innovation

This section examines how PHOs are enabling new primary care services to be delivered in ways that align financial and professional incentives for general practices and clinicians.

Reviews of primary care reform in New Zealand up to 2008 suggest that PHOs were not delivering all that was expected, with some simply acting as a ‘post box’ for primary care funding.^{60 85} Since 2008, PHOs have matured, both due to amalgamations (down to 32 in number) and to the allocation of explicit roles in the planning of district services in ‘alliances’ with DHBs.ⁱⁱ

There have, however, been no formal investigations of whether these changes have made a measureable difference to improving the delivery of primary care services in New Zealand. In light of this absence of evidence, our conclusions are bounded by observations of the primary care innovations that have emerged and what these reveal about the propensity of the system to innovate. In particular, our commentary draws on:

- An assessment of where PHOs sit in the context of the international trend towards meso-level primary care organisations. These organisations give strength to a part of the health system that is paradoxically critical yet often weakly organised⁹ and there is a growing body of evidence of the factors needed for them to succeed, see for example Smith (2011).⁸⁶**
- Case studies and interviews with opinion leaders who are currently applying a bundle of health care innovations under the title of Health Care Home (HCH). These insights have been matched against the features known to support the spread of health care innovation.¹**

In assessing PHOs as facilitators of innovation, we have looked at their operations within the context of the current policy settings, the wide diversity of PHOs, and the recent networks formed for the sole purpose of collaborating on the HCH model of care. Firstly, however, we look at how PHOs are operating within the context of the broader international interest in new types of meso-level organisations as a way of driving improvement in primary care.

3.1 PHOs as meso-level organisations

PHOs can be situated within a wider international trend of bringing together diverse and often autonomous general practices and other community services into a collective whole.^{86 87} New Zealand PHOs have garnered international attention as an early example of a meso-level body seeking to both improve population health and collectivise general

ⁱⁱ **This may not have been entirely unexpected given that central government was looking for much of the new funding to be passed on to patients in the form of reduced fees, leaving PHOs little leeway in their early days to use their funding as levers for change.**

practice interests.⁸⁷ Interest has been shown in how IPAs emerged from within and across general practices in the 1990s, and then, as the basis for PHOs, created clinically-led and -owned organisations with links to front-line practices. International analyses of their operations suggest these offer useful lessons to others seeking to create such bodies.⁸⁸

When first introduced in 2001, the Primary Health Care Strategy outlined that PHOs would be funded on a capitation basis by DHBs for 'the provision of a set of essential primary health care services to those people who are enrolled'.³⁸ Despite the moves to capitated funding, a significant proportion of general practice income still derived (and continues to derive) from patient co-payments. The result has been that incentives over the years have continued to prioritise the volume of primary care over new models of care.⁶¹ This was a concern in 2008 and was still apparent when those we interviewed explained the importance of the careful positioning of an innovation like telephone triage as part of the HCH model of care. The introduction of telephone triage, it was explained to us, could result in less practice income from co-payments, which has meant PHOs have needed to provide additional funding or demonstrate that practice visit volumes would be maintained. In Canterbury, early changes to the configuration of primary care funding were made to overcome the incentive for general practices to prioritise the volume of care. In other parts of the country, despite the early expectations that capitation would shift incentives, the existence of patient co-payments continues to blunt the impact of capitation.

From our interviews, it was clear that PHOs were giving a priority to keeping general practitioners engaged in new models of care by setting realistic goals for practice change. These goals match what others have described as important features in any call for primary care change, i.e. demonstrating that change will improve some or all of the following: (i) quality of care for patients; (ii) physician income; (iii) quality of the working day of clinical staff; and (iv) respect from clinical peers.⁸⁹

In England, the trajectory of similar meso-level organisations (for example, Primary Care Trusts) was beset with problems. The work of these organisations has been experienced as overly bureaucratic, managerially controlled and belonging to the wider health system rather than local clinicians.⁸⁷ Drawing on the English experience, advice for the successful operation of meso-level primary care organisations stresses the importance of:

- Stability in the organisation of the health care system;
- A policy that enables resources to be shifted between providers and services;
- Incentives that engage general practitioners and practices in seeking to develop new forms of care across the primary-secondary interface.⁸⁶

Forcing particular configurations of primary care organisations from the top, to fit pre-existing geographical boundaries or some other template, has been linked to an increased likelihood of clinician disengagement and lack of innovation compared to those allowed to develop organically.⁹⁰

In New Zealand, PHOs have had the advantage of relative stability in the organisation of primary care and are seen as organisations belonging to clinicians. While general practitioners need to be part of a PHO in order to receive government funding, the decision on which PHO to join is voluntary. This context has meant PHOs have had an incentive to keep their practices well-engaged and only move as fast as their member practices are prepared to go in introducing new models of care. For example, those we interviewed regularly highlighted the thought they put into rolling out HCH in tranches across their member practices. Moreover, the multi-component nature of HCH (discussed in more detail in Section 4), clearly offered an initial design capable of being adapted to fit local priorities, and allowed a tailoring of messages to those most pertinent for different types of practices within a PHO. That said, in some parts of New Zealand where there is only one PHO covering one district, the PHOs could in theory be more directive in introducing new models of care.

The current policy settings have allowed those PHOs wanting to innovate to pursue the innovations they think will offer the most value. For those PHOs less interested in innovation, however, there have been few additional central directives. This point was picked up by those we interviewed, who acknowledged the advantages of the current permissive policy environment, but also indicated where they now needed greater backing to drive larger scale change. The next section discusses in more detail the enablers and barriers emerging from the policy settings for primary care innovation.

3.2 Policy settings for primary care: a light-touch environment

Figure 4 displays the current policy settings for innovation in primary care. These have emerged from the historical developments outlined in the previous section. At the macro level, the New Zealand Health Strategy, overseen by the Ministry of Health, has emphasised the importance of quality primary care. The new alliance framework has given a significant role for PHOs working collaboratively with DHBs to develop plans to achieve system-level outcomes linked to the Strategy. Limited research is available on how these alliances are performing. Our interviews indicated that this alliancing framework has assisted in those areas where there has been a historical legacy of collaboration between DHBs and PHOs but has yet to emerge as a significant driver of innovation.

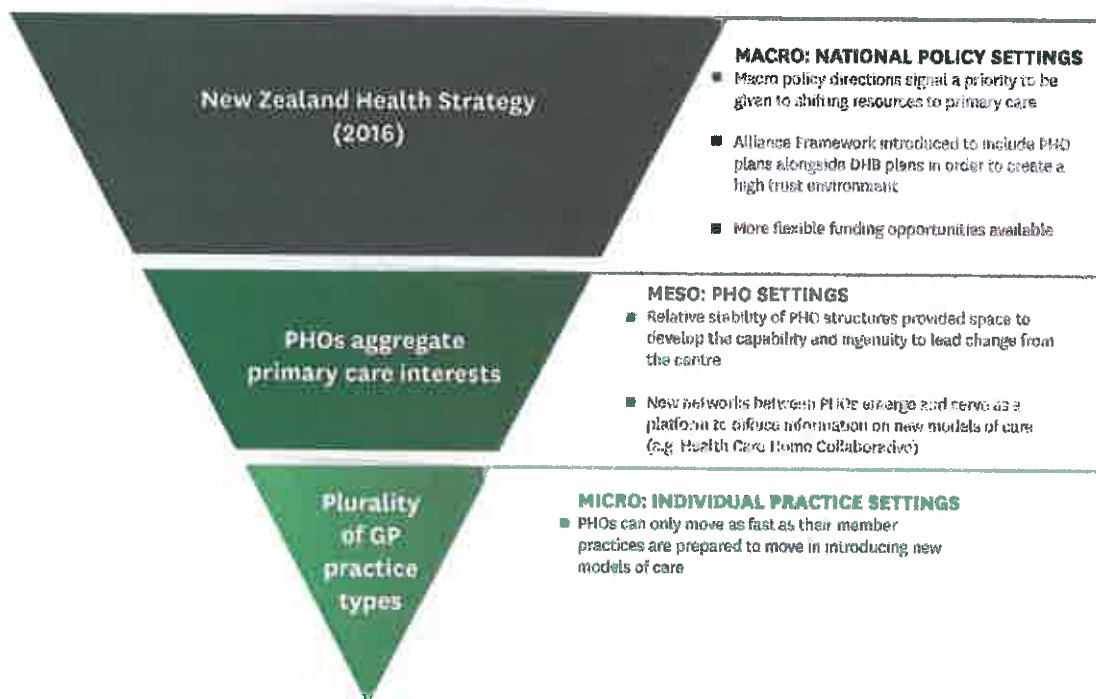
In Canterbury, one study has shown how building a strong case for change and a long-term partnership between local organisations (the IPA, PHO and DHB), with an emphasis on 'one system, one budget', has created a sound platform for innovation and has been associated with an increase in the number and range of services delivered outside of the hospital, reduced waiting times, reduced hospital bed 'gridlock', and reduced emergency department use.⁹¹

By contrast, another study highlights the potential challenges innovators face: an initiative to engage across five PHOs in South Auckland in order to reach a collective understanding of shared innovations has struggled to overcome perceived conflict

between the desire to obtain good health access and coverage for different local clusters with the PHO focus and advocacy for their enrolled population. While the DHB had hoped to create four local clusters that would be budget holding bodies in their own right, the PHOs had stronger incentives to maintain what they described as ‘their own sovereignty’ and retain control over all forms of funding being channelled to local general practices.⁶⁵ These contrasting experiences reflect the diversity of PHOs and the problems that emerge when DHB geographic boundaries do not match the boundaries in place around the enrolled population for each PHO.

The complex and overlapping relationships between PHOs and DHBs have been a barrier to innovation, with some arguing that New Zealand’s smaller PHOs are likely to be more cautious about doing things differently.⁴ Equally, given DHBs have considerable funding oversight, they have the potential to be a major enabler of innovation or put barriers in the way of PHOs attempting to do things differently if DHBs believe these do not meet acceptable quality assurance standards.

Figure 4: Summary of current policy settings in New Zealand



At the meso level, some PHOs have found willing partners with DHBs to take on service innovations, and those PHOs have then run programmes to incentivise their practices to change the way they operate. As noted in the previous section, the relative stability of PHO structures has given PHOs space to develop the capability and ingenuity to lead change from the middle. One commentator recently noted that innovations to expand access to primary care have been 'driven more by the vision of local health care leaders as opposed to health policies championed by government'.⁴ Our interviewees were often of this view. One school of thought suggests this is an indictment of the system and that the Ministry of Health is missing opportunities to provide exemplars of best practice and innovation. Although we were able to source some of the early work on HCHs back to initial seeding for business cases linked to Better Sooner More Convenient Care initiatives, our interviewees were interested in seeing more active backing to scale up innovations that were seen to offer value.

Another school of thought suggests that active backing nationally could risk creating 'political must dos' which could divert activity away from innovation as organisations 'second guess what they are required to do rather than focus on locally generated ideas and solutions'¹ (p.610). Interviewees recognised the value in the HCH not being a national initiative; the grassroots nature of the HCH initiative making it more sustainable in times of government change.

At the micro level in Figure 4, the plurality of general practice arrangements underscores the size of the change management task for PHOs looking to drive innovations. Interviewees stressed the importance of moving as fast as their general practices are prepared to go in introducing new models of care, reflecting the ways in which general practices in New Zealand are a hybrid spanning salaried staff working in centres of high socio-economic need, to smaller owner-operated practices, and to larger corporate models. One interviewee aptly captured the diversity of interests involved when they described the HCH model of care as a 'best practice franchise'.

3.3 Diversity in PHOs

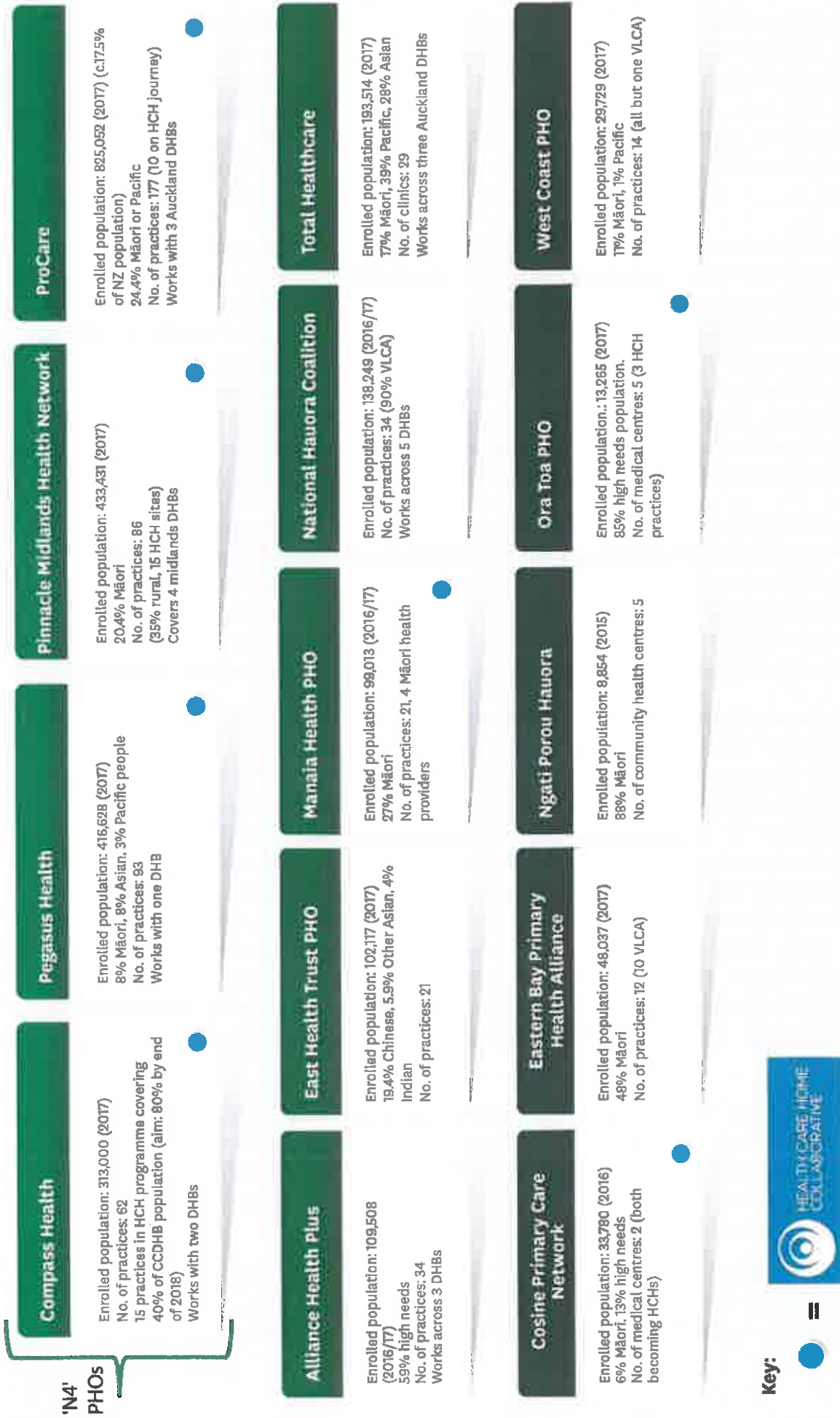
There is considerable diversity in the make-up of PHOs. Figure 5 displays a cross section of PHOs arranged according to size of enrolled populations. The commentary in this section of the report is based around the work of the top row of organisations. These are the four largest PHOs, collectively known as 'Network 4'.ⁱⁱⁱ

We found little published about the innovative activity undertaken across the bottom row of PHOs (less than 50,000 enrolled). In the middle row, we found one-off descriptions of service innovations that included the following:

ⁱⁱⁱ *Network 4* are a collaboration of New Zealand's four largest PHOs: Compass Health, Pinnacle Midlands Health Network (PMHN), Pegasus Health and ProCare Health, together covering a population of more than two million people.

- **A suite of programmes developed as a response to the emergence of the flexible funding pool at the National Hauora Coalition PHO. This suite of programmes were collectively designed to improve quality clinical care, reduce barriers to access and contribute to clinical outcomes. The actions undertaken spanned after-hours access, urgent support funds, multidisciplinary interventions, palliative/end of life care, and specialised interventions such as podiatry, smoking cessation and cardiovascular disease triple therapy.⁹²**
- **Examples of specific self-management programmes that included a Diabetes Health Coaching Initiative at Total Healthcare PHO and a care planning approach at Alliance Health Plus PHO.⁹³**

Figure 5: Cross section displaying PHO diversity



Sources: (1) N4: 84-97 (2) Middle tier examples: 98-102 (3) Third tier examples: 103-109

The creation of PHOs reflects a coming together of organisations with a strong history of community and iwi engagement (for example Māori-led and Pacific-led PHOs) and those offering business services for individual general practitioners. The complexity of private and public roles within the primary sector continues to this day. This complexity has pros and cons. The advantage, as already outlined, is that PHOs have emerged in a permissive policy environment and have enabled new primary care services to be delivered in ways that align financial and professional incentives for general practices.

The disadvantage is that the innovative ideas most likely to be mainstreamed are likely to be those that are based on a medical practice model of primary care as opposed to a community health approach based on strong public health nursing. While PHOs were originally expected to have a proportion of community governance, other than their not-for-profit status, there is much about them that continues to represent private and medically based interests. In preparing this report, we did search for information on what PHOs were doing across the middle and third row in Figure 5. Some information was opaque, leading us to confirm the importance of the recent call for more research and analysis⁴ and for better reporting on where primary care funding is being spent.

Comparing the experience of PHOs with English primary care meso-level organisations in 2007, concerns were raised that if PHOs were required to demonstrate a strong degree of community involvement then this might make them less effective.⁸⁷ The New Zealand approach of non-government PHOs, it was argued, was more likely to be consistent with the professional culture of primary care and hence be able to harness professional energy and enthusiasm in the wider health system goals for public health.

A final point with regard to the diversity of PHOs relates to the roles of Māori and Pacific PHOs. These have a long history of applying a community approach to overcoming health inequalities and tailoring the services they deliver to the specific barriers faced by their enrolled populations. Despite delivering lower fees for enrolled patients, evaluations of the experience of Māori and Pacific PHOs have found lower fees on their own did not always equate with improved health outcomes. An evaluation of Māori PHOs between 2003 and 2010 highlighted the search within the PHOs for a collaborative approach between medical services (delivered through general practices), and social and cultural support (often mandated by iwi, hapu or marae communities). Funding formulas which failed to cover the costs associated with high needs populations, agreeing performance measures that reflected the reality of caring for those with chronic conditions, and maintaining a stable clinical workforce, were all signalled out as key issues.⁵²

In a similar vein, an evaluation of Pacific PHOs found that despite offering lower fees compared to other mainstream providers, services were still under-utilised by Pacific patients.³³ The evaluation pointed to strong support to provide culturally appropriate services designed and delivered by Pacific clinicians but also identified the difficulties of remaining financially viable for the smaller PHOs.

These experiences highlight the ways in which different groups can perceive the relative advantage of an innovation differently. More research and analysis is needed to understand how Māori-led and Pacific-led practices respond to the HCH model. We were

given a number of examples in interviews of the potential for the HCH model to address inequities in care by creating more time in the schedule for those who did need to be seen quickly. In one region those implementing the HCH model of care held workshops with Māori providers to see how the model could be adapted for their needs. Feedback suggested little adaption was needed. In another region, a large Māori provider was described as an early adopter of the model as they were naturally innovative in their search to improve access and long-term condition management. In a third region, a broader network had formed across all the HCH practices supporting what had been a previously isolated long-term condition nurse working in one Māori provider. Whilst these examples suggested a good fit with achieving improved care for Māori, a more rigorous assessment is needed. In a fourth region the management-heavy nature of HCH implementation was difficult for their particular Māori provider who was dealing with a different set of issues.

3.4 PHO networks spreading innovation

In early 2016, the 'Network 4' PHOs established the New Zealand HCH Collaborative which has since grown its membership, with other PHOs as well as DHBs joining. The Collaborative is funded by participating members with a role 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'.¹¹⁰

The creation of this network represents a significant resource in terms of scaling up and spreading primary care innovations in New Zealand. A common theme both internationally and in New Zealand is to point out that while there are often no shortage of innovative ideas for change and improvement, the key barrier comes when these ideas need to be scaled up and spread. A recent King's Fund review of the acceleration and spread of innovation in the NHS⁸² stressed the complexity of the process of transferring innovation from one organisation, requiring much more than being published at conferences or being presented as 'toolkits'.

An earlier investigation of New Zealand health sector innovation concluded that the innovation systems in New Zealand place a strong reliance on chance mechanisms to communicate ideas from one entity to another, with the downside that targeted funds that would convert local innovation to proven best practice are often under-resourced.¹¹¹ More recently, another commentator suggested that while a number of PHOs have been implementing new models of care, institutionalising these reforms is challenging without strong evaluative evidence on what works.⁴

All of those we interviewed acknowledged the current acceleration in the take-up of the HCH model of care and highlighted the important supporting role being played by the HCH Collaborative. Our argument is that this collaborative network is playing a critical role in institutionalising innovation in primary care. In their review of the enablers

supporting health service innovation, Greenhalgh and colleagues identify the importance of such informal inter-organisational networks. An organisational decision to adopt an innovation can be influenced by whether comparable organisations have done so. Networks such as the HCH Collaborative, formed by a number of organisations, can promote an innovation when it starts to be generally perceived as the norm; equally these networks can dissuade organisations from adapting innovations that have no perceived advantage.¹

Those we spoke to confirm the significant role the HCH Collaborative plays as a vehicle to drive the spread of innovation. The agreement of national standards offered an opportunity for patients to receive a consistent experience across New Zealand. Those PHOs at the beginning of implementing the new model of care could leverage resources and insights from other more experienced PHOs. Comments made on the value of the HCH Collaborative echo the importance of social processes in spreading new ideas¹¹² and the importance of early adopters encouraging those more cautious to take on board changes.

Other parts of New Zealand have experimented with quality improvement strategies to accelerate innovation. These provide opportunities for front-line staff to test and spread new ideas within quality improvement collaborative structures. Counties Manukau DHB's equivalent to HCH (called 'Enhancing Primary Care') included many of the same components as the HCH changes, but was intentionally designed as a pilot with nine practices funded to gather data to test the impact of changes.

Gathering the data to see if the innovations being trialled are the ones able to deliver the greatest value is a specialist task. Our review of quality improvement collaboratives in secondary care settings in New Zealand identified that learning from measurement was the biggest challenge.¹¹³ Section 4 reports the early findings from individual evaluations of the HCH model of care, but collectively across the primary sector, generating robust evaluative data is easier for the larger PHOs who have the resources to actively test new innovations. The underdeveloped nature of data gathering and analysis in primary care has been identified overall as a barrier to robust primary care policy in New Zealand.⁴

3.5 Key points

Our conclusion is that PHOs in partnership with DHBs offer an organisational form able to promote those innovations most likely to engage clinical leadership. Further key points include:

- The current 'light touch' policy settings have enabled innovation to emerge from the middle of the system and benefited from enthusiastic leaders able to build on a historical legacy of strong collaborative relationships.
- There has been little policy 'prodding' from the top of the system that would encourage those less interested in picking up new models of care.

- **Some PHOs are growing their capability to be more than a 'post box' for funding and the stability of the primary care system through the last decade has created space for a focus on locally generated ideas and priorities. Our evidence for this is based on what we have observed from the opinion-leading PHOs and needs to be confirmed by more in-depth research.**
- **Primary care patient co-payments continue to incentivise face-to-face patient visits and have required 'creative workarounds' from PHOs to ensure that practices shift from prioritising volumes to delivering proactive care.**
- **The creation of the HCH Collaborative network represents a significant resource in terms of scaling up and spreading one form of primary care innovation in New Zealand.**

4. The Health Care Home model in New Zealand: diffusion of ideas

4.1 Rationale for a deep dive into Health Care Homes as an illustrative example

As mentioned in Section 3, the HCH is a model of primary health care service delivery currently being implemented, iterated and evaluated across a number of regions in New Zealand. Its 'innovativeness' lies in the bundling together of several evidence-based elements – including GP telephone triage, care planning, online patient portals, new professional roles, and application of lean quality improvement processes – sequenced in an order that aims to ensure that 'practices can offer more convenient high quality care as well as ensuring services are more sustainable in the long term'² (p.2).

With core elements spanning four domains (see Box 1), the model aims to address several of the major challenges facing primary care in New Zealand: increasing demand for health care services including primary care, partly as a result of a growing and ageing population living with more complex needs; workforce shortages; rising patient expectations; ongoing health inequities; advancements in technology; and variation in the patient experience and quality of care between practices. There was a feeling among the individuals that we spoke to that general practice in its current (or more traditional) form was both outdated and unsustainable in the long term.

The HCH is based on a version of the Patient Centered Medical Home (PCMH) model that has been evolving and expanding in the USA. Models with similar characteristics are being implemented in other countries around the world, and there is a growing international evidence base for some of the elements of care common amongst these models (see Appendix 3).

In New Zealand, implementation builds on previous pilot projects and initiatives, and has in the last five years expanded from a model used in a handful of practices in the Midland region of the country to one that is now being implemented in 128 practices across the North and South Islands. As discussed in Section 3, a HCH Collaborative funded by participating members provides governance at a national level, enables learning and resources to be shared between different areas, produces documentation describing the requirements of the model, and is responsible for a peer-led HCH certification process. There is growing evidence as to the model's impact for patients and practices, with two evaluations in the last couple of years and a comparative national evaluation recently commissioned by the Ministry of Health and the Health Research Council.¹¹⁴⁻¹¹⁶

This section describes the development of the HCH in New Zealand as an example of an emerging model of care that has spread from its inception in provincial Hamilton to several DHB regions.

4.2 The history of the Health Care Home model of care in New Zealand

The HCH model was originally developed by Midlands Health Network in response to 'mounting pressures facing the health sector' (p.5), including a piece of forecasting work that found that the region would need more than '230 full-time equivalent GPs over the next 14 years just to meet current demand'¹¹⁷ (p.1). Following on from previous work, and in response to the BSMC expressions of interest process (for which Midlands was one of the nine chosen to progress), clinicians and leaders developed a model of care that had 'better management of demand, of scarce resources and a focus on ensuring those with the greatest health needs have those needs met' at its core¹¹⁷ (p.5).

Having visited the UK, US and Europe to explore innovation in primary care and in other industries (for example, visiting Boeing in Chicago to learn about their processes for achieving greater efficiencies), a group of staff and clinicians were sent to Seattle to learn about Group Health's^{iv} Medical Home model, a PCMH model underpinned by lean thinking and standardisation.¹¹⁸⁻¹²⁰ 'Inspired' by what they saw, in late 2010 to 2011 Midlands ran a series of workshops to tailor and customise parts of the Group Health model to a New Zealand setting. The resulting model – then called the Midlands Health Network model of care for integrated family health centres – was trialled at three PHO-owned, proof-of-concept practices in Hamilton in 2011. The five key strategies were: to expand the core general practice team; improve access through a Patient Access Centre; increase the number and nature of virtual consultations; implement strategies to streamline the patient experience; and provide proactive health care, with general practice teams initiating and scheduling contact with patients (for example, following up on screening opportunities).¹¹⁷

The model was expanded to other practices in the region and early evaluations of the model were published^{121 122} (these were included in the meta analysis in Ernst & Young 2017,¹¹⁴ see p.40 this report) Implementation and elements of the model evolved based on learning along the way, though the 'core principles underpinning the model have not changed'.¹²³ Speakers from Group Health made further visits to New Zealand¹²⁴ and vice versa, with PHO leaders visiting the US,¹²⁵ and Midlands ran a number of open days for others around New Zealand to see the model and hear from colleagues first-hand about how it was working. Greenhalgh and colleagues outline the benefits of practical experiences and demonstrations like this in reducing the perceived complexity of an innovation and how initiatives that make the benefits more visible increase the likelihood of assimilation (the 'observability' of an innovation).¹ Other areas were also making changes with similarities to the HCH model during this period.

In 2014, the four largest PHOs formed 'Network 4'. The HCH was pursued as a joint initiative, and in 2015 a business case was prepared for the Ministry of Health seeking new investment to support establishment of the model across the N4 districts.^{2 126} This being unsuccessful, some PHOs (such as Compass Health) agreed local funding arrangements with their DHB to support implementation of the model – and so rollout

^{iv} Now part of Kaiser Permanente

began expanding to other areas. Northland later requested to join the N4, and the national Health Care Home Collaborative was formed.

The Collaborative has since published a model of care requirements document (see Box 1), setting out the key features of the model and describing what a mature HCH practice looks like.¹²⁷ This has been used as the basis for developing a credentialing and certification process for 'signing off' a practice as a HCH (with an accreditation process to be developed with the Royal New Zealand College of General Practitioners). To be credentialed, a practice needs to meet a set of criteria, including having an implementation plan to achieve a maturity level of 4 on all service elements; providing GP triage and offering alternatives to face-to-face care; offering on-the-day appointments for triaged patients; having call management arrangements in place; extended opening hours; and having and increasing the use of a patient portal.¹²⁷ An HCH national dataset to support benchmarking and quality improvement is in progress.

Box 1: Core elements of the HCH model in NZ

Greenhalgh et al. (2004)¹ describe how innovations that 'can be broken down into more manageable parts and adopted incrementally... will be more easily adopted' (p.596) and how 'if the knowledge required for the innovation's use can be codified and transferred from one context to another, it will be adopted more easily' (p.597). The 2017 'model of care requirements' document published by the Health Care Home Collaborative (HCHC) sets out the model in these terms, outlining the 'service elements and characteristics of a Health Care Home practice over and above the traditional model'¹²⁷ (p.2).

The document sets out the four core domains of the HCH:

1. Ready access to urgent and unplanned care
2. Proactive care for those with more complex need
3. Better routine and preventative care
4. Improved business efficiency and sustainability.

Within each domain lies a set of service elements (20 in total), alongside a set of characteristics against which a practice is scored from 1 (low maturity) to 4 (high maturity – i.e. the target). For example, within domain 1: urgent and unplanned care...

- Service element 1 is 'The Health Care Home provides alternatives to face to face consults and utilises GP triage to proactively manage demand' (p.4-5)
 - Characteristic 1.5 is 'Patient needs assessed via triage'
 - A practice scoring 1 (low maturity) on this characteristic is described on the maturity matrix as 'not done systematically' whereas a practice scoring 4 is described as doing this '...in a systematic manner, including the use of a senior, experienced clinician who is able to access, diagnose and treat, managing the call directly avoiding where possible the patient to visit the practice. GPs triaging their own patient where possible'.

This maturity matrix allows practices to map their current model of care on a developmental scale. The current version is due to be reviewed in October 2018.

4.3 Diffusion across New Zealand and implementation on the ground

As of April 2018^{115 128}:

- 128 practices across New Zealand are now on the journey to implementing the HCH model.
- Of the practices that chose to take part in the national HCH Collaborative certification process, 12 have now officially been certified Health Care Homes.¹²⁸
- The national HCH Collaborative has grown and now represents the primary health care needs of a considerable number of New Zealanders. PHO and DHB collaborative members comprise Compass Health, Capital & Coast DHB, Central PHO, Pegasus Health, Pinnacle Midlands Health Network (PMHN), ProCare, Northland DHB, Manaia Health, Te Tai Tokerau, Hutt Valley DHB, Te Awakairangi Health Network, Cosine, Comprehensive Care, Nelson Marlborough DHB, Nelson Bays Primary Health, Marlborough PHO, and Southern Health System (WellSouth and Southern DHB), with national supporting organisations, the Royal NZ College of General Practitioners (RNZCGP), and GPNZ.
- Evaluations of the PMHN HCH model of care have been published in 2017 and 2018, showing promising results (see below).

The model of care requirements document sets out the core features and principles expected across all practices implementing the model, enabling a level of national consistency in the care that patients can expect to receive from a HCH practice, be it in Northland or Southern DHB. However, it is not overly prescriptive (for example, it does not specify the technology provider that is to be used, or what continuing quality improvement or lean approaches should focus on), nor does it preclude local tailoring. This potential for 'reinvention' is important, as evidence suggests that if 'potential adopters can adapt, refine, or otherwise modify the innovation to suit their own needs, it will be adopted more easily'¹ (p.596). The HCH model is therefore able to reflect local contexts and priorities. In Northland, for example, the 'neighbourhood health care home' has a particular focus on equity and the ultimate aim is to integrate health (and broader public) services in local communities. The ProCare health care home practices are built on experience of targeting services at high-risk patients with long-term conditions such as diabetes, and so again have a different focus.¹¹⁰

In lieu of national funding, local funding arrangements agreed between DHBs and PHOs also differ. In the Greater Wellington region, for example, Capital and Coast DHB provides \$16 per enrolled patient (with \$5 at risk based on performance) plus \$7,000 per practice for 'engagement and release', and Compass Health PHO provides \$14 per enrolled patient through flexible funding plus up to \$16,000 per practice for change management and workforce development.¹¹⁰ In PMHN, practices only receive PHO funding, as do ProCare practices (although three receive additional funding from Counties Manukau DHB through a pilot).² Individuals we interviewed outlined some of the things that this funding was used for, including upfront infrastructure costs (for example, implementing a patient portal or new telephone system), to release clinicians and staff to spend time on planning and implementation, and to remunerate elements of the model that are dis-incentivised by current funding streams (multi-disciplinary team meetings or phone consultations, for example). As well as funding, PHOs also offer

practices support, advice and tools to help with implementation, and support materials developed by Collaborative members are often shared via an online members-only space.

Adoption of the model is voluntary, with practices in a region enrolling in tranches following an expressions of interest (EoI) process. PHO and DHB interviewees we spoke to differed in their views of who the early adopters of the model were or what motivated GPs and practices to join the programme – an area which warrants further research. Having said this, all agreed that there were a set of early adopters, some saying they could have predicted who would express an interest in being a tranche 1 practice before calls to participate had begun. There was also some agreement as to the presence of a second set of practices, who preferred to ‘watch and see’, waiting for further evidence and for validation from their clinical peers that this was a worthy endeavour to sign up to. There was also agreement that there is a smaller group of practices who were unlikely to join voluntarily.

4.4 Relative advantage for practices: a growing evidence base in New Zealand

Greenhalgh and colleagues describe how ‘innovations that have a clear, unambiguous advantage in either effectiveness or cost-effectiveness are more easily adopted and implemented’¹¹ (p.594) – and the evidence base regarding the ‘relative advantage’ of being a HCH practice in New Zealand is growing.

Two evaluations of the PMHN HCH model have been carried out in the last few years.¹¹⁴
¹¹⁵ The first, in 2016, was based on a meta-analysis of previous evaluations carried out between 2012 and 2015, a two-day workshop, analysis of data from four practices who applied a tool to measure progress towards becoming a HCH developed as part of the evaluation, and quantitative analyses of secondary care activity data based on six practices running the model from 2013 or before. This evaluation concluded that ‘[i]t appears, from the perspectives of both patients and providers, that the model has achieved positive changes’¹¹⁴ (p.4). The evaluation reported that:

- The model had evolved since inception and stressed the significant investment in time and effort required to implement and embed the multiple changes involved in rolling out the model.
- Overall, there were positive results for patient experience (though not across all domains) and staff generally rated the model higher than the traditional model of general practice, despite ‘initial misgivings’ from some staff.
- There was evidence of increases in clinical capacity reported by practices, and that new roles (such as clinical pharmacists) increased team-based care and reduced reliance on the GP, allowing clinicians to work at the top of their scope of practice.

- The financial performance of PMHN practices was reported to have been maintained or improved.
- However, no significant differences in secondary care activity were found between HCH and control practices.

Following advances in data systems and analysis at PMHN, a second Ernst and Young evaluation with additional quantitative analysis was published in May 2018. This was based on patient data from 14 HCH practices compared to nine comparable practices in the region – with similarly sized enrolled populations (86,105 patients in the HCH dataset, 85,256 in the control group) – over a six-month period between April and September 2017. The evaluation reported the following positive results for HCH practices compared with non-HCH practices:

- A significantly lower rate of ambulatory sensitive hospitalisations (ASH) (20% fewer).
- A significantly lower rate of emergency department (ED) presentations (14% decrease) – with a large (favourable) difference among Māori (24% lower) and elderly HCH patients (32% decrease).
- Both these lower rates were also more pronounced for people living in the most deprived conditions (quintile 5).
- The ASH and ED impacts were estimated at \$2.9m per year (if scaled up to cover 75% of practices in the DHB regions then this would be equivalent to ~\$25m a year).
- A case study of one privately owned practice found no negative financial return.
- Additional process metrics show that 62% of requests for care were managed by means other than a same-day visit, 12 times more people were accessing patient portals, there were fewer referrals to specialist care and a significant increase in telephone access.¹¹⁵

Early (internally-produced) findings from Compass Health after the first year of implementation also report that ‘early findings are encouraging’ (p.10), with indications of positive impacts for both patients and practices and faster rates of improvement in HCH compared with non-HCH practices (including reduced hospitalisations).¹²⁸

A two-year piece of evaluation research funded by the Ministry of Health and the Health Research Council is due to begin in mid-2018, which will look at the effectiveness of three general practice models of care currently in use in NZ.¹¹⁶ The models that will be looked at are the medical home model, including the Health Care Home, the corporate ownership model, and the traditional model of general practitioners with support from nurses. What is needed to strengthen the evidence base, however, is a matched patient sample across different models that compares a range of patient and staff experiences, clinical and health outcome indicators prior to and after practices become HCHs. This sophistication of analysis is currently missing and would overcome some methodological concerns with the existing evidence base.

We have looked at the HCH as an example of an innovation in service delivery emerging within the New Zealand health system, but that is not to say that there are not other models. Many other DHBs and PHOs are pursuing their own approaches. For example,

Counties Manukau are in the pilot phase of an 'Enhancing Primary Care' programme with the aim of 'creat[ing] a more sustainable model of General Practice which will release capacity in General Practice teams to support more planned proactive care for... patients with complex health needs'.¹³⁰ Canterbury's acute demand management system (running alongside work on the HCH) and the 'open-access model' in Nirvana Health, Auckland are featured as models of innovation in a recent report on primary care in New Zealand.⁴ Internationally, a multitude of innovative ways of delivering care are developing (see for example Baird et al. 2018),³ including models with similarities to the HCH (see Appendix 3), those that are 'digital first', and other approaches designed to meet the needs of vulnerable, isolated, or high needs populations.

4.5 Key points

Here we have focused on the HCH model of care as an illustrative example of an innovation in primary care service delivery in New Zealand. As set out in the introduction to this section, we have chosen this model over the many other innovations in New Zealand because: it is one that has spread beyond its initial site of inception to several other regions across the country, with the number of practices joining continuing to grow; it aligns with international trends in models of care that are developing; and though emergent, the evidence base for the model being implemented in New Zealand is growing and shows positive early results.

Our observations so far are that:

- The innovation in this model lies in the bundling together of several evidence-based components sequenced in a complementary and coordinated way, with a package of support and access to tools and learning provided by PHOs and shared between members of the HCH Collaborative.
- While the model draws on international evidence and experiences (the Patient Centered Medical Home in the US and particularly the Group Health model of care for example), it has been customised to the New Zealand setting. This tailoring extends to the local level, where PHOs and practices can 'fit' the model to needs, priorities and existing initiatives.
- It appears to fulfil several of the attributes of innovations that are known to increase the likelihood of adoption,¹ for example the aforementioned ability to customise the model to a local area (the potential for 'reinvention'), the observability and relative advantage of being a HCH, and the way it can be broken down into manageable parts and implemented incrementally.
- While two evaluations of the PMHN HCH model have been carried out and show a positive impact on several outcomes, more research is needed, both to evaluate the outcomes of the model in different regions and to support further rollout to practices in the later tranches of adoption.

5. Conclusion

This conclusion synthesises the key points from earlier sections of this report that have explored the history of primary care innovation, what we know about the way the roles of PHOs have developed, and the current implementation of the HCH model of care. From past research undertaken by the HSRC investigating primary care innovation pilots, we know that the context for innovation matters. Appendix 1 displays some of the common themes across a selection of HSRC research undertaken since 2001. Collectively this body of research highlights the time needed to see innovations deliver the expected results. Further, the implementation and spread of innovations are enabled by a legacy of good trusting relationships, stable leadership, and team-based work cultures.

Greenhalgh et al's (2004) review¹ combines the findings of a wide range of theoretical and empirical papers to develop a model to explain the spread and sustainability of health service innovations. We have used this model as a frame for making the following judgements on the current enablers and barriers to primary care innovation in New Zealand. We assessed the extent to which the components in the model were evident from the information we had available, concentrating most on two areas: (1) Outer System Components; and (2) System Readiness and Antecedents for Innovation. On a third, Innovation Attributes, we reflect that the HCH model of care appears to fulfil several of the features known to make an innovation more likely to be adopted, such as the ability for local areas to customise the model (the potential for 'reinvention'), the observability and relative advantage of being a HCH, and the way it can be broken down into manageable parts and implemented incrementally.

We cannot claim to have extensively covered all the innovations being undertaken by PHOs and further research is clearly needed (and is currently being commissioned) to increase our knowledge of innovation in primary care. Nevertheless, our summary of the key enablers and barriers that we have strongest evidence for are listed overleaf.

5.1 Outer system components

The conceptual model of innovation stresses the importance of the socio-political climate, the effectiveness of different incentives and mandates, and the critical role played by inter-organisational norm-setting and networks. Our conclusion is that there is strong evidence to suggest that the following features are **enabling** innovation in primary care:

- The stable structure of the New Zealand health system. DHBs have been in place since 2001 and the current configuration of PHOs has been in place since around 2012. This has provided supportive conditions for innovation to emerge from the middle of the system. In other countries, forcing particular configurations onto primary care organisations from the top, to fit pre-existing geographical boundaries or some other template, has been linked to an increased likelihood of clinician disengagement and lack of innovation compared to those allowed to develop organically.⁹⁰
- The emerging collaborative network between the larger PHOs and partner DHBs setting standards and sharing learnings around the implementation of the HCH. This network is enabling the acceleration of the HCH model of care. Section Three highlighted how the HCH collaborative network is playing a critical role in institutionalising innovation in primary care by ensuring the bundle of innovations encompassed in HCH is starting to be seen as the 'norm' across comparable organisations. The Collaborative network has provided a platform to those prepared to take responsibility for spreading new ideas by strengthening the relationship networks key to spreading innovation.

With respect to the **barriers** to primary care innovation we identified strong evidence to suggest that:

- Primary care patient co-payments are a barrier to primary care innovation. Those practices that rely on patient co-payments have continuing incentives to maintain patient volumes in traditional face-to face interactions. Any new service innovation (such as telephone triage or on-line consultations) needs careful change management support and funding to ensure practices maintain their expected level of income. Those practices experiencing growing demand and/or who want to respond to patients who desire something different from a 15-minute appointment, have been prepared to engage in bespoke solutions such as HCH models of care in ways that allow them to maintain practice income. Not all practices may be prepared to make this trade-off. This issue needs to be taken up in the upcoming health system review.
- History matters. Those locales able to draw on strong past collaborative relationship between DHBs and PHOs are likely to have moved faster in implementing new models of care. In some areas of New Zealand the complex

and overlapping relationships between PHOs and DHBs have been a barrier to innovation.

We found uncertain evidence for the argument that a lack of central leadership in the system has meant that innovation is not being supported as it should be. With respect to primary care innovation, the current light-touch policy directions from the top of the system, coupled with enthusiastic leaders able to build on a historical legacy of strong local relationships, have supported the emergence and ongoing refinement of the HCH model of care.

A key point in the innovation diffusion literature is that a central policy push at an early stage involving a funding stream can increase the chances of innovation success, however, strong external mandates also run some risks. Our historical overview did find that past 'Better Sooner More Convenient' funding streams provided some momentum for the broader rollout of the HCH model of care. This momentum continued with the introduction of flexible funding for PHOs. That said, there has been little policy 'prodding' from the top of the system that would encourage those less interested in adopting new models of care.

5.2 System readiness and antecedents for innovation

Features that suggest a system is in a state ready to assimilate a particular innovation include the degree to which adopters see the current situation as inadequate or intolerable (tension for change), and if supporters of an innovation outnumber and are more strategically placed than its opponents (power balances). Innovation 'system fit' is also important (i.e. an innovation needs to fit with the organisation's existing values, norms, strategies, skill mix, supporting technologies and ways of working).

With respect to the latter, we found strong evidence that some PHOs were ensuring the innovations they were promoting were the right fit with existing values and norms of their practices. From our interviews, it was clear that PHOs were giving a priority to keeping general practitioners engaged in new models of care by setting realistic goals for practice change.

The 'tension for change' feature is harder to judge. Internationally, the trend is for primary care to be seen as a part of the health system that can be used to manage and influence change.⁸⁶ New Zealand general practices have traditionally taken on a gatekeeping role whereby patients first consult their GP before being referred to specialist services. This report has identified leading examples of practices taking on *additional* roles co-ordinating care for both individuals and populations. Our interviewees outlined similar ways in which the current situation in primary care was inadequate, though each had a particular local context behind their rationale for implementing the HCH. The rationale could stem from improving equity and integrating

local services to building on experiences involved in targeting services at high-risk patients with long-term conditions.

All our interviewees were providing practical change management support, evaluating changes and measuring performance. In particular, those PHOs implementing the HCH bundle of innovations have put considerable thought into how best to support the change management capability of their different practices. While a number of the innovations bundled within the HCH model of care look straightforward on the surface (for example, moving telephones out of reception or putting in place a patient portal), they can present a significant challenge to the culture and structure of a general practice.

The extent to which management decisions across the bulk of practices in New Zealand are experiencing a similar tension for change to those implementing the HCH model of care is not known. As outlined earlier, general practices in New Zealand involve a wide plurality of practice types, spanning salaried staff working within a community health population approach, to smaller owner-operated practices, and to larger corporate models.

Smith's analysis of New Zealand's Primary Health Care Strategy pointed to an unresolved tension between population and patient perspectives from the beginning. She explained that implementation of the reform focused more on the development of population health within a public health view of primary care, with 'less management and policy attention being paid to the development of better integrated primary care services for individual patients within a general practice'.⁸⁶ It may be reasonable to ask whether Primary Health Care Organisations and their practices whose core business is to provide medical care, have the capability and incentives to take on complex fundamental social problems and lead public health initiatives.

Much of the initial sequencing of the HCH model of care has been built around the idea that if patient time is valued through call triaging then additional benefits will accrue to managing the practice workload. The expectation is that reduced demand will free up the working day of GPs who will then take on new forms of team-based care, particularly for those with more complex needs. This sounds plausible, however investigations are needed into whether these assumptions are being realised. One small ethnographic study of eight United Kingdom general practices that introduced alternatives to face to face consultations (such as telephone, email and e-consultations) found, for example, only modest and gradual impacts on workload volumes.¹³¹

Areas where some of the system antecedents to innovation may not yet be adequately developed include:

- The under-developed nature of the evidence base available to help other potential adopters assess the benefits of particular innovations. The HCH Collaborative is starting to fill this gap, but it is unclear, for example, how the HCH 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 will respond to the model. Whilst our interviewees gave examples of experiences that suggest the HCH model of care is a good fit for those providers seeking improved care for Māori, a more rigorous assessment across a wider

breadth of Māori and Pacific providers is needed. The most recent Ernst & Young 2018 evaluation of the experiences of 14 HCH practices compared with non HCH practices, found a lower rate of emergency department presentations for those Māori enrolled in a HCH practice (24% lower), but more research is needed to be sure of this finding.

- The plurality of general practices types and PHO ownership structures could be an obstacle to the widespread rollout of innovative models of care. New Zealand general practices have traditionally taken on a gatekeeping role whereby patients first consult their GP before being referred to specialist services. This report has identified leading examples of practices taking on *additional* roles coordinating care for both individuals and populations, yet how far interest in these additional roles is driving the management decisions of the bulk of practices in New Zealand is not known. It is not known if new models of care requiring the support of different types of primary care professionals will be supported, nor how enhanced integration with other primary care services, hospital and social services will be promoted.

Appendix 1: Key themes across selected HSRC reports*

Key Themes	Where are these themes reinforced?
<p>➤ Change takes time – this has implications for both the planning and implementation of the innovation and its evaluation</p>	<ul style="list-style-type: none"> - 'Significant changes in culture &/or measurable health outcomes may take years to become apparent' (Traditions project - National Demonstration Integrated Care Pilot Projects p.41) - 'Changing the culture of organisations may take several years and effects on health outcomes are unlikely in the short term' (Kaipara Care – Dargaville - National Demonstration Integrated Care Pilot Project p.52) - 'Implementation period too short to achieve and embed such significant system change to primary health care (Evaluations of the Better Sooner More Convenient (BSMC) business cases in MidCentral & West Coast p.8)
<p>➤ Implementation & spread of initiatives are enabled or constrained by a myriad of contextual features Examples include:</p> <ul style="list-style-type: none"> ○ Legacy of good trusting relationships (interprofessional relationships, relationships with DHBs/PHOs, working relationships & coordinated care within & between health provider groups) ○ Stable leadership ○ Workplace culture ○ Communication ○ 'Change fatigue' ○ Enabling Health Information Technology ○ Bringing together PHOs from either a population health background or an IPA background requiring management thinking to bring about significant change in the model of service delivery 	<ul style="list-style-type: none"> - 'Relationships are key – building and cementing relationships with different stakeholders & health professionals forms a sound basis for the development of service improvement projects' (Nursing Integration Leader [Northland DHB] - The Evaluation of the 11 PHC Nursing Innovation Projects p.17) - 'A key issue that arises from this research is how PHOs and practices refer and link to other services that provided in community settings.' Evaluation of the Implementation and Intermediate Outcomes of the PHC First report p.29) - 'Cooperation and coordination of activities between practices and other [community] services need to be improved . . . e.g., through co-location of services, sharing of information, and improved collaboration working with individual patients through to full integration of funding and service delivery through into providers.' (Evaluation of the PHCS for the period 2003-2010: Final report p.13) - 'Innovation established through partnerships with community, industry & multiple health agencies' (Tairāwhiti DHB) [Tairāwhiti DHB] The Evaluation of the 11 PHC Nursing Innovation Projects p.17 - 'Projects demonstrate importance of nursing leadership in PHC – innovations with strong leadership are successful in achieving their key goals & objectives' (The Evaluation of the 11 PHC Nursing Innovation Projects p.49) - 'Leadership a key feature of more successful innovations/ identified lack of leadership within less successful innovations. Innovations demonstrated importance of leadership at district & PHO level as well as at service clinical levels in order to promote service development & high standards of clinical care' (The Evaluation of the 11 PHC Nursing Innovation Projects pp.50-51 & p.52) - 'DHBs & PHOs provided support through mentoring or development of management/governance structures support innovations, overseeing the development of proposals, establishing governance committees/n groups, setting up workforce development programmes, & providing additional funding/facilities' (The Evaluation of the 11 PHC Nursing Innovation Projects p.60) - 'Alliance Leadership Teams – building an alliance as an innovative governance framework built around existing governance arrangements demands trust between members – this takes time, a shared vision, commitment to working in good faith amongst the members & partners' (Evaluations of the BSMC business cases in MidCentral & West Coast DHBs p.109) - Different patients have different needs and different practices have different cultures that support/inhibit achievement of more proactive primary care – in particular 'the delivery of more planned proactive primary care dependent on the extent to which practices reorganized themselves to deliver ARI and could build existing team-based culture' (At Risk Individuals Model of Care: an Evaluation pp.54-62) - 'Poor communication was considered by most participants to be a major barrier to successful implementation

	<ul style="list-style-type: none"> ➤ A lack of analytics and its impact on demonstrating change <ul style="list-style-type: none"> ○ Need to identify data requirements upfront 	<ul style="list-style-type: none"> ➤ Hospital use and costs – not the only impact measures of interest 	<ul style="list-style-type: none"> ➤ Evaluations often constrained by timeframe – innovations may be evaluated too early and for too shorter time – unable to show large gains hoped for <ul style="list-style-type: none"> ○ Formative & process evaluation is important as well as quantitative outcome evaluation
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<ul style="list-style-type: none"> - individual medical health . . . difficulties arise when providers have to prioritise population health strat with a population who have high individualised medical needs' (Improving Māori Health and Reducing Inequalities between Māori and Non- Māori p.18) - 'A community model of care facilitated by the PHOs was described as a positive development across th providers interviewed. This model consisted of several elements, including remaining small enough to the local community which enabled managers and treatment providers to remain aware and responsive locally defined needs.' (Evaluation of the Implementation and Immediate Outcomes of the PHCS: The experiences of Pacific PHOs & Pacific Populations p.5) - 'Diversity of PHOs an impediment to being able to make progress with implementing the PHCS – lack c about role and functions of PHOs, together with limited leverage over the allocation of funding to provi leaves PHOs struggling to develop and extend frontline primary care provision' (Where next for prima organisations in New Zealand? p.4) - "There is significant variation between PHOs in terms of size, governance & management arrangements & responsibilities. Key roles and responsibilities need to be clearly allocated to PHOs and their structu reviewed to ensure they can fulfil these functions appropriately.' (Evaluation of the PHCS for the period 2010: Final report p.11) 	<ul style="list-style-type: none"> - 'Collection of good quality data problematic' (National Demonstration Integrated Care Pilot Projects p.1) - 'Reliance on 'goodwill' to access data' (National Demonstration Integrated Care Pilot Projects p.69) - 'Close attention to evaluation requirements, including data tracking and management, is important for evaluation' (Kaipara Care – Dargaville' project - National Demonstration Integrated Care Pilot Projects p.13) - 'Lack of data precluded full cost-effectiveness analyses of the National Demonstration Projects' (Nation: Demonstration Integrated Care Pilot Projects p.61) 	<ul style="list-style-type: none"> - 'Lack of association between change initiatives & reduction in emergency hospital admissions over cou business cases evaluated' (Evaluations of the BSMC business cases in MidCentral & West Coast DHBs) - 'West Coast Business Case Buller (Westport) aimed to reduce ASH rates – no evident consistent downw trend for population as a whole (although may be some downward trend for Māori)' (p.13); 'MidCentral Case aimed to reduce avoidable ED presentation rates by 30% - ED presentation rates not decreased t increase may have slowed' and 'aimed to reduce ASH admissions for over 65 year olds by 20% - no evi trend on this measure' (p.14 & pp.46-57) - 'ASH & ED presentation rates do not capture other important outcomes such as improved patient exper care' (Evaluations of the BSMC business cases in MidCentral & West Coast DHBs p.64) - 'The changes put in place by the Localities initiative were collectively expected to shift the balance of c the hospital to the community . . . However, given difficulties of attribution of high level changes in the one specific initiative, evaluative attention directed to the nature of group commitments to integration ' (Evaluation of Local Networks designed to achieve more integrated care, forthcoming) 	<ul style="list-style-type: none"> - 'Constrained evaluation timeframe' (National Demonstration Integrated Care Pilot Projects p.6 & p.65) - 'Formative & process evaluation is important as well as quantitative outcome evaluation' (New Traditio - National Demonstration Integrated Care Pilot Projects p.41) & (Kaipara Care – Dargaville - National Demonstration Integrated Care Pilot Projects p.52) & (Asthma Clinical Pathway for Children and Young National Demonstration Integrated Care Pilot Projects p.54) & (Mental Health Integration Task Force: Li Attachment Shared Care - National Demonstration Integrated Care Pilot Projects p.56) - 'BSMC evaluations undertaken at a very early phase in the ongoing development of the business cases' (Evaluations of the BSMC business cases in MidCentral & West Coast DHBs p.16) - 'Given timeframe for data collection and analysis – included process measures that focussed on how th initiative was implemented' (Evaluations of the BSMC business cases in MidCentral & West Coast DHBs p.16) - 'Evaluation of such large scale change needs to begin earlier (to establish baseline data) and continue :
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Appendix 2: Primary care in New Zealand – trends

National funding in 2017/18 and 2018/19

- Vote Health – the main source of funding for NZ’s health and disability system – totalled \$18.225bn in 2018/19,¹³² and typically makes up around a fifth of total government expenditure.
 - o 72.6% of this goes to the 20 DHBs for services in their region (including hospital care, most aged care, mental health, primary care services, the combined pharmaceuticals budget and some public health services)
 - o The rest pays for services funded at a national level by the Ministry of Health, for the Ministry of Health itself and for capital expenditure.¹³²
- Primary care is funded by DHBs so does not appear as a separate line in national budget estimates; however the latest MoH briefing to the incoming minister estimates that around 5% of Vote Health goes to primary health care (\$920m in 2017/18).¹⁰
- The 2018 Budget provides for i) additional primary health care funding in 2018/19 of \$58.608m and \$100m in out-years, to increase the allocation of VLCA levels of funding to around 500,000 more New Zealanders; ii) a further \$2.858m in 2018/19 and \$4.9m in out-years to extend free services to 13-year-olds; and iii) development of a free annual health check for the elderly programme for future years.¹³²

Funding for primary care over time

- It is not possible to track the funding allocated to primary care services over time; however, there are indications that funding for these services may have fallen:
 - o A 2017 Treasury report comparing DHB provider-arm (hospitals) versus external (for example, primary care) expenditure over time found that at an aggregate level DHBs’ external provider expenditure has been falling slightly as a percentage of the total expenditure (and below the level planned), indicating ‘a gradual shift toward a greater proportion of funding committed to hospital services’¹³³ (p.23).
 - o Analysis by GPNZ found that subsidies to support service user access to first-contact primary health care services had fallen each year from 4.51% of Vote Health in 2008/09 to a low of 4.24% in 2015/16.¹¹

How are general practices funded?

- PHOs receive capitation funding for their GP members’ enrolled populations and then likely fund GPs on the same basis, while GPs also receive fee-for-service co-payments from their patients. These fees are set by each practice, although the

rate of annual increase is regulated at a national level and increases above an annual amount can be reviewed by the DHB.

- First Contact funding typically accounts for around half of a general practice's revenue, although this can vary considerably.¹² Co-payments from patients constitute half (or more than half) of revenue for many general practices.¹²
- Around 30% of practices are Very-Low-Cost-Access (VLCA) practices. These practices provide services to high needs enrolled populations, and receive first contact funding and a VLCA top-up provided that the practices agree to maintain low patient fees (currently zero fees for children 0-12 years, \$12 maximum for children aged 13-17 years and \$18 maximum for adults aged 18 and over).¹³⁴
- A 2015 report from the Primary Care Working Group on General Practice Sustainability (reporting to the Minister of Health) described how the balance between the two sources of GP income might have changed over time, stating that *'Capitation rates for general practice have not increased in line with cost of inflation for the past decade. This means that the proportion of general practice funded by Government is decreasing and the proportion funded by patients via co-payments is increasing'* (p.7).

How have patient co-payments changed?

- The Ministry of Health collect data on the schedule of fees charged to patients for standard consultations (although these estimates may differ from the actual fees paid due to Community Services Card or High Use Health Card discounts or other price adjustments).¹⁵ Only fees for adults are presented here due to data issues for those aged 13-17.
- Analysis of scheduled fees data from MoH shows that in 2016 the average adult fee in a VLCA practice ranged from \$14.26 to \$15.53 across age-groups, compared to between \$38.39 and \$41.47 in a non-VLCA practice. Between 2008 and 2016;
 - o Adult fees in VLCA practices declined by between \$3.47 and \$3.62 in 2016 dollars, representing a real decrease of 18.5% to 19.7% on average across the age groups.
 - o Conversely in non-VLCA practices, adult fees rose by between \$6.49 and \$8.20 per visit in 2016 dollars, representing an average increase of between 19.8% and 24.7% across age groups.
 - o Fees have risen most for adults of prime working age (25-64) enrolled in non-VLCA practices, who experienced real increases of 24.5-24.7%.

Are all New Zealanders able to access primary care services?

- Evaluations of the Primary Health Care Strategy suggest evidence of reduced costs and increased consultation numbers between 2001 and 2005, particularly for

groups that received priority in the rollout of new funding such as those aged 65 and over, and those enrolled in practices with high-needs populations.¹³⁵⁻¹³⁸

- However, recent reports suggest that inequities are ongoing, particularly for women, Māori and Pacific peoples and those living in the most deprived areas (quintile 5). The latest NZ Health Survey data for 2016/17 shows that¹⁶:
 - o In total, 28.1% of New Zealand adults reported having experienced one or more types of unmet need for primary health care in the past 12 months. This figure was higher for Māori (37.5%), for those living in the most deprived neighbourhoods (33.5%), and some age groups (25-34, 35-44) and in a number of groups the reported figures were higher among women.
 - o Inability to get an appointment at a usual medical centre within 24 hours is the most common reason for lack of access, at 18.4% of the population – the highest rates being among women aged 45-54 (26.5%) and 35-44 (23.9%), and Māori women (25.0%).
 - o Unmet need for GP care due to cost was reported by 14.3% of the population – with the highest rates among Māori women (25.0%), Pacific women (23.6%), women living in the most deprived neighbourhoods (23.9%) and women aged 25-34 (26.8%).
 - o There were also high rates of unfilled prescriptions due to cost, particularly for Māori, Pacific and those in quintile 5 compared to the total population.

Has the number of GP and nurse consultations increased?

- The Ministry of Health collects aggregate data from general practices on the number of GP and practice nurse consultations by DHB and PHO (although the dataset we have does not include the overall population for each DHB/PHO, or the number of unique patients, and so analysis of changes in consultation numbers across a population are not possible, for example to look at whether any increase reflects more visits among more frequent users, or higher use of services among a broad cohort of the population).¹³
- Looking at the data on visits to the GP, this shows that between 2008 and 2016:
 - o The total number of GP consultations rose from around 11.8m in 2008 to around 13.2m in 2016 – an increase in raw visit count of nearly 12%.
 - o GP visits increased more for certain age groups, particularly those aged 5-14 years (since July 2015, children aged under 13 have been able to receive free care) and 65+ (with smaller increases among those aged 15-24 and 25-44, and a small decrease for those under the age of 5).

- By ethnicity, growth in GP consultations was higher for Māori, Pacific and 'other' groups (27%, 29% and 38% respectively) compared to European New Zealanders (5%).
- Similarly, the data for practice nurse visits shows that between 2008 and 2016:
 - The total number of practice nurse visits rose from around 1.4m in 2008 to around 3.3m in 2016 – an increase of nearly 132%.
 - Growth in nurse consultations was particularly high for those aged 5-14 years (191%) and lowest for those aged 25-44 years (113%).
 - By ethnicity, those individuals in the 'other' group experienced a 199% increase in practice nurse visits, with Pacific people experiencing the lowest increase at 81%.
- In addition to changes in access and health need, the growth in consultation numbers is likely to be influenced by demographic factors. Between June 2008 and June 2016, the estimated resident population grew 10.2%.¹⁴ Over the same period, the population aged 65 and over grew from 12.6% of the estimated resident population (535,000) to 14.9% (698,400). A growing elderly population bears special relevance to understanding trends in consultation numbers, because this group is most likely to have ongoing and complex health need.⁹

Who makes up the primary care workforce?

- The latest workforce survey from the Royal New Zealand College of General Practitioners¹⁷ (with a response rate of 52%) found that in 2017:
 - Around half of GP members who responded were aged 52 or over, just over half were female (with females outnumbering males in the younger age groups) and a disproportionately low number identified as Māori or Pacific GPs compared to the general population.
 - Over a third were practice owners or partners (with ownership more likely among males and with increasing age), and just under half were long-term employees or contractors.
 - 72% worked in a practice owned by GPs. In urban areas, the next most common ownership model was corporate ownership (8%) whereas in rural areas the next most common was community, trust or charity ownership (10%). Practices owned by a trust/charity were more likely to have smaller enrolled patient numbers (<9000), whereas practices under corporate ownership were more likely than respondents in all practices to have enrolled populations of more than 9000. Other practice types included those fully/partially owned by: a PHO or GP organisation (4%), a DHB (1%), an iwi (1%), a university (2%) (and 'other', 6%).
 - 27% intended to retire within the next five years – almost double the figure in the 2014 survey – and 47% intended to retire within the next 10 years

(with many having already reduced their working hours or planning to do so). The proportion intending to retire within the next five years varied by DHB, ranging from 15.1% to 37.5%.

- Almost a quarter felt burnt out, with the following groups more likely to report feeling burnt out: those aged 40-64, male, working full time, practice owners or partners, or reporting a poor work-life balance. Just over half said they would recommend a career in general practice.
- How about nurses?
 - In 2014-15, 6,870 nurses were employed in a primary care/community setting – around 13.6% of the total practising nurse workforce (consisting of registered nurses, enrolled nurses and nurse practitioners).
 - In 2015, there were 142 practising Nurse Practitioners (NPs) across New Zealand and around 39% of these were employed in primary care/community settings.¹³⁹

What are patients' experiences of care like?

- Data from the 2016/17 NZ Health Survey asking adults about their last visit to a GP shows that respondents were significantly less likely than in the 2011/12 survey to report definite confidence and trust in their GP and that their GP was good at explaining health conditions and treatments to them.
- A summary report on the first year of the Health Quality and Safety Commission primary care patient experience survey (2015/16), trialled across five PHOs and with responses from more than 150 practices and just under 12,500 patients, reported;
 - Positive results for waits inside GP surgeries, and for respect and kindness
 - Issues around continuity and coordination of care, and communication around medication.
 - A mixed picture with respect to interactions between primary care and other parts of the health sector.
 - Partnership – patients' involvement in their own care – was the weakest domain of patient experience.
 - Marked ethnic disparities in some areas (for example, cost as a barrier and coordination of care). Younger age groups and those with a mental health diagnosis routinely reporting less positive experiences.¹⁸

Appendix 3: The international evidence base for medical home type models

The HCH has its origins in the USA. Models with similar characteristics are also being trialled in England, Australia and Canada; however, the focus and combination of elements differs between countries. Often the models are too new to have been subject to rigorous evaluation, or to show definite improvements in outcomes. Here we summarise international experiences and emerging evidence.

In the USA, a 2007 document set out the joint principles of the 'patient-centred medical home' model (PCMH) – a model designed to be patient-centered, comprehensive, co-ordinated, accessible and committed to quality and safety. Since 2007 it has spread across the US, with an estimated 45% of family physicians now practicing within a PCMH¹⁴⁰ although the model implemented varies widely¹⁴¹. The latest annually published systematic review of PCMH research found that it 'has demonstrated improved outcomes in terms of quality, cost and utilization, but not uniformly'¹⁴⁰ (p.4). In general, a positive impact was observed when looking at cost (though not always with statistical significance) and for the limited number of studies commenting on patient satisfaction. Results on quality showed either a trend towards positive results or no change (with only a few statistically significant positive results) and there were mixed results in terms of utilisation.

The Group Health medical home model, on which the NZ HCH is (loosely) based, reported positive outcomes in terms of patient experience, clinician burnout, emergency department visits and inpatient stays, improved clinical quality and cost (with a return on investment of 1.5:1).¹¹⁸ Downs (2017)⁴ notes a number of factors that might account for differing results between Group Health and the NZ HCH model, including (p.48);

- *'Delivery system: Group Health was a closed and highly integrated model. In other words, for care to be covered, patients had to use services provided by providers who work for Group Health. New Zealand's general practice clinicians are independent practices and do not work for DHBs. Primary and secondary care providers have different incentives in New Zealand.*
- *Scale: New Zealand's practices are relatively small compared to the scale of the Group Health model which can more easily share resources across large populations. Consolidation of New Zealand's small general practices should facilitate the objectives of the HCH model.*
- *Financial risk: Providers in Group Health and New Zealand's HCH have different motivations. Group Health was both a provider and a health insurer. It had insurance risk for all patient care including hospital care. While general practices in New Zealand may work hard to ensure that their patients get appropriate care, they do not bear risk for service utilisation outside of primary care.*
- *Use of health care team: New Zealand's HCH has a strong reliance on GPs and may not have leveraged all the benefits of team-based care. Team-based care can significantly free up GPs' time to address complex patients who are more likely to be*

hospitalised. While the Group Health prototype team had around 30 per cent FTE that were GPs, that figure is closer to 50 per cent in the New Zealand model.

- *Stages of implementation: The EY evaluation^v included a number of HCH practices in New Zealand 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.'*

In England, one of the new models of care being trialled in more than 200 sites around the country is the 'Primary care home' (PCH), launched in 2016.¹⁴³ A key focus is on staff from general practice and other services (including social care) working together to deliver joined-up care. A recent report¹⁴³ found that some PCH test sites are beginning to show positive outcomes in terms of reduced emergency department attendances and prescribing costs, improved staff experience and quicker access to a GP (see also Kumpunen et al. (2017)¹⁴⁴ for a discussion of enablers and reflections for future sites).

In Australia, a stage one trial of Health Care Homes funded by the Australian Government is running until November 2019. The aim is to provide 'better coordinated and more flexible care' for people with chronic and complex conditions, and includes elements such as shared care plans, bundled payments and team-based care.¹⁴⁵ An evaluation is underway, due to report early findings in 2019.¹⁴⁶

^v Ernst & Young, Evaluation of the New Zealand Health Care Home, 2010-2016. Auckland: Ernst & Young, 2017.

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