

Learning from  
promising primary  
care practice models  
for the USA



# Strengthening primary care in the USA to improve health: Learning from high and middle income countries

Training and Research Support Centre



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**November 2014**

Support for this research was provided by a grant awarded by Charities Aid Foundation of America from the Robert Wood Johnson Foundation Donor-Advised Fund





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# Table of Contents

<b>Key points</b> .....	<b>1</b>
<b>Improving health through primary care</b> .....	<b>2</b>
<b>Challenges and opportunities in primary care in the USA</b> .....	<b>5</b>
<b>Promising practice in primary care in HMICs</b> .....	<b>7</b>
<b>Communities and population health at the centre of primary care</b> .....	<b>9</b>
1a: Participatory approaches to population health in Chile .....	10
1b: Patient participation, health champions and healthwatches in UK .....	11
1c: Co-ordinating PC and population health in the Netherlands .....	12
<b>Reaching out to and equitably including all into PC</b> .....	<b>13</b>
2a: Enrolment and referral continuity in England .....	14
2b: 24/7 access to care through PC co-operatives in the Netherlands.....	15
<b>Reorganising and expanding capacities and financing for comprehensive PC</b> .....	<b>16</b>
3a: Interprofessional primary care teams in Ontario, Canada .....	17
3b: Recognition and training of expert generalist GPs in UK .....	18
3c: Bundled payments and care groups in the Netherlands .....	19
3d: Moving from fee for service to blended payments in Ontario .....	20
3e: Incentives, quality circles and peer review in the Netherlands .....	21
<b>Supporting information and learning from practice</b> .....	<b>22</b>
4a: Information systems for reporting and reviewing PC in the UK .....	23
4b: Innovation circles and communities of practice in Chile .....	24
<b>PC - proactive, participatory and people centred to improve population health</b> .....	<b>25</b>
<b>Adapting promising practice in PC in the USA</b> .....	<b>26</b>
<b>Endnotes</b> .....	<b>31</b>

# Key points

The aims and definition of primary care (PC) differ across countries, but generally include first contact and accessible care where the majority of the population's physical, mental, social and behavioural health issues are resolved. The mismatch between investment and health outcomes in the USA has raised interest in learning from approaches to PC in other high- and middle-income countries (HMICs) that have improved health and value for money. In 2014, these findings were drawn from desk reviews and country case studies of Canada (Ontario and Quebec), Chile, England, UK, and the Netherlands, and reviewed at an international meeting. This paper presents the findings and recommendations.

Societal demand for improved health outcomes and access to care and reforms currently underway in the USA opens a window of opportunity to address shortfalls in access, continuity, comprehensiveness and quality of PC and the workforce, financing and social issues that contribute to poor outcomes. A review of the features of PC in HMICs highlighted improvements achieved in value for money through:

1. focusing on proactive, comprehensive, participatory approaches that promote population health;
2. reaching out to and equitably including all in the catchment population into PC;
3. reorganising capacities and financing for comprehensive, co-ordinated PC; and
4. supporting innovation and learning from practice.

Examples of promising practice from the HMICs demonstrate these features:

- Participatory approaches to population health in Chile; patient participation, health champions and healthwatches in England; and co-ordination between PC and population health in the Netherlands that support participatory and population health approaches;
- Enrolment/empanelment/registration and PC co-ordination of referral in England and 24/7 access to care through PC co-operatives in the Netherlands to support inclusion and access;
- Interprofessional PC teams and moving from fee for service to blended payments in Ontario; training of expert generalist general practitioners (GPs) in England; and bundled payments, care groups, and quality circles in the Netherlands, supporting comprehensive, co-ordinated PC; and
- Information systems in the UK to support improvements within PC and communities of practice and innovation circles in Chile to support innovation, accountability and learning from practice.

This learning suggests that a response to demand in the USA for improved health outcomes could:

1. **Shift the paradigm towards a PC approach that promotes the widest level of population health.**
2. **Reorganise the models, roles, competencies and resources to deliver this approach.**
3. **Build information systems, communication and a consistent community of practice, learning and influence to sustain and be accountable for the approach.**

## **Shift the paradigm to promote population health:**

The lessons from other HMICs suggest organising proactive PC services that are oriented to improving health outcomes in both communities *and* individuals that are comprehensive, participatory and integrated with other services and activities to build a culture of health and to improve population health. The concept of an Accountable Health Community Collaborative is proposed as one vehicle within which to plan and co-ordinate holistic approaches, to assess family and population health and to enhance health literacy and social roles.

## **Reorganise and expand supportive models, competencies and financing:**

The learning from HMICs points to gains in value for money from introducing or scaling up various measures: enrolment/empanelment with a defined PC provider; interprofessional and team practice; co-operation across PC providers to share resources and support access; and shifting to blended payments, capitation and bundled payments. The Centers for Medicare and Medicaid Services (CMS) could apply, expand and communicate the benefit of these measures. They may also be integrated into existing sites of innovation or introduced as voluntary options, with incentives for uptake and monitoring of outcomes.

## **Build informed practice and a community of practice and learning:**

Information systems need to gather, organise and report on evidence in ways that support the above improvements, with supportive IT that does not burden PC providers. Meso-level processes and IT platforms can build communities of practice to nourish and exchange local learning from practice. Learning and innovation circles can build shared evidence and support for new approaches and continuous improvements amongst key actors.

Many of these measures, while they may be implemented incrementally, are inter-related and mutually reinforcing. Applying them to improve population health calls for sustained learning, improvement and advocacy across PC stakeholders and practitioners, to build a momentum for the reforms and engage within health systems and public debates on the vision, goals, mindsets and evidence that support them.

# Improving health through primary care

There is no single definition of primary care (PC) in health systems. What it aims to do, how it is organised, what it includes and seeks to achieve differs across countries, cultures and contexts, and have

changed over time. However, some common desired attributes of primary care have been raised in different settings, shown in the box below.

## Box 1: Common attributes of primary care

1. Provides first contact, accessible healthcare services, where demands are clarified and information, reassurance or advice are given, diagnoses made and where most health issues should be resolved.
2. Responds to social, cultural and economic norms and contexts.
3. Addresses the population's main physical, mental and social health concerns, integrating their biomedical, psychological and social dimensions.
4. Puts people at the centre of service delivery within a family and community orientation.
5. Is based on sound knowledge of the community and patients and uses population health and clinical guidelines and evidence.
6. Provides an integrated, co-ordinated, comprehensive approach to population health, health promotion, disease prevention, personal care and rehabilitation.
7. Includes different practice sizes and levels of integration with social and community services.
8. Supports continuity of care, guides and supports referral to other levels of the system and other services and engages in intersectoral collaboration.
9. Builds a sustained partnership between people and patients and a multidisciplinary collaborative team of health workers, including community health workers (CHWs).
10. Involves effective organisation, use and sharing of information for ongoing improvement.<sup>1</sup>

While these attributes are variably and differently implemented, they locate PC as a core component of the Primary Health Care (PHC) approach, anchored in values that put people at the centre of service delivery, through measures that organise population health, prevention and care according to need and that involve people in decisions and actions on their health.<sup>2</sup>

The USA spends more with poorer health outcomes than in other HMICs.<sup>3</sup> Recognition of this mismatch between investment and health outcomes and the health reforms

underway has raised interest in learning from approaches to PC in other HMICs that have achieved improved health outcomes at lower levels of health expenditure.

This is not simply a matter of containing costs. Indeed, policies that focus *purely* on short-term cost containment risk damaging public trust and provider confidence in PC. They can also undermine the measures for access, quality and other system improvements that lead to a slower growth in health expenditure and that yield more sustained health achievements.

Responding to a societal demand for accountability means improving *value for money* in PC and the health benefits for the resources applied, in terms of concomitant gains in health and healthcare outcomes, in client and provider satisfaction, in quality of care, in lower levels of cost escalation and in improved protection against impoverishment from healthcare spending.<sup>4</sup>

We understand *population health* outcomes as the level and distribution of health outcomes in the population (or group of people) and their determinants, implying responses from, but not limited to, the health sector.<sup>5</sup>

**This raises the question: What features of PC practice and service delivery have contributed to improved value for money and outcomes in health, in health equity and in access to and coverage of health services, particularly in the context of rising chronic disease burdens, multimorbidity, different population health needs and persistent inequalities in health?**

To answer this, as outlined in *Figure 1*,<sup>6</sup> we need to explore the content and organisation of PC services and, beyond the facility walls, to understand the

contribution of people's roles and responsibilities in PC and how services are involving individuals, families and communities. We need to understand the socioeconomic contexts, policies, laws, organisation and financing of the wider health system and the leadership, capacities and information that play a role in supporting and sustaining improvements in PC.

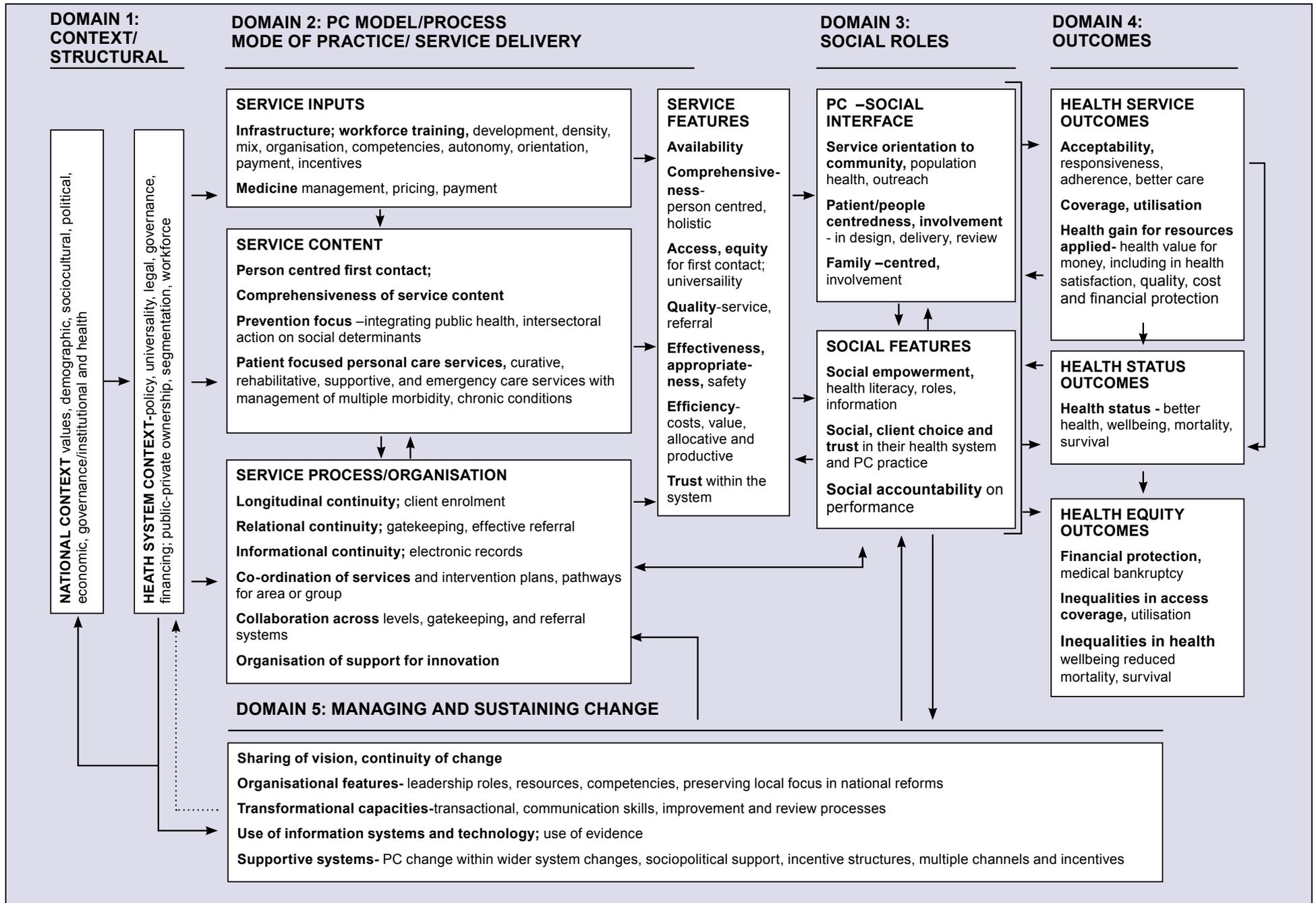


To contribute to this learning, in 2014 TARSC has implemented the project 'Learning from promising primary care practice models for the USA', working with country teams on the case studies, with support from RWJF. The project sought to identify and describe promising PC approaches in HMICs to inform dialogue on PC reforms in the USA.

This paper summarises the key findings from the project,<sup>7</sup> from desk reviews<sup>8</sup> and country case studies from Canada (Ontario and Quebec), Chile, England United Kingdom and the Netherlands,<sup>9</sup> as countries that showed evidence of improved health outcomes from PC in areas relevant to the key challenges and opportunities being faced in the USA.

It presents insights on learning from HMICs that may be adapted in the USA, drawing on evidence from United Nations and other databases, from several hundred peer reviewed published papers and official government documents and from key informant interviews.<sup>10</sup> We suggest possible areas of follow-up, drawn from review of the evidence, including at an international convening<sup>11</sup>.

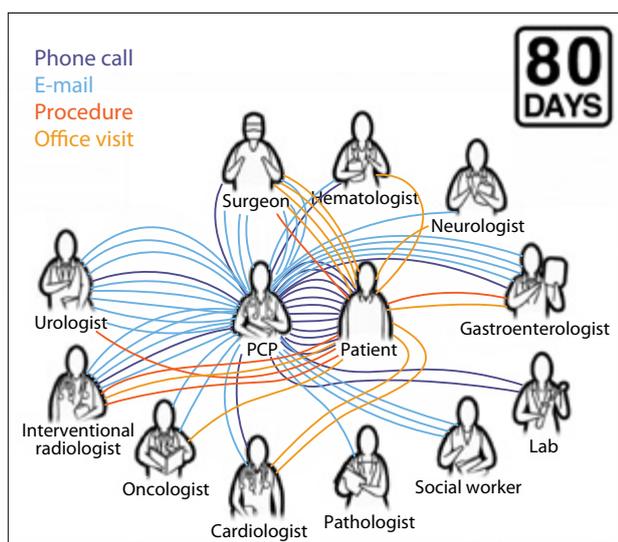
# Conceptual framework for analysis of the role of PC



# Challenges and opportunities in primary care in the USA

There is much innovative practice in the American health system. There is, however, also a widely recognised spending and quality crisis, with higher levels of avoidable hospital admissions and poorer access, efficiency, equity and health outcomes relative to other HMICs.<sup>12</sup> Constraints in access, continuity, comprehensiveness, quality of and participation in PC in the USA contribute to poor outcomes.<sup>13</sup> Low- and middle-income and minority households have poorer or delayed access to care, are less able to afford care and have worse health outcomes.<sup>14</sup>

While there is a wide range of PC models in the USA, people are not as a norm registered with a defined primary care practice (PCP), and PCPs, especially small solo practices without shared infrastructure, do not provide 24-hour access 7 days a week (termed 24/7 access).



#### Ambulatory Care Coordination for One Patient.

Over an 80-day period, 12 clinicians were involved in the care of the patient. The patient's primary care physician (PCP) communicated with the other clinicians 40 times (32 e-mails and 8 phone calls) and with the patient (or his wife) 12 times. The patient underwent 5 procedures and had 11 office visits (none of them with his PCP). (An animated "instant replay" is available with the full text of this article at NEJM.org.)

Source: From Instant Replay — A Quarterback's View of Care Coordination, Press MJ. N Engl J Med;371:489-491 Copyright © 2014 Massachusetts Medical Society Reprinted with permission from Massachusetts Medical Society

Generally, there is weak continuity of care and follow-up - between PCPs, individuals, families and communities - and poor information flow between PCPs and communities. This has consequences in low coverage and late uptake of PC services<sup>15</sup>

PC services in the USA are often not sufficiently accessible, comprehensive or co-ordinated with other services to prevent and manage the multiple health needs of different population groups, such as older people, youth, minority groups, with gaps in areas such as mental and dental health and in follow up of emergency care. As a norm, they do not co-ordinate with wider public health, social, food, housing, transport and other services affecting health, nor do they have a role in organising and getting report back on referral to other levels of care. PCPs have to make extraordinary efforts to co-ordinate the array of providers for patient care, exemplified in *Figure 2*.

People have low trust in and often bypass PC services, engaging a confusing array of providers. This often leads to inappropriate use of hospital and emergency services, duplication of testing and treatment and poor communication and information flow between services, at high cost for both patients and services.<sup>16</sup>

There are challenges in providing the workforce roles, competencies and leadership in PC to address health needs. This is particularly so in terms of the supply, orientation, training and continuing medical education of PC personnel, their recognition, fair pay and career satisfaction, and in the organisation of interprofessional teams of PC physicians, nurse practitioners (NPs), physician assistants (PAs), nurses, social workers, medical assistants and lay and community health workers (CHWs).<sup>17</sup>

Current fee-for-service (FFS) payments neither encourage delivery of more comprehensive care, support interprofessional teams and non-clinical inputs for community health and prevention, nor do they incentivise quality improvements. Electronic health/medical records

(EMRs) are not currently designed to support team-based, comprehensive PC. The health information exchange (HIE) is in its infancy and there is no national HIE infrastructure. A focus on service units for billing assists in control of fraud, but does not incentivise or provide an information platform for comprehensive and co-ordinated care.

The current financing forms are making progress in addressing the gap in insurance coverage, but financing is still fragmented across multiple payers with different price structures. There is caution on regulating or setting standards based on value for money, limiting options for controlling costs of treatments and technologies.<sup>18</sup>

For professionals in the system, meeting current administrative and care demands can make it difficult to engage in improvement efforts, especially for less well resourced PCPs. For the public, inadequate communication, trust and involvement in the health system limit access, uptake and patient roles, sustaining perceptions such as ‘more care = better care’.

Recognition of the mismatch between investment and outcomes in the health system in the USA has led to a confluence of political, business, professional and public support for healthcare reform, albeit without a shared national vision of the desired health and PC system to drive the redesign.

The Patient Protection and Affordable Care Act (ACA) has opened opportunities for improving PC, some of which are already advancing, building on innovations such as service models that have redefined the interface between PC, communities and specialty care, on team-based care approaches that have broken traditional hierarchical barriers and on use of information technology and social media to enhance communication and quality of care.<sup>19</sup> The ACA has enabled measures and resources for improved insurance coverage, access and financial protection, for patient-centred and sometimes community-centred PC, for improved quality of care, for prevention and public health activities in PC and for effective reporting and use of health information. Culturally tailored programmes provided in community health-oriented services have been found to reduce inequalities in health, especially when provided through interprofessional teams, supported by community health workers and free at point of care. So too has widening

insurance coverage.<sup>20</sup> The ACA has stimulated new funding resources and mechanisms such as Accountable Care Organisations; supported by a significant and expanding role and coverage of Medicaid and engagement of the CMS on innovations.

This current context opens windows of opportunity for new thinking and practice in the USA to:

- improve health outcomes for the diverse population and social groups through approaches and measures that bring patients and communities into the redesign, with direct engagement on community and population needs, assets and priorities for health;
- review the scope of and approach to PC services and build relationships with other sectors and services that support health;
- promote measures that enhance first access to PC and that build a continuity of care between PC and clients and with referral and other services;
- explore the competencies, roles and organisation of the spread of personnel needed for PC services and for community roles;
- explore and introduce payment arrangements that support population health and that incentivise comprehensive care, 24/7 access, workforce teams and quality improvements;
- improve value for money in medicines and technologies; and to
- improve how information is captured, used and shared to plan, monitor and review reforms.

These opportunities and challenges have provided a lens through which to explore how such issues have been addressed in other HMICs and what measures may have relevance to the USA. In the pluralistic and contested environment in the USA there may be call for a range of models, approaches and institutional investments that can garner support through early change or early returns on investments. At the same time, individual measures need a unifying shared vision and goals for the health system and a community of actors that supports reforms, including to move from demonstration to system scale within and across states.

# Promising practice in primary care in HMICs

This section presents examples of measures and approaches from the four case study countries that address the challenges in and opportunities for improved PC in the USA. *Table 1* shows selected features of these countries relative to the USA. Their political economies and social values have shaped the principles and organisation of their health systems often over many decades. Values of universal entitlement to healthcare as a right, of equal access to the same standard of comprehensive

care for all on the basis of need and of equitable financing, free at the point of use, have underpinned the support for the role of the state or the social bargain between public and private actors that have guided specific approaches. While political and economic conditions are changing in many HMICs, consistent articulation and wide support for these values have provided the longer term stability needed to build strong PC in all four countries.

**Table 1: General and selected PC features of the four case study countries and the USA**

	Canada	Chile	Netherlands	England	USA
People /sq km 2012	4	24	498	265	35
Life expectancy at birth 2012	81	80	81	82	79
GDP / capita 2012 i	52 409	15 245	45 961	38 649	51 755
Service funding	Provincially administered universal public insurance funded service	Public (FONASA) and private (ISAPRES) insurance	Statutory health insurance system with universally mandated national insurance	National health service, funded from general taxation	Mainly private health insurance; tax funded public insurance (Medicaid, Medicare)
Primary care payment	Mostly FFS; some cap, P4P	Public: cap + P4P	Cap + FFS	Cap+ FFS + P4P	Mostly FFS; Limited cap; salary, P4P
Registration with PC	Not normally	Yes in public services	Yes	Yes	No
PC gatekeeping role	No, except some incentives	Yes	Yes	Yes	No, except for some insurance plans
Patient satisfaction (ii) 2012	38%	na	51%	62%	29%

Notes: (i) current US\$ (ii) Patients who indicate the system works well, minor changes needed; na = not available P4P= payment for performance; FFS = Fee for service; Cap= capitation

Source: Loewenson et al. 2014a

A comparative review of the features of improved PC in these countries<sup>21</sup> highlighted a range of features associated with improvements in value for money, that is in health, quality, satisfaction, cost and financial protection, shown in the next subsection for each of the different practices presented.<sup>22</sup> Many of these practices are linked and mutually reinforcing. They may be initiated incrementally, with entry points such as enrolment with a designated PC provider, zero upfront fees for PC and PC co-ordination of access to specialists and other services. They:

**1** **Focus on communities and population health at the centre of PC**, building approaches that address individual and community health and that foster informed roles for individuals and communities in their health. This is being achieved through public information on health, and on insurance and service entitlements, including in social media; through raising levels of health literacy and engaging health champions, expert patients and community health workers to support social roles. Health literate services

have staff trained in cultural and communication competencies. They co-ordinate with other social services, use participatory population and family health mapping to identify and foster joint action on community health and link local community representatives to national processes.

**2** **Reach out to and equitably include all in PC**, making PC an effective entry point for access to and inclusion in the health system. This has been achieved through widening coverage of a defined benefit, free at point of care, supported by mandatory prepayment and pooling of funds to allow for income and risk cross-subsidies.<sup>23</sup> It is supported by public education and active follow-up of underserved groups through community settings and in local languages and by service guidance to ensure and monitor delivery of the benefit. Enrolment is a key measure for first access, with flexibilities to choose a PC practice and provision for portability. Voluntary enrolment can be incentivised, with safeguards against excluding complex cases. Access 24/7 is facilitated by guarantees and shared resources in PC co-operatives located near or within hospitals. Continuity of care has been improved by PC co-ordination of referral, supported by competencies that build public trust in this role.

**3** **Re-organise capacities and financing for comprehensive, co-ordinated PC** A weak interface between population health and individual care undermines both. Promising approaches have used population health evidence, value for money assessment, guidance and peer review to plan, improve and monitor services and to support quality improvement, transparent decision making and accountability, including in relation to health technologies. Comprehensive PC has been delivered by a mix of health and allied professionals in multidisciplinary teams, integrating or co-ordinating with public health and other services, and community settings, like schools. The co-ordination and management of individual and population health in PC has motivated training of 'expert generalist' physicians able to manage the range of roles and decisions required and support for the continuing education and fair pay for the full range of professional and community workers involved, particularly in underserved areas. Improved value for money has been achieved by moving from FFS towards capitation and blended payments, sometimes through a range of voluntary

practice models and payment arrangements, with incentives for and improved incomes from blended arrangements. Bundled payments have enabled more comprehensive and co-ordinated care. Incentives have been used to support quality, access, equity and innovation, with some cautions and provisions for exceptions and regular review.

**4** **Support the information and learning from practice for innovation** PC is a site of innovation with high demands on information, communication and learning. This has been enabled by interoperable information systems across the health system, with automated data capture for reporting and reviewing performance at all levels. PC services have used online communication with clients and telecare for dialogue with specialists. Meso-level IT platforms and forums for peer-to-peer learning have facilitated learning across PC practitioners, building communities of practice and innovation circles to review key areas of reform, with support from new funds from the state and insurers.

The project's detailed case study and technical reports provide information on the practices and supporting systems in HMICs that address these key features of PC. Here we give information on twelve selected examples of such practice and of their impact on value for money, presented in more detail in the project reports and sources cited. These examples are identified as relevant and feasible for adaptation in PC in the USA,<sup>25</sup> indicating in endnotes similar practices in the USA, some of which have been associated with improved coverage and population health.

Some areas of promising practice that are well accepted in other HMIC settings are less easily adapted in the USA and are not included in the twelve examples. While noting the historical experiences and perceptions around them, these practices merit further debate in the USA, given evidence of the advantages they bring for improved health value for money. The PC role in referral continuity, sometimes referred to as 'gatekeeping', is viewed negatively in the USA as restricting choice and access. However there are options for retaining choice, and it brings benefits of continuity and care co-ordination that may help to address the cost escalation from inappropriate use of secondary level and acute emergency care services in the USA. High costs of non-beneficial services in the USA and the rapid pace of technological innovation in healthcare raise the need for discussion of options for evidence-based assessment and guidance on health technology, given the role this has played in fair benefit and value for money in HMICs.<sup>26</sup>

1



## Communities and population health at the centre of primary care

‘People-centred care’ identifies people not only as ‘patients’ playing an informed role in their care, but also as community members preventing ill health, promoting well-being and being represented in fair policy processes that raise public interest in health systems.<sup>27</sup> Problems such as physical inactivity, smoking and harmful alcohol use call for behavioural interventions, but also for integration between PC and other services to address the environments that lead to them. Community services or family members support both uptake and continuity of care.

The following examples show how population and family health approaches and patient and community roles are integrated within community and person-centred approaches to PC.<sup>28</sup>

## 1a: Participatory approaches to population health in Chile

### Key features

- A holistic, biopsychosocial approach integrating physical, social and mental health.
- Participatory tools - genograms, epidemiological maps and budgeting.

### Description

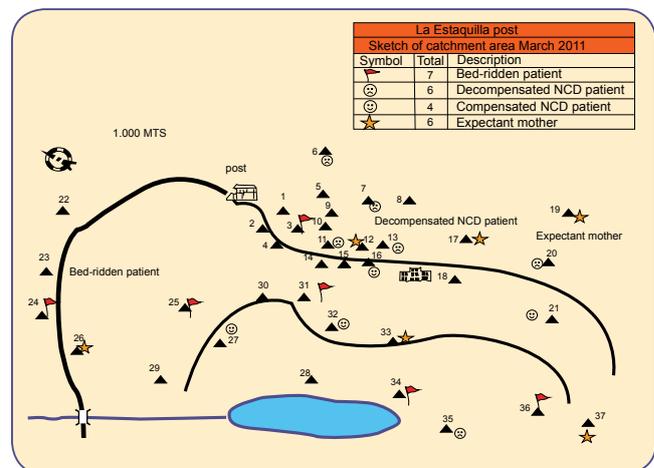
Chile is introducing a **biopsychosocial (BPS)** approach in its public PC health centres to promote holistic and integrated approaches to individual, family and community health. It places people at the centre of decision making and provides performance incentives for integration of social preferences and achievement of participation goals. The health team is trained to work collaboratively with individuals, families and the communities in a territory, using community-based approaches to health promotion, disease prevention and care. The BPS model is guided by a holistic and intercultural understanding of the mental, physical and social aspects of health. It aims to ensure integrated and continuous care that can resolve 90% of health problems at PC level, including chronic conditions and emerging psychosocial problems. It integrates vertical disease programmes within a horizontal life course approach and applies new methods and tools,<sup>29</sup> exemplified below, to assess, screen and promote health in population groups.<sup>30</sup>

A **genogram** is a visual display of a person's family relationships and medical history developed with the family. Through a family health survey and home visits it maps hereditary patterns, psychological factors and identifies needs, problems and risk factors or protectors to be addressed in the BPS.<sup>31</sup>

**Participatory epidemiologic maps** (see example in *Figure 3*<sup>32</sup> adjacent) are developed with families to map households and services and to identify families that need support. The maps are used in meetings to set and evaluate local work plans. Municipal health administrations are required to develop health plans using these maps and community views.<sup>33</sup>

**Citizen's dialogues** and **participatory budgeting**, initiated in 2000, are now regularly underway in over 40 municipalities. People discuss and prioritise health needs and budget allocations, building dialogue with other social actors. Community delegates are elected and trained to support effective engagement, working with health teams and other public institutions. They convene public meetings to gather ideas and present proposals and projects that they then vote on.

**Figure 3: The La Estaquilla Rural Post's epidemiological map, Chile**



Source: Ministerio de Salud 2012, reproduced under open license

### Conditions for introducing, scaling up and sustaining the practice

Chile's shift from a biomedical approach grew within renewed emphasis on PC in the 1990s. A 1995 PC Health Law set the framework for municipal PC. By 2005, the family health centre model was established and family health plans used by workforce teams to define and implement services for different groups in a *...life cycle approach ... [with] integral activities where the rest of the team participates*.<sup>34</sup> Municipalities have a duty to build PC competencies to deliver the BPS, and Ministry of Health gives guidance to, evaluates, grades and certifies the competencies.<sup>35</sup>

### Evidence of impact on key areas of value for money<sup>36</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Reduced infant mortality from acute respiratory infections	Increased home/preventive visits and enrolment, especially in vulnerable groups			Reduced costly hospital admission for hypertension and diabetes	Reduced income differences in service uptake. 10% fall in out of pocket spending 2000-11

### Additional information:

1. Subsecretaría de Redes Asistenciales website - [http://web.minsal.cl/subs\\_de\\_redes\\_asistenciales](http://web.minsal.cl/subs_de_redes_asistenciales)
2. Frenz et al. (2014) 'Learning from Promising Primary Care Practice Models for the USA: Country Case Study Chile', Escuela de Salud Pública, Facultad de Medicina Universidad de Chile: Santiago, TARSC: August 2014.

## 1b: Patient participation, health champions and healthwatches in UK

### Key features

- Patient participation groups involve the public in decisions about PC services.
- Health champions are community volunteers who facilitate community action in health and work with local PC staff to ensure PC services address people's health needs.
- Healthwatches organise and communicate people's experience of PC to monitor and shape local services and raise issues at regional and national levels.

### Description

To improve services, public and patient involvement are actively encouraged in the UK.<sup>37</sup> General practices obtain supplementary enhanced service funding from the National Health Service (NHS) to set up **patient participation groups** (PPGs). PPGs obtain views of patients and carers and give feedback from the practice population through virtual and face-to-face meetings. The practice and PPG review the feedback, together with patient and care quality surveys and information from suggestion boxes, and agree on prioritised improvements. The practice reports to the public and the PPG on actions taken and achievements against goals.<sup>38</sup>

**Practice health champions** are local community volunteers, some from groups such as young mothers, youth, people with chronic diseases, older people or newly settled migrants. They train and facilitate community-level actions to transform health and well-being in their communities. They motivate people to get involved in healthy social activities, create groups to meet local needs, direct people to relevant support and services and work with PC staff to improve services. Health champions and practice staff meet regularly to discuss shared priorities and work, combining their respective knowledge, experience and the practice resources. They are reported to have improved input to health system decisions, set up social and support groups for

young mothers or people with chronic conditions, improved individual and community literacy on prevention initiatives and supported the use of the appointment guides and other practice tools, especially for those for whom English is a second language.<sup>39</sup>

### Healthwatch England

is the national consumer champion for health and social care. It has statutory powers to ensure the voice of the consumer is strengthened and heard by those who commission, deliver and regulate health and care services, with a network of 148 local Healthwatches across



England to provide insight into people's experiences of health and social care. In 2013, funded by local authorities, a local Healthwatch was set up in every local authority area drawing on individual or consortia of voluntary organisations with their own staff and volunteers. These have a statutory place on local Health and Wellbeing boards that link NHS and local authority decision making and services. They gather and communicate public views and experiences of the health system, promote and support people's involvement in service commissioning, provision and review and support informed choice in communities. They make their views and recommendations for any special investigations known to Healthwatch England and to the Care Quality Commission.<sup>40</sup>

### Conditions for introducing, scaling up and sustaining the practice

Legal provisions and statutory funding from the NHS and local authorities and from charities have facilitated these mechanisms.<sup>41</sup> They build on a history of voluntary sector activity and public forums in the NHS from local to national level.

### Evidence of impact on key areas of value for money<sup>42</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Improved health literacy; reduced complications mortality	Improved adherence to treatment	Service design responsive to public input	Service, quality, waiting time improvements	Lower emergency care costs	Improved service uptake in disadvantaged groups

### Additional information:

1. Healthwatch UK website at <http://www.healthwatch.co.uk/>
2. Health Champions website at <http://www.altogetherbetter.org.uk/health-champions>
3. Regional Voices for better health <http://www.regionalvoices.org/>
4. Pennington A, Whitehead M (2014) 'Learning from promising primary care practice models for the USA: Country case study UK: with a focus on England', University of Liverpool: Liverpool, TARSC: August 2014

## 1c: Co-ordinating PC and population health in the Netherlands

### Key features

- Population health is co-ordinated through a network of public health service organisations covering all municipalities that use population health evidence and closely links with PC and with a range of social and community health services within population health frameworks.
- Community health centres have adopted community and patient-centred models, including outreach to specific social groups and PC practices network to support holistic care.

### Description

Dutch PC services are largely provided by GPs co-ordinating care in collaboration with other professionals and by local government social and public health services through 25 public health service organisations (termed GGDs), covering all municipalities. Community-oriented models are increasingly used, particularly to address chronic conditions. Community Health Centres (CHCs), first established in the 1970s, have added to other collaborative and co-ordinated PC models, including care chains, networks and 'care groups'. CHCs are multidisciplinary, combining family practice, nursing and home care, pharmaceutical, paramedical, psychological, child, social and mental healthcare and diagnostic facilities. They are located in neighbourhoods and may also group practices across locations. CHC teams meet to support follow-up on specific patient groups, such as people with diabetes or young children. Care groups were introduced in 2007 with the bundled payment system (described later) to combine the disciplines and services needed for population-focused prevention and care for people with different chronic conditions. An estimated 78% of general practitioners are member of a care group.<sup>43</sup>

GGDs collect and develop community demographic profiles and co-ordinate plans around local population health priorities. They monitor social developments and population health impacts of services. They interface with PC, linking community prevention and public health programmes with individual care, providing psychosocial

support, youth health services, prenatal care, care for older or vulnerable people and community outreach to people not accessing PC, such as homeless people. They work with police, energy, housing and mental health services to identify people in need of care. Various websites provide public information and support feedback on services. The GGDs are developing a patient tracking system to support information sharing between services around patient and public needs and to enable improved referral and continuity of care.<sup>44</sup>



Source: Scene from kiesbeter information film [www.kiesbeter.nl/kiesBeterfilmpje.aspx](http://www.kiesbeter.nl/kiesBeterfilmpje.aspx) with permission of National Health Care Institute of the Netherlands, Quality Institute, [www.kiesBeter.nl](http://www.kiesBeter.nl)

### Conditions for introducing, scaling up and sustaining the practice

GGDs are supported by public health law, and municipal local government is obliged to consult the GGD on public health.<sup>45</sup> Some universities have included cultural competencies in medical education, albeit with challenges in defining curricula and in faculty support and expertise. Insurers have also supported new models. For example, Agis Health Insurance funded a pilot for people living in a deprived district of Utrecht, integrating PC, public health, social and secondary care services and training professionals in prevention and population health measures. Well organised patient associations influence health insurers and an Alliance for Health Literacy set up in 2010 involves over 60 organisations in building health literacy in communities.<sup>46</sup>

### Evidence of impact on key areas of value for money<sup>47</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
	Longer consultations; improved 24/7 access and continuity with public health services, including in deprived areas		Lower rates of avoidable hospital admissions		Improved service coverage in disadvantaged groups

### Additional information:

1. Kringos DS and Klazinga NS (2014) 'Learning from promising primary care practice models for the USA: Case study from The Netherlands', Academic Medical Centre, University of Amsterdam: Amsterdam, TARSC August 2014

2



## Reaching out to and equitably including all into PC

Mandatory insurance and tax funding in the four country case studies have achieved prepayment coverage levels of 98-100%. Single payer arrangements and fund pooling across multipayers have enabled payment arrangements that align services to population health needs, that incentivise the efficient provision of quality services and that fund meso-level arrangements for training and interoperable information technology (IT). Early first contact and referral continuity are associated with improved health outcomes. This has been achieved when the entitlement to PC is made clear, when patients and populations are known to PC services through enrolment/

registration/empanelment with their PC provider and when PC is accessible, including after hours, with support for uptake in deprived areas and disadvantaged groups. Enrolment and PC provider co-ordination of referral to specialist care is not only found to reduce costs, but also to support early uptake of care and to improve health outcomes. In the four case study countries, there were *shorter* waiting times to seeing a specialist in the countries with PC gatekeeping roles than where this was not required. This section provides examples of promising practices in enrolment/empanelment and in ensuring first access.<sup>49</sup>

## 2a: Enrolment and referral continuity in England

### Key features

- More than 99% of people are enrolled (registered) with a GP in the area they live in, choosing their practice from a list. This has enabled high levels of first contact, coverage and continuity of care, and the approaches and payment arrangements supporting population health.
- GPs are the entry point for referral services except for emergency services, supporting continuity of care and reducing unnecessary treatment costs. It has public support due to trust in GP expertise, with entitlement to second opinions and efforts to reduce waiting times.

### Description

In England, more than 99% of people are **enrolled or registered** with a GP in the area where they live. Patients register once, choosing a preferred practice from information provided by the NHS Choices system and normally only changing if they leave the area. GPs cannot refuse a registration unless their patient list is full and or the person lives outside the area. Visitors for more than 24 hours and less than three months can have temporary registration. A local NHS commissioning board co-ordinates registration and arranges for medical records from all levels of care to be transferred and kept by the GPs. The NHS IT system identifies patients and their practice through a NHS identification number or name, address or date of birth. For some, such as homeless people, community services are used as the contact address.

After registering with a new GP, a person is invited within 6 months to a health check by a practice nurse, with the results used to arrange follow-up care, tests or screening. On average, two-thirds of people have at least one PC consultation in a year. At population level, registration generates a profile of the population for the practice. This is

used to plan services. GPs are funded based on the size, age and sex and health needs profile of the registered patients and the levels of socioeconomic deprivation in the practice area. Capitation payment provides the majority of GP income.<sup>50</sup>

For **referral continuity**, patients gain access to NHS specialist and hospital care, community nursing services and prescription medicines only through their GP and only have direct access to Accident and Emergency (A&E) services. PC services prepare patients for hospital admission, provide advice and co-ordinate discharge and support in the community. People are entitled to a second opinion at all levels of care. Waiting times are monitored and people can see their GP within 48 hours face-to-face or via phone appointments. In 2012, 80% of patients saw a specialist within 4 weeks of referral and GPs should also be able to obtain same day specialist advice. Test and specialist referral results are entered into the IT system accessed by the GP, as are notes from emergency care services. The system protects confidentiality by only allowing access to certain parts of the patient record depending on the service. Health champions and patient groups described earlier support uptake in people that may have difficulty with the system.<sup>51</sup>

### Conditions for introducing, scaling up and sustaining the practice

Enrolment is a key commitment of the NHS and with gatekeeping is central to continuity, quality and value for money in care. Gatekeeping has support due to trust in GP expertise, discussed later, with GP income independent of how much or to whom they refer. The options for choice of GP, for patients to get second opinions and for direct use of A&E services free of charge have also built support, and attention is given to monitoring and accountability on waiting times.<sup>52</sup>

### Evidence of impact on key areas of value for money<sup>53</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Improved health outcomes	Improved access, early uptake of care	High OECD ranking on timeliness of care; patient-centred care and 87% user satisfaction	Top OECD ranking on all effective, safe and co-ordinated care	Supports care planning. Reduced unnecessary tests/ treatment; only 7% receiving unnecessary tests in past two years	Improved reach in marginal groups. Reduced costs and cost concerns. High equity in access

#### Additional information:

1. NHS Choices website at <http://www.nhs.uk/chq/Pages/1095.aspx?CategoryID=68&SubCategoryID=158>
2. Pennington A and Whitehead M (2014) 'Learning from promising primary care practice models for the USA: Country case study UK: with a focus on England', University of Liverpool: Liverpool, TARSC, August 2014.
3. NHS Services explained, website at [www.nhs.uk/NHSEngland/AboutNHSservices/Pages/NHSServices.aspx](http://www.nhs.uk/NHSEngland/AboutNHSservices/Pages/NHSServices.aspx)

## 2b: 24/7 access to care through PC co-operatives in the Netherlands

### Key features

- Since 2000, 24/7 care, a legal entitlement covered by insurance, has been guaranteed through the organisation of large-scale PC co-operatives combining groups of PC providers.
- Many PC co-operative services are situated near or in a hospital. They use IT and home visits to support access and make information and service links back into PC practice.

### Description

After-hours care is funded by insurers in the Netherlands as a legal entitlement in the ‘basic care package’, and GPs are legally obliged to ensure after-hours coverage. Since 2000, primary care providers have shared resources to provide this after-hours care by forming PC co-operatives. These involve 40 to 250 individual providers, each professional giving about 4 hours duty a week and providing care to between 100,000 to 500,000 people within a radius of 30km. PC co-operatives are located near or at, but independent of, local hospital emergency departments. An increasing number share an integrated front office where triage is undertaken.

Access to the co-operative is through a single, regional telephone number and the co-operative provides telephone triage, home visits or consultations at the centre. Triage

nurses, guided by protocols and guidelines, and supervised by physicians, assess the urgency of the case and either advise self-care or for the person to visit a PC co-operative or their PC provider the next day. They may also order a home visit or refer the case to the A&E department or ambulance service. For home visits medically qualified physicians drive in identifiable cars, equipped with oxygen and other equipment and medication for emergency care.

The co-operatives have electronic patient files and online connection to the emergency car and some, but not all, link with EMRs in PC practices.<sup>54</sup>

### Conditions for introducing, scaling up and sustaining the practice

The significant additional workloads for individual PC services to organise after-hours care encouraged the sharing of resources and capacities in PC co-operatives, drawing on experience from the UK and Denmark.

The PC co-operatives were established on a voluntary basis, enabled by funding for organisation and material costs and by training of and guidelines for professionals involved in triage. In early implementation they identified areas for improvement, including reducing time to get to patients’ homes to 15 minutes, improving the quality and safety of telephone triage and giving patient-tailored telephone advice responding to their care needs.<sup>55</sup>

### Evidence of impact on key areas of value for money<sup>56</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Reduced safety incidents	25% increase in PC contacts, 53% reduction in emergency care contacts, 12% reduction in ambulance calls, 34% fewer hospital admissions	Improved user and physician satisfaction. Reduced GP workloads	Improved physician adherence to prescriber guidelines	Improved efficiency of care. Less emergency care use	89% reduction in self-referral to hospital emergency departments

### Additional information:

1. Kringos DS and Klazinga NS (2014) ‘Learning from promising primary care practice models for the USA: Case study from the Netherlands’, Academic Medical Centre, University of Amsterdam: Amsterdam, TARSC August 2014

3



## Reorganising and expanding capacities and financing for comprehensive PC

Population health outcomes have been more effectively achieved through comprehensive person-centred approaches, co-ordinated with other services, as described in the first set of practices. This calls for innovative payment and multidisciplinary workforce arrangements and guidance. ‘Comprehensiveness’ is addressed through focusing assessment, planning and resources around population groups with higher risk of multimorbidity rather than individual diseases, with measures:

- to cluster attention around co-occurring morbidities;
- to cluster the different services needed for comprehensive care close to communities; such as in school settings, workplace wellness programmes; and that
- locate the person and PC team at the centre of a network of health and other services.

The BPS model in Chile described earlier exemplifies such PC approaches, with PC services also providing an entry point for wider social protection programmes. The promising practices in this section give examples of the arrangements and PC organisation supporting comprehensiveness and co-ordination in PC.

In all the case study countries, doctors, nurses and administrative staff operate with a range of other health and allied personnel and work in interprofessional teams, as exemplified in Ontario. These have the potential to deliver more holistic care and to reach underserved areas. Midwives and nurses provide outreach for maternal and other healthcare in communities. Building public trust, co-ordinating these teams and managing the wide spectrum of roles in PC is found to demand not only measures to organise the breadth of personnel discussed in the last section, but also to strengthen and incentivise the depth of expertise needed to manage uncertainty and to build a strong professional ethos. Fee-for-service payments have been identified as a major driver of cost escalation and wastage. Moving away from FFS towards blended and capitation payments and incentives for innovation and team approaches have supported the PC approaches outlined in earlier sections. This section highlights selected examples of how these capacities were built, quality improvements supported and payment reforms implemented in these countries.<sup>57</sup>

## 3a: Interprofessional primary care teams in Ontario, Canada

### Key features

- Comprehensive PC in Ontario has involved interdisciplinary teams, with physicians, nurse practitioners and a range of health, social and allied workers, and various community health workers that support integrated approaches to multimorbidity and reach to underserved areas.
- Interdisciplinary teams were supported by expanding the scope of practice for NPs, midwives and pharmacists, expanding university-based and other training to various professionals, together with guidance, virtual and face-to-face learning to support teams.

**Table 2: Personnel in PC Models involving interprofessional teams in Ontario and Quebec**

PC Model Year started	Number and reach	Staff composition
<b>Community Health Centres (CHCs)</b> Ontario (1979)	75 in 2013, serving > 500 000 people	Teams with physicians, nurse practitioners, other clinical, health promotion and community development professionals, and management and administrative personnel. No minimum group size
<b>Family Health Teams (FHTs)</b> Ontario (2005)	200 in 2012, serving about 2.5 million people	Physicians working with nurses, NPs, dietitians, mental health workers, social workers, pharmacists and health educators; Minimum physician group size of three
<b>Nurse Practitioner-Led Clinics (NPLCs)</b> Ontario (2005-7)	26 in 2012, serving >27 000 people	Nurse-to-physician ratio greater than FHTs. Per clinic: Up to four full-time nurse practitioners, four interprofessional staff, an administrative lead, and up to three clerical staff with physicians working as consultants for services outside NP scope of practice when needed

Source: Moat et al. 2014

### Description

Ontario, Canada, has reformed PC through a range of models, many of which include interprofessional PC teams, with their workforces shown in *Table 2*.

CHCs, FHTs and NP-led clinics involve interdisciplinary teams and also provide more comprehensive care. CHCs provide personal care, health promotion, disease prevention and community outreach, particularly to socially disadvantaged and hard-to-serve populations. FHTs have multidisciplinary teams that provide a range of services and co-ordinated care to registered clients, including home visits by physicians. NPLCs have a high nurse-to-physician ratio and assist to address GP shortages in underserved and remote communities. The number of licensed NPs doubled in Ontario between 2004 and 2008, substituting for GPs in many aspects of PC. Physician assistants were introduced in 2006 and have a unique scope of practice guided by provincial standards of the regulatory college for physicians. They work under the direct supervision of a physician who delegates specific tasks to them.<sup>58</sup>

Interdisciplinary teams in Ontario were supported by expanding the scope of practice for NPs, midwives and pharmacists, linking innovative models with expanded scope, shown in *Figure 4*.<sup>59</sup> Medical, NP and midwifery

education programmes expanded, family medicine residency positions grew and university-based training was established for PAs. A Quality Improvement and Innovation Partnership was developed to support interprofessional practice, and virtual and face-to-face learning were used to support quality improvement and other PC approaches. These efforts to restructure tasks, redistribute work burdens and bring new skill mixes to PC were not introduced as isolated practices, but in the context of wider service and financing measures.<sup>60</sup>

### Conditions for introducing, scaling up and sustaining the practice

NPs and PAs have reduced waiting times, ameliorated physician shortages and have had support of physicians, although with some resistance to the introduction of PAs from NPs. New PC models and interprofessional team approaches obtained additional resources from the PHC Transition Fund in 2000 and other sources for interdisciplinary projects, including accreditation, leadership and training and for integrating pharmacists into Family Practice. The recognition given to interprofessional and team approaches facilitated wider support from medical professionals and their associations for the new PC models.<sup>61</sup>

### Evidence of impact on key areas of value for money<sup>62</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Improved control of hypertension. Improved mental health outcomes	Improved contact; access, particularly where there are physician shortages	Improved user satisfaction. Reduced wait times	Longer consultation times. Improved chronic care management	Unclear and mixed outcomes	Improved access in remote areas, disadvantaged groups

#### Additional information:

- Moat K, Lavis J and Hutchison B (2014) 'Learning from promising primary care practice models for the USA: A Canadian case study' McMaster Health Forum: Hamilton, TARSC August 2014
- Video 'Ontario Community Health Centres: Every One Matters' Available at: [www.youtube.com/watch?v=zBBuRjmChqw](http://www.youtube.com/watch?v=zBBuRjmChqw)

## 3b: Recognition and training of expert generalist GPs in UK

### Key features

- General practice in the UK is treated as a specialised area, requiring the depth of training of secondary care specialties to produce ‘expert generalists’ able to manage the range of roles and decisions required in PC.
- This, together with the traditional longevity of GP relationships with patients, has built public trust in PC, while public funding for training and status and pay at specialist levels has made PC a desirable field.

### Description

*Expert generalist care is needed more now than at any time since the foundation of the NHS. ...Only a healthcare professional with highly developed generalist skills is able to apply his or her medical expertise to the growing range of long-term conditions; to incorporate this knowledge into “whole-person” understanding of the patients and their family; to manage risk safely; and to share complex decisions with patients and carers, while adopting an integrated approach to their care.<sup>63</sup>*

With 90% of healthcare contacts in the NHS dealt with in PC, expert generalists are PC physicians able to support ‘gatekeeping’ roles in co-ordinating care plans and referral, able to define and address individual and community care needs and to manage information for public health, prevention, care and rehabilitation.

GP education and training, funded by the NHS, is well established and regarded. It builds skills to manage

uncertainty and to make informed decisions about risks and conditions and to manage the continuum of care. This is particularly needed given the shift in care from hospitals to PC, the narrowing focus of other specialisations and the complex care administered by multidisciplinary teams. Training takes 10 years, the average for HMCs, including, 5 undergraduate years, a 2-year foundation programme of general medical training and 3 years of specialist training in general practice, to gain membership of the Royal College of General Practitioners (RCGP). Newly qualified GPs continue to learn together in groups with support from senior PC practitioners and the RCGP.

This depth of training and the traditional longevity of GP/patient relationships have led to a generally high level of trust in PC and GPs. The status of expert generalist and recognition of their depth of competency has been further supported by their average net pay in 2012 being slightly more than that of a specialist.<sup>64</sup>

### Conditions for introducing, scaling up and sustaining the practice

Recognition of the key role of PC in meeting NHS commitments has meant that general practice is seen as an area of high expertise.

The investment in GP training and expertise, improved pay relative to specialists have in turn yielded returns in health value for money (see below). There is concern to sustain the investment and professional ethos in the face of commercial pressures.<sup>65</sup>

### Evidence of impact on key areas of value for money<sup>66</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Improved health outcomes	Improved access, early uptake of care	87% user satisfaction and 92% confidence and trust in the last GP seen	Top OECD ranking on all effective, safe and co-ordinated care	Low percent (16%) had seen an emergency department for a condition treatable at PC. Low per capita health spending	Lowest rating of cost concerns in OECD study (4%)

#### Additional information:

1. Pennington A and Whitehead M (2014) ‘Learning from promising primary care practice models for the USA: Country case study UK: with a focus on England’, University of Liverpool: Liverpool, TARSC, August 2014
2. Royal College of General Practitioners (2013) ‘The 2022 GP: A vision for General Practice in the future NHS’. RCGP: UK.
3. Video: ‘Lost in translation: Revitalising the PC expert generalist role’, at <https://www.youtube.com/watch?v=PZ7vfumUuHk>

## 3c: Bundled payments and care groups in the Netherlands

### Key features

- Bundled payments provide a single fee payment to a care group to co-ordinate and pay for the different services needed for integrated prevention and care of chronic conditions.

### Description

Everyone legally residing in the Netherlands, including non-resident employees, is compulsorily insured. The contributions are pooled into a health insurance fund, allocated among health insurers using a risk-adjusted mechanism, and used to pay the private PC and hospital providers via a combination of capitation and FFS.

Bundled payments were introduced in 2007 to encourage comprehensive PC, to reduce the fragmentation of services by different providers for prevention and care of chronic conditions, to limit PC referrals to secondary care (with incentives to keep patients longer in PC) and to incentivise web consultations and more flexible opening hours.

A **bundled payment** in the Netherlands is a single fee paid to a contracting entity (the care group) covering care needs of people with specific chronic conditions, such as diabetes or chronic obstructive pulmonary disease (COPD).

The care group, composed of multiple healthcare providers, delivers or subcontracts care from a range of services (PC, specialists, other disciplines, laboratories). The group contracts with the health insurer for a single negotiable fee to cover the range of services for chronic conditions for a fixed period, and then negotiates service provision and prices with the subcontracted individual providers. Eligible people are assigned to a care group based on their condition and receive all services free under the basic benefit package.<sup>68</sup>

By 2010, 78% of GPs were members of a care group. The approach was piloted for diabetes, and found to lead to improvements in co-ordination and efficiency of care, but with wide differences in care and reimbursements provided. In part this was due to prices being freely negotiable and inexperience in setting prices for the bundles. Some insurers sought to contain costs by restricting care activities.

In 2010 bundled payments were extended to cover COPD and vascular risk management and the care provided subject to standards approved by national provider and patient associations. Over time co-ordination amongst providers improved, as did adherence to protocols, attendance of multidisciplinary consultations and use of EMRs.<sup>69</sup>

### Conditions for introducing, scaling up and sustaining the practice

Bundled payments were introduced incrementally as a voluntary scheme, with funding incentives for PC providers that both reduced costs and improved quality of care, within the wider PC reforms in 2006. Pilots were used to test and refine the approach, generating support and voluntary uptake from demonstrations. Implementation demanded a concomitant spread of IT capabilities within PC to manage care and monitor quality. Implementation was also affected by an uneven distribution of professionals, hospitals and specialists weakening interprofessional collaboration, by the substantial market power of care groups relative to providers and by the lack of involvement of patient organisations in the 'care groups' that administer bundled payments. Nevertheless, the approach has been associated with improved care co-ordination and quality and reduced hospital costs encouraging uptake.

While bundled payments reduced fragmentation of personal care services for specific diseases, there is now dialogue to explore population-based payments to better address multimorbidity within communities.<sup>70</sup>

### Evidence of impact on key areas of value for money<sup>71</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
	25% less hospital care. Chronic care focus. Less for multimorbidity	Limited by lack of patient involvement in care groups	Improved quality, co-ordination of care. Adherence to protocols	Reduced hospital care costs	Reduced costs to users from co-ordinated services

### Additional information:

1. Kringos DS and Klazinga NS (2014) Learning from Promising Primary care Practice Models for the USA: Case study from the Netherlands ' Academic Medical Centre, University of Amsterdam, Amsterdam, TARSC August 2014

## 3d: Moving from fee for service to blended payments in Ontario

### Key features

- In Ontario a movement was made from FFS towards blended and capitation payments. A range of models and payment arrangements allowed for the diversity of perspective in the influential physician lobby. Physicians were incentivised to opt for models using capitation and blended payment arrangements through improved pay and practice environments.

### Description

Ontario, Canada, provides an interesting example of how a movement from FFS towards blended payment strategies and capitation was applied after 2004/5, with a decline from 90% to 40% of physician income from FFS by 2010. Professional groups are a powerful lobby in Canada and needed to be persuaded of the benefits of

capitation for it to succeed. Many physicians supported capitation as a more balanced approach to patient care, enabling management or co-ordination of services for more complex cases and multimorbidities. A range of models and payment approaches that are shown in *Table 3* allowed for voluntary and incremental change. Salaries were applied in NLPC and CHCs, blended payments involving capitation in FHTs, FHNs and FHOs, and FFS in FHGs. Incentives were applied to encourage the move from FFS, enhancing career paths, improving relative incomes and practice environments, making PC more attractive for young professionals, including through investment in IT. By combining capitation with incentives for after-hours care, patient enrolment and EMR adoption rose and, importantly, PC physicians pay improved, narrowing the gap between their income and that of specialists.<sup>72</sup>

**Table 3: Payment arrangements for PC models in Ontario, Canada<sup>73</sup>**

PC Model	Payment arrangement
Community Health Centres (CHCs)	Staff (including all health professionals) paid through salary, with no targeted financial incentives.
Family Health Groups (FHGs)	Physicians paid by FFS, blended with capitation and targeted financial incentives for after-hours care and targeted palliative, mental health, preventive and other care.
Family Health Networks (FHNs)	Physicians paid through capitation blended with FFS, pay-for-performance (P4P) and other incentives, access bonus for services provided. Additional funds to pay administrative staff.
Family Health Organisations (FHOs)	Same as FHNs except that capitation payments cover a broader set of primary care services.
Family Health Teams (FHTs)	Physicians paid through capitation blended with FFS, P4P and other incentives or blended salary arrangements. Additional funds to pay for interprofessional staff and administration.
Nurse Practitioner-Led Clinics (NPLCs)	Transfer payments direct from the ministry to cover salaries and operational costs of each clinic.

### Conditions for introducing, scaling up and sustaining the practice

PC models were enabled by a positive fiscal climate, government contracts supporting new PC models and investment in new payment arrangements. Personnel appreciated that the measures were not for cost containment

but for improved care, while physician income also increased. The range of options allowed for a diversity of perspective in the influential physician lobby, managing the political concessions in the reforms. Transitional challenges included weak performance monitoring and factors in the capitation formula that discouraged enrolment of vulnerable groups.<sup>74</sup>

### Evidence of impact on key areas of value for money<sup>75</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
	More comprehensive care, focused on patient health needs	Improved patient, provider satisfaction	Improved quality of preventive care management		Improved care in underserved areas and groups

#### Additional information:

- Health Quality Ontario website at <http://www.hqontario.ca/public-reporting/primary-care>
- Moat K, Lavis J, Hutchison B (2014) 'Learning from promising primary care practice models for the USA: A Canadian case study', McMaster Health Forum: Hamilton, TARSC, August 2014

## 3e: Incentives, quality circles and peer review in the Netherlands

### Key features

- Quality of care in the Netherlands is covered by standards for professional education, by clinical guidelines, by patient rights and access to information. Various measures exist to incentivise implementation of these measures, including peer review audits, development and implementation of ‘best practice’ guidance, and measures set by law for public feedback and involvement, such as through patient councils and a patient complaints system.

### Description

To qualify for 5-year re-registration to practice in the Netherlands, PC providers must have done at least 40 hours of continuing medical education and 10 hours of peer review activities annually. A voluntary peer review audit for certification from the Dutch College of General Practitioners (NHG) is done by a colleague GP to assess 385 dimensions of performance in areas of practice building, task delegation and collaboration, service organisation, medical recordkeeping and professional development and workload. The NHG as a professional association has developed over 100 voluntary guidelines to strengthen professional ethos, increase the evidence base of functioning and improve the quality of care. Adherence to guidelines is facilitated by treatment criteria, practice environment requirements and continuous medical education.<sup>76</sup> An ‘NHG-formularium’ integrates advice on prescriptions into a digital General Practice Information System. An Institute for Healthcare Quality (created in 2013) steers improvements supported by the voluntary guidelines and monitors quality indicators. Financial incentives for ‘modernisation and innovation’ provide support for IT and teleconsultation that assist with guideline adherence. In some regions, GPs have face-to-face consultations with different specialists annually, and PC personnel can seek specialist advice through telephone and telemedicine. Teleconsultation is reimbursable as a



NHG guidelines online at: <http://guidelines.nhg.org/>; used with permission of Nederlands Huisartsen Genootschap

‘modernisation and innovation procedure’ as it reduces referrals to specialists by using internet resources at PC level. A PAZIO project healthcare portal facilitates online appointments, self-management activities for chronically ill patients, allows patients to view their medical records and enhances possibilities for accountability of services. Legally, all healthcare providers are required to have a complaints system and a patient council to address patient rights and respond to public feedback.<sup>77</sup>

### Conditions for introducing, scaling up and sustaining the practice

Since 1996, stimulated by reforms that prioritised quality of care, the Care Institutions Quality Act has required all healthcare providers to provide good quality, effective, efficient and patient-oriented and responsive care. These legal requirements, together with financial incentives raised above, professional guidance and peer review and implementation support have facilitated quality improvements. While the guidance for high quality care is voluntary, it is backed by pressure from media and patient organisations and from insurers who use the standards in payments for care.<sup>78</sup>

### Evidence of impact on key areas of value for money<sup>79</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Diabetes and pre-natal care improvements linked to positive health outcomes	Incentives may improve coverage but also gaming		Improved adherence to quality guidelines	Reduced unnecessary referral to secondary care	

### Additional information:

- NHG Guidelines (translated) at <https://guidelines.nhg.org/>
- Kringos DS and Klazinga NS (2014) ‘Learning from promising primary care practice models for the USA: A case study from the Netherlands’ Academic Medical Centre – University of Amsterdam, Amsterdam, TARSC August 2014

4



## Supporting information and learning from practice

There have been moments of radical change in the organisation of health services, as in the introduction of the NHS in the UK. There have also been more incremental reforms, with change and reversal at different times reflecting the outcome of contested ideas, interests and political forces.

This raises a question, potentially pertinent for the current US context, of what enables or blocks innovation and scale up of promising practice when political and policy windows open, generating practice and learning and widening support amongst the actors that can influence and sustain change. In the countries included in this work, within the principles and social bargains struck at political level, the levers included new laws, guidance, institutional arrangements, resources, networks and models. These were backed by financial and non-financial incentives, training, social media and communication processes and tools, such as those described earlier.

The experiences in HMICs point to ways that information has been used to understand health needs and lever health improvement at both individual and population levels and analysed for those more directly involved in PC to review and improve practice.

The first section pointed to the participatory processes and models that centre PC innovation on social evidence and learning. This section presents examples of two other features that support innovation: The first outlines an interoperable, person- and PC-focused electronic information system that facilitates promising practice within PC. The second points to the networking of PC practice sites and wider learning circles that build learning from practice and link communities of practice to knowledge and policy dialogue.<sup>80</sup>

## 4a: Information systems for reporting and reviewing PC in the UK

### Key features

- The NHS in the UK has invested in an integrated, unified information system that provides individual and population evidence, supports continuity of care and PC planning and review. Digital EMRs are co-ordinated through PC, in an interoperable system linked across all NHS services, with protections for confidentiality. Automated capture of population and personal care data supports payment arrangements and review of service performance.

### Description

As outlined earlier, when they register with a GP in the NHS, people obtain a unique identification number, with their EMRs kept and co-ordinated at PC level. The information is used locally and at higher levels to understand the health profile of the registered population, to inform capitation payments to the practice and to identify groups and individuals for screening, health checks and follow-up. It has thus enabled health promotion and first access. The ‘Spine’ is the national system enabling information to be shared across NHS care settings. Tests and treatment results are entered into the patient record, accessible to the person’s GP, with a subset of relevant information accessible by other NHS professionals. This enables continuity of care and referral. The PC system is expanding its use of digital communication with its registered population for them to make or change appointments online and, through NHSmail, a secure email service, to communicate between PC services and individual clients on care, such as to provide repeat prescriptions, or with communities to provide information or anonymous online surveys.

Information at PC level is also gathered and aggregated in various ways through automated data capture. The Quality and Outcomes Framework (QOF) was introduced in 2004 to support quality and health outcomes and to improve GP pay. It was underpinned by significant public investment in providing an IT infrastructure and software in PC services for monitoring disease prevalence and quality of care.

Integration between the QOF software and EMRs alerts healthcare professionals to do quality-related tests during a consultation. There is a critique that the performance incentives in the QOF drive attention to the particular areas of care incentivised and limit improvements to thresholds paid for. This has necessitated regular review of indicators and exceptions for specific areas of care or social groups.<sup>81</sup> However the QOF has also provided an information system that automatically aggregates data monthly, quarterly and annually with evidence on performance used by PC personnel, regional and national authorities to assess performance and to organise support for improvements. The automated system is also used to compile and publicly report information for social accountability on practice performance: with one health analyst stating “... the fact that the performance is public is in the public domain and can be looked at is actually quite a strong reputations spur for practices”.<sup>82</sup>

### Conditions for introducing, scaling up and sustaining the practice

Digital systems that support information flow between care providers and to patients are regarded as a key contemporary means to achieve NHS principles. PC practices led this reform in part through the QOF system, which widened digital record keeping, automated analysis and reporting, and introduced online communication with people in the catchment community. PC practices were supported to do this in various ways. The NHS investment in the software and IT support and capital grants to PC practices were key to support uptake and interoperability of the system. In the QOF, the link between incentives, improved incomes and evidence from the system motivated uptake, with benefits in efficiency and quality of care and health outcomes, most rapidly in deprived areas, albeit as noted above with some critique of the QOF incentive system. The IT operating model for PC is regularly updated to address ethical, information and governance issues or system problems and to increase link care across different settings.<sup>83</sup>

### Evidence of impact on key areas of value for money<sup>84</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
Positive QOF impact on targeted outcomes	Reduced use of secondary care. Improved access	Improved communication with clients and between practice staff	Improved quality of chronic care and referral continuity. Greater gains in worse performers	Low emergency service use for conditions treatable at PC	

#### Additional information:

- NHS Strategic Systems and Technology website at <http://www.england.nhs.uk/ourwork/tsd/sst/>
- NHS Choose and Book service website at <http://www.chooseandbook.nhs.uk/>
- Pennington A and Whitehead M (2014) ‘Learning from promising primary care practice models for the USA: Country case study UK: With a focus on England’, University of Liverpool: Liverpool, UK, TARSC, August 2014

## 4b: Innovation circles and communities of practice in Chile

### Key features

- Practice and local innovation in municipal PC in Chile provide new learning on PC that is exchanged through forums and an internet platform that directly networks PC practice sites.
- These and innovation circles on key areas have built collaborations between health professionals and academia that have informed policy change and implementation.

### Description

Family health centres, municipalities and universities have formed teams around challenges in PC to build and exchange knowledge collaboratively and to facilitate adaptation of good practices. The teams use a specially designed open access technology platform at ‘Colaboración Pública Salud’ to share and discuss innovation. Rather than using knowledge transfer, it uses a method of co-creation of knowledge, drawing from models such as Mind Lab in Denmark. The platform provides a digital space for peer institutions in PC to share experience and knowledge about a challenge, to co-create solutions and to agree on commitments to implement solutions in their own areas or organisations.

On particular issues ‘innovation circles’ bring together 40-60 professionals to share and reflect on their work, exchange documents and information and increase joint work, building a community of practice and a library of tools and learning. The model is based on shared learning for and from practice, particularly at local level, linking academic to practitioner knowledge. As raised by one academic: *...municipalities can do a better job... by managing local information to make decisions about services that respond better to problems in my area and that are not present in others.*

At national level Innovation Marathons (*Innovatones*) have been held since late 2013 bringing several Innovation Circles together to exchange experience and learning. The Ministry of Health and the Chilean Municipal Association hold an annual Good Practices Competition and a National PC Congress is planned to position PC centrally in research and policy debate.<sup>85</sup> These collaborations between health professionals in practice and in academia have helped shape and manage policy change and implementation in Chile—referred to as ‘thinking politics’.

PC centres (CESFAMS) petitioning on conditions through their association



Source: Colaboración Pública Salud, 2014, with permission of Confusam <http://saludaps.colaboracionpublica.cl/noticia/confusam-exige-capita-de-6000-para-la-aps>

### Conditions for introducing, scaling up and sustaining the practice

Local authorities, health professionals and social movements have sustained and developed comprehensive PC and social protection approaches at local authority level over the past century in Chile, including under the dictatorship, organising evidence to gain support for their inclusion when new opportunities emerged in national policy. The model of exchange across local areas to ‘co-create’ knowledge from practice has built learning from practice, using IT platforms and forums to scale to national level. National processes have also been supported by wider exchange internationally on PC, in a Community of Practice on PHC in the Region of the Americas.<sup>86</sup>

### Evidence of impact on key areas of value for money<sup>87</sup>

Health outcomes	Healthcare outcomes	User/provider satisfaction	Quality improvement	Cost	Financial protection
No direct attributions, but indirectly the practices adopted from the knowledge exchanges are likely to have influenced many dimensions of health value for money.					

#### Additional information:

1. Colaboración Pública Salud website at <http://saludaps.colaboracionpublica.cl/>
2. Frenz P, Alfaro T, Orsini M, Alaniz R, Aguilera H et al. A (2014) ‘Learning from promising primary care practice models for the USA: Country case study Chile’, Escuela de Salud Pública, Facultad de Medicina Universidad de Chile: Santiago, TARSC August 2014.

# PC - proactive, participatory and people centred to improve population health

The individual examples demonstrate specific features of promising practice in PC. However, they also have common features.

Many are driven by a shift in focus away from a frontline PC system that is mainly reactive to individual disease events ('detect and manage') towards one that is **proactive**, empowered and competent in promoting health for all population groups ('predict and prevent').

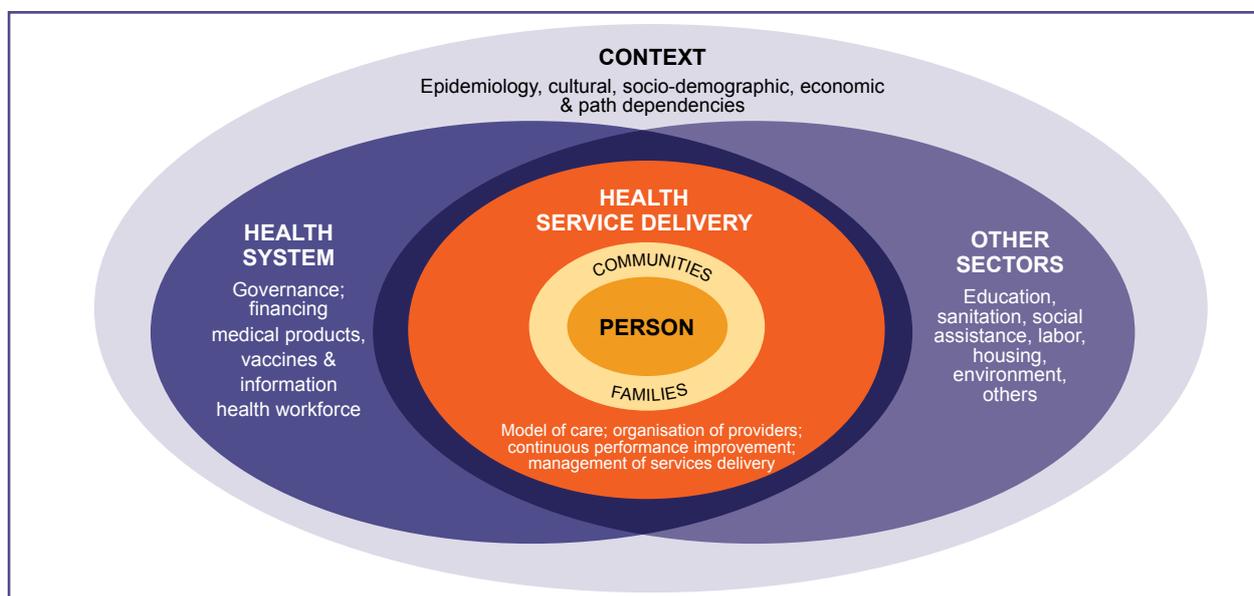
The practices are centred on the entitlements, responsibilities, **power and participation of people**, families and communities, in systems that are underpinned by values and principles, that engage and involve communities in health actions and that build both a culture of health and a social accord across key actors to achieve equal access to the same standard of comprehensive care for all on the basis of health need, regardless of funder.<sup>88</sup>

The practices reflect measures to deliver a **comprehensive population health approach to PC**, that is able to effectively link population health with individual care and to co-ordinate the institutions, services, actors, workers and resources involved and the competencies, teams, training, financing, payment, information and other social and institutional resources needed to support this approach.

Although there is limited documented *system level* evaluation of PC, and there are difficulties in directly attributing outcomes to specific measures, there is evidence, briefly presented, that these features are associated with dimensions of improved health and value for money.

They reflect principles that have informed health systems decisions over many decades in HMICs with strong PC systems. They resonate with comprehensive PHC and with strategies for strengthening people-centred health services in the World Health Organisation (WHO), exemplified in *Figure 4*.

**Figure 4: Interacting determinants of people-centred health services**



Source: WHO EURO (2014) Strengthening people-centred health services delivery in the WHO European Region: concept note. Working document. Copenhagen, WHO Regional Office for Europe, 2014:4. Used with permission of WHO Regional Office for Europe.

# Adapting promising practice in PC in the USA

The diverse, pluralistic health system in the USA is experiencing rapidly evolving reforms, with pockets of intense activity, demonstration sites and systems-level innovation across the country, often at local, state or regional levels.

There are windows of opportunity for engaging on and implementing reforms to support comprehensive PC and system-level measures that enable them. Change processes, however, often challenge histories, bureaucracies, entrenched procedures, perceptions and interests that block innovation, more so when there is uncertainty of the timing and level of returns.

From evidence and key informant experience in other HMICs, innovation in PC has been facilitated and sustained by:

- Clearly articulated health system goals and a widely shared vision for PC.
- Political, policy and professional leadership and support at central and local levels.
- Communication of evidence on drivers of poor performance, ideas, evidence and feasible models to address them shared and debated across all key actors.
- Resources, incentives, competencies and leadership to demonstrate innovation and to embed them within wider system reforms.
- Voluntary options to encourage change, including incrementally, with incentives to amplify support for and uptake of promising practices.
- Evaluation and review of evidence on impact on health outcomes and value for money.
- Forums and networking to support and communicate learning from practice to identify early returns, respond to challenges, sustain longer term processes

and build a ‘community of promising practice’ that connects public, practitioner, academia and policy levels.<sup>89</sup>

The response to societal demand for improved health outcomes in the USA will be shaped by its unique context, values, culture and political economy, different to that of the HMICs reviewed.

While this paper has focused on PC, innovation at this level is affected by these wider issues and by the mindsets and debates on the wider health system.<sup>90</sup> At the same time, positive innovation in PC can inform and influence mindsets and wider debates and processes. There are thus opportunities, drawing on the insights, learning from and promising features in other HMICs.<sup>91</sup>

1. To support a paradigm shift towards a PC approach that promotes the widest level of population health.
2. To organise the models, roles, competencies and resources to deliver comprehensive community-centred PC universally.
3. To build the information, communication and consistent community of practice, learning and influence to sustain and be accountable for the approach.

The final sections present proposals for this, with key entry points for taking them forward, within which key stakeholders in the USA can review and elaborate specific measures to advance them.

# 1. Making the paradigm shift to a proactive, participatory, community-focused PC to improve population health

There is societal demand in the USA for a healthcare system that achieves and is accountable for wider population health benefits from the resources applied.

Achieving this calls for a **paradigm shift** across providers towards primary care that is proactive, oriented to communities *and* individuals, comprehensive, participatory and linked with other services and activities that improve population health. This implies building a culture of health, involving people in contributing to improvements in health and wellbeing.

There are opportunities to adapt the learning on such approaches from other HMICs, by:

- a. Implementing participatory population health needs assessments/demographic portraits and genograms/family APGARs/family health maps to identify the health needs and disparities across different communities and settings, to develop individual care and PC service plans and build links with public health and other services.
- b. Strengthening a biopsychosocial, family-centred and community-oriented model in PC services that builds sustained promotive, preventive and care services around the health needs of families and population groups.
- c. Supporting social roles, public health literacy and community involvement in action on key health problems, including through social media and online interaction and through community level ‘health champions’.
- d. Engaging communities in decisions on PC, including in improvement councils and through healthwatches and participatory budgeting.

There are opportunities to strengthen or scale up such approaches within more community-oriented PC models, such as in patient-centred medical homes (PCMHs), community health centres and community-centred homes and within ACO quality performance assessments. These community-oriented approaches can also be integrated within existing innovations on interprofessional teams, or in measures underway for transparency and reporting to communities on service performance, such as on prices.<sup>92</sup>

The concept of an **Accountable Health Community Collaborative (AHCC)** is proposed as one arrangement through which to recognise, give visibility to and

advance this paradigm shift, integrating learning from earlier community-oriented initiatives, and noting the wider payment, workforce, information and other system reforms needed to reinforce these models, discussed in the next subsection. In the same way as PCMH provided a designation for PC practices seeking to engage in more comprehensive patient care, the AHCC can provide a vehicle to deepen the framing, organisation, strategies and tools for a paradigm shift to community-focused PC, within which to apply useful approaches, tools and learning from other HMICs detailed in this paper.<sup>93</sup>

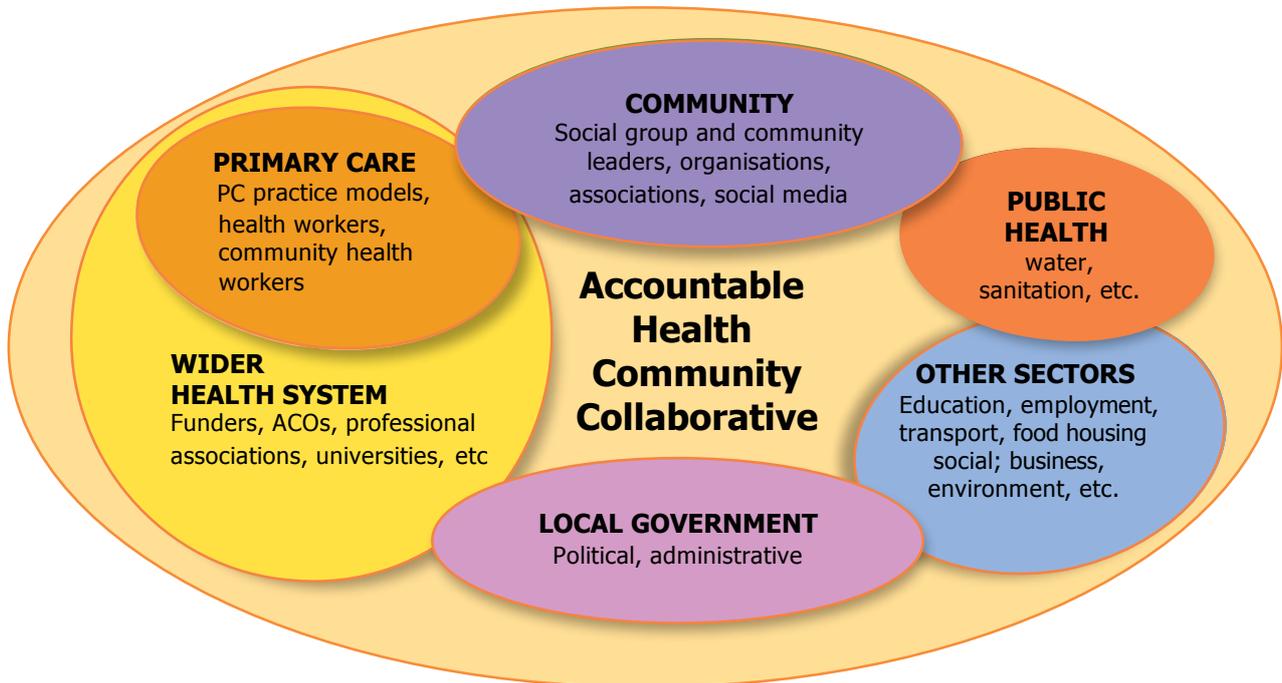
It builds on the concept of an Accountable Health Community (AHC) raised in the past decade, including by the Institute of Medicine, to advance collaborations that involve citizens, address community health and meet ‘triple aim’ goals of improved health, quality and costs of care.

Several local AHC initiatives have recently been established in Minnesota, Massachusetts, Maine, Vermont, Oregon and Arkansas, funded by the CMS State Innovation Model (SIM) grant programme. The exchange across these AHCs has identified the following features to be important: definition of the catchment community by area; leadership for shared ownership of and accountability for health across sectors; integrated strategies that address the spectrum of what drives health and reinvestment of accrued savings into strategies that further improve community health.<sup>94</sup> The SIM programme further requires that models reach 80% of the state population and integrate payment, workforce and health information measures that support such PC innovations. Many of these measures are discussed in the next subsection. Round two of the SIM raises the opportunity to apply lessons learned and to sustain and spread such models statewide.<sup>95</sup>

The AHCC concept ‘continues the conversation’, initiated by the Accountable Communities for Health Conference in 2013.<sup>96</sup> It applies the AHCC as a vehicle to lever a shift in practice *within* PC, within the health system and in the collaboration across PC, services and communities.

The AHCC involves the range of actors shown in *Figure 6*,<sup>97</sup> that come together to build, formulate, implement and review comprehensive, community-focused population strategies, to share local information and capacities and to facilitate social participation in the process.

**Figure 6: Collaboration of actors within the Accountable Health Community Collaborative**



Source: authors

A common agreed template would need to be developed for the convening organisation, composition and roles of the AHCC, as well as for its catchment population<sup>98</sup> work, processes, strategies, training activities and culture, building on existing experience and coalitions. AHCC processes would include fostering public-private partnerships with social leaders to assess community needs, priorities, assets and capacities and engaging funder's collaboratives to resource the expertise in the convening organisation.

Meso-level structures can support the information for and learning from applying new approaches, discussed later. The change and the mindset that support it call for

communication to public, professional, practice, funder and other constituencies on both the idea of the paradigm and such models - with feasible demonstrations, voluntary options, resources and incentives - and the benefit of their application in terms of improved community health and well-being and improved conditions for those working in the system and in the shared savings they bring to communities and to services. Local level efforts would need to be supported by the changes within PC and in the wider health system, discussed in the next subsection.

## 2. Organising the models, roles, competencies and resources to deliver comprehensive community-centred PC universally

Changes at the local level to build comprehensive and participatory PC approaches that are population health, community, family and patient oriented call for supportive inputs in the organisation of services, workforces, payment arrangements and information systems. There are areas where learning from promising practice in HMICs can inform such supportive reforms.<sup>99</sup>

Comprehensive person and community focused care calls for a proactive engagement with the attributes and health needs of the catchment population. The experience of HMICs shows the gains in health and in value for money from applying geographical **enrolment/empanelment** and from the payment arrangements and referral co-ordination that support continuity of care. This is achieved when people identify and register with a preferred PC provider, with measures for choice and portability. With US public distrust in PC and strong views around provider choice, the safeguards and benefits would need to be clearly communicated and demonstrated. Registration could be expanded voluntarily, especially through PC models with a community focus and in AHCC arrangements, with monitoring of patient/public satisfaction, continuity and costs of care to demonstrate returns. CMS and other payers could request people to volunteer the name of their preferred providers, piloting billing and blended payment arrangements to provide incentives of improved income from registration and achievement of population health goals. Offering plans that combine key features of such promising practice, such as enrolment with a designated PCP, zero upfront fees for PC and access to specialists through their PCP provides an opportunity to combine such key success factors for improved PC found in other HMICs.

Already a number of innovations are underway to promote **interprofessional and team** practice in PC, as found in other HMICs. Their wider application calls for:

- Investment by payers in capacities and incentives for organisation of team-based care.
- Recognition of roles and skills and work organisation so that all professionals are working ‘at the top of their license’.<sup>100</sup>
- Local planning and flexibility to align the composition of workforce teams to population health needs, including through sharing of certain skills across PC practices.
- Communication to public and professional audiences on interprofessional roles and their benefits, drawing on experiences from sites such as the 31 LEAP sites.<sup>101</sup>

- Engagement with institutions involved in formal professional education and health workforce planning and licensing to better align both to the interprofessional and expert generalist competencies needed for comprehensive and team-based practice in PC.<sup>102</sup>

In some states, **co-operation across practices** to share resources and support 24/7 access is already happening, with community health teams sharing IT systems, learning, financial resources and practice facilitators; using nurse triage to guide patients to services that are open; and sharing resources for data, patient tracking and quality monitoring and reporting.<sup>103</sup> It would be useful to identify, resource and scale up practices where such co-operation is working well.

**Moving away from FFS to blended payment arrangements** - particularly capitation and bundled payments and incentives - supports comprehensiveness of care, population health approaches and value for money. The CMS, as a major payer, has scope to apply such arrangements with wide impact and to communicate their benefit, including in calls on what the next generation of PC payment and design reform should look like; in planned CMS convenings of PC leadership, people and payers on payment innovations; in new billing codes, such as the CMS code for comprehensive chronic disease management and in the evidence from the multipayer alignment in the CMS Comprehensive Primary Care Initiative. For the diverse private payers, voluntary options for new blended payments could be encouraged, allowing flexibility in how models achieve key goals of addressing the needs of different patients and population groups and of providing high quality, patient-centred, team-based, community-oriented and accessible care. In addition to existing incentives, it would be important to explore incentives for enrolment, first access, PC co-ordination of referral and for achieving population health outcomes.

Work on **bundled payments** needs to be advanced in tandem with new provider models able to use them effectively, such as the AHCC. CMS initiatives on bundled payments have focused on hospital-based care for specific diseases. A 2007 RWJF project piloted a global budget for PC physicians caring for patients with selected chronic conditions, raising the potential savings from avoidable complications. The process and outcomes of such initiatives on bundled payments could be shared, together with the experiences of other countries on applying bundled payments, to inform work to extend the arrangement from payment for management of specific diseases to support of promotion, prevention and care in specific population/patient groups.

### 3: Building the information, communication and learning community to sustain and be accountable for innovation

Supporting PC providers, many overburdened by administrative and care demands, to strengthen the spiral of innovation and learning from practice is not without challenge. This support needs to come from all levels, from a national level vision that is widely shared across key constituencies that brings new norms, energy, role models, resources and evidence and that builds a belief that change is doable, through to local-level information systems and resources that support and enable change and learning from practice.

Interoperable, linked health information systems play an important role in supporting access, continuity, quality and comprehensive care. They are a key input to PC innovations for:

- proactive, population health approaches, particularly when information from enrolment is used to scope the needs of the catchment population;
- continuity, when information is linked and communicating across providers, especially when co-ordinated through PC;
- patient-centred quality care and planning, when there is automated capture, analysis, use and review of evidence; and for
- participatory PC, when information platforms are used to promote transparency, accountability and dialogue with patients and communities.

In the USA, significant investments in EMRs have been made and Health Information Exchanges (HIEs) have been expanded. However, wide gaps still exist in reorienting the system from one primarily used for event billing in PC to one that provides the features listed above.<sup>105</sup> Rising IT, social media, telemedicine and other capabilities are providing opportunities to develop a non-burdensome system that captures and aggregates data and exchanges information to address these key dimensions of PC. The United States Office of the National Co-ordinator for Health Information Technology has a goal of widespread national adoption of interoperable EMRs within 10 years. Platforms, such as CMS and its initiatives and the international Health Level 7 platform, would need to build dialogue on and incentives for shared indicators and metrics to support innovation,<sup>106</sup> with collaboratives, such as the AHCC, playing a role in framing, analysing and using the information.

Information systems can only partially address the learning, engagement and alliances needed for a shift in paradigm and practice in PC and in the health system arrangements that support it. Many questions arise about motivating and applying innovation, including applying specific measures within wider health, social and economic systems. The experience in many countries points to approaches that build and exchange learning on community-oriented, comprehensive PC that draws from practice and that strengthens the voice and agency of the practitioners and catchment communities involved

PC.<sup>107</sup> As exemplified in Chile, this needs measures that nourish, connect and amplify local level learning. Meso-level co-ordination across AHCCs and similar arrangements could, for example, support and integrate learning across them, share and communicate evidence, foster leadership, exchange expertise and resources and build coalitions to engage in national level policy institutions, processes and funding. As demonstrated in the example from Chile, there are new opportunities in IT platforms for making widespread and direct connections across local practitioners to support and connect learning from and for practice.

A more concerted national level process is needed to convene key actors on the vision and goals for PC, to review the learning on approaches, measures and models that improve population health raised in this paper, to build shared understanding and identify more specific actions. Learning and innovation circles on specific areas can deepen this dialogue to address specific challenges in the reforms, to identify drivers of problems, options to address them and support amongst key actors for the approaches and organisation of resources to deliver them.

Given the strong public, funder and provider interests around payment models, for example, it is proposed that a national convening and learning circle of funders, providers, community groups and academics present and discuss the evidence and options on payment arrangements, drawing on evaluation of practice and demonstration sites in the USA and other HMICs, to encourage model development and uptake and to engage and feed into government processes and social media. Such evidence-based processes would provide information from practice, including social and other media testimonial on the direct experience of changes from the community lens.

As noted, many of the promising practices in HMICs are linked and mutually reinforcing and raise issues in and beyond the health system. While recognising the challenges, there is an argument that reforms that were contentious yesterday, as ACA was, may within a decade be 'normal practice', with over a third of practising doctors having started work in the world of ACA and, together with others, seeking not to reverse ACA but to improve it.<sup>108</sup> The societal consensus on the need for health systems to better use resources to improve population health opens the opportunity today to build a widening and sustained community of practice, learning and advocacy on new goals and approaches for population health at national level, drawing on a diversity of actors. Such a collective effort could build a momentum for PC reforms that deliver improved population health and engage within health system and public debates on the vision, mindset, goals and measures that support these changes.

# Endnotes

- 1 As found in Kruk ME, Porignon D, Rockers PC, Lerberghe WV (2010) 'The contribution of primary care to health and health systems in low- and middle-income countries: A critical review of major primary care initiatives' *Social science and medicine* 70(6):904-11; WHO (2013) 'Primary health care, including health system strengthening', Report by the Secretariat to the Sixty-Second WHA A62/8, WHO: Geneva; Loewenson R and Whitehead M (2012) 'Robust and equity oriented health systems', WHO European Office for Investment for Health and Development: Venice; Molla S, Yordy KD, Lohr KN, Vanselow NA (1996) 'Primary care: America's health in a new era', Committee on the Future of Primary Care, Institute of Medicine: Washington, DC; Kringos DS, Boerma WGW, Bourgueil Y, Cartier T, Dedeu T et al. (2013a) 'The strength of primary care in Europe: An international comparative study,' *British Journal of general practice* 63(616): e742-e750(9); Harzheim, E, Duncan BB, Stein AT, Cunha CRH, Goncalves MR et al. (2006) 'Quality and effectiveness of different approaches to primary care delivery in Brazil', *BMC health serv res* 6:156; McMurphy D (2009) 'What are the critical attributes and benefits of a high-quality primary healthcare system?' Submitted to the Canadian Working Group on Primary Healthcare Improvement, Canadian Institutes of Health Research: Ontario; Lester H and Roland (2009) 'Performance measurement in primary care' in Smith et al. (eds) *Performance measurement for health system improvement*. Cambridge University Press: New York; Kitreerawutiwong N, Kuruchittham V, Somrongthong R, Pongsupap Y (2010) 'Seven attributes of primary care in Thailand', *Asia-Pacific journal of public health/Asia-Pacific academic consortium for public health* 22(3):289-98; Starfield B, Shi I, Macinko J (2005) 'Contribution of primary care to health systems and health', *Milbank quarterly* 83:457-502.
- 2 WHO (2013); The term behavioural health has greater use in the USA to cover both individual behaviours and broader environment factors, but in international literature behavioural health has a more limited scope and use – referring to individual behaviours. The social determinants of health are understood to include behaviours, such as smoking and harmful alcohol use and the risk environments for them. PC prevention and promotion services address behaviours and integrate with other services to promote environments that enable and sustain healthy behaviours.
- 3 As summarised in Loewenson R (2014) 'Analysis of databases on country performance on health expenditures and outcomes', Training and Research Support Centre and as most recently elaborated in Davis K, Stremikis K, Squires D, Schoen C (2014) 'Mirror, mirror on the wall - How the performance of the U.S. health care system compares internationally', The Commonwealth Fund: New York.
- 4 As for example is presented in Kringos DS, Boerma WGW, Van der Zee J, Groenewegen PP (2013b) 'Europe's strong primary care systems are linked to better population health, but also to higher health spending' *Health affairs* 32(4): 686-94; Glenngård AH (2013) 'Productivity and patient satisfaction in primary care--conflicting or compatible goals?' *Health policy* 111(2):157-65; and Hale J, Phillips CJ and Jewell T (2012) 'Making the economic case for prevention--a view from Wales', *BMC public health* 12:460. This has been articulated in the USA as the 'Triple Aim' of managing per capita costs, people's experience of care and population health.
- 5 The phrase 'population health' is used increasingly in the USA. While there is no formally adopted definition, we apply that most commonly used in the USA - including by American Public Health Association, CMS, Institutes of Medicine and more widely - as the health outcomes of a group of individuals, including the distribution of such outcomes within the group and their determinants. This is not limited to the population of patients of healthcare and more widely includes geographically and socially defined populations. As it includes consideration of upstream factors and reduction of disparities, it implies actions from healthcare services, public health agencies, wider services and communities. See Institute of Medicine (2012) 'Integrating primary care and public health', National Academies Press: Washington, DC; Soto M (2013) 'Population health in the Affordable Care Act era', *Academy health*; Kindig DA and Stoddart G (2003) 'What is population health?' *Am Journal of public health* 93:3669; Jacobson DM and Teutsch S (2012) 'An environmental scan of integrated approaches for defining and measuring total population health by the clinical care system, the government public health system, and stakeholder organizations', National Quality Forum: Washington, DC.
- 6 These parameters and their key elements were organised in a conceptual framework used to gather and systematise evidence in the project. The details on the elements and relationships in the framework are presented in more detail in Loewenson R and Simpson S (2014) 'Framework for analysis of primary care contexts, systems and models and their adaptation. TARSC, March 2014
- 7 Presented in Loewenson R, Simpson S with Nolen A and country case study teams (2014a) 'Strengthening primary care to improve health: Learning for the USA from high and middle income countries', TARSC August 2014

- 8 Simpson S (2014) 'Desk review of key features of promising primary care practices in middle- and high-income countries. TARSC; Nolen A (2014) 'Primary care in the United States of America health system: Literature review of strengths, weaknesses and opportunities for improved health outcomes, UTMB, Texas, TARSC and Loewenson R, Simpson S and Nolen A (2014b) 'Synthesis and analysis of evidence on promising primary care practice: Learning from high- and middle-income countries to address challenges and opportunities in the USA', TARSC
- 9 Full country case study reports in Moat K, Lavis J, Hutchison B (2014) Learning from promising primary care practice models for the USA: A Canadian case study', McMaster Health Forum: Hamilton, TARSC August 2014; Frenz P, Alfaro T, Orsini M, Alaniz R, Aguilera H et al. (2014) 'Learning from promising primary care practice models for the USA: Country case study Chile', Escuela de Salud Pública, Facultad de Medicina Universidad de Chile: Santiago, TARSC, August 2014; Pennington A and Whitehead M (2014) 'Learning from promising primary care practice models for the USA: Country case study UK: with a focus on England', University of Liverpool: Liverpool, TARSC August 2014 and Kringos DS and Klazinga NS (2014) 'Learning from promising primary care practice models for the USA: A case study from The Netherlands', Academic Medical Centre – University of Amsterdam: Amsterdam, TARSC August 2014
- 10 A more detailed discussion of the methods, of the evidence used and any limitations is found in Loewenson et al. (2014a). Notwithstanding constraints such as limited published evaluations of PC reforms, many reforms in progress in countries and difficulties in attribution, the reports provided a reasonable body of evidence to support major findings reported and external peer review from the US and other countries helped to validate evidence and conclusions.
- 11 The: (1) US and international peer reviewers; (2) interviews with key informants in the country case studies; and (3) dialogue at the international convening assisted with addressing difficulties in attribution in complex systems and with the limitation that much experience of PC and evaluation of promising practice is unpublished. The convening is reported in Training and Research Support Centre (2014) 'International Convening Report: Strengthening primary care practice to improve health: Learning for the USA from high- and middle-income countries', Oxford, September 11-12. TARSC with support from RWJF and CAFA.
- 12 Davis et al. (2014); OECD (2013) 'Health at a glance 2013', OECD Indicators. OECD: Paris; Commonwealth Fund (2011) 'Why not the best? Results from the national scorecard on U.S. health system performance, 2011', Commonwealth Fund: New York.
- 13 The challenges and opportunities were outlined in a desk review of 320 papers by Nolen (2014) and analysed in sixteen areas in Loewenson et al. (2014a) and through input from US delegates in the convening (TARSC 2014).
- 14 Agency for Healthcare Research and Quality (AHRQ) (2012) 'National healthcare quality report 2012', AHRQ: Rockville, MD; Chappel A, Kronick R and Glied S (2011) 'The value of health insurance: Few of the uninsured have adequate resources to pay potential hospital bills', ASPE Research Brief, Department of Health and Human Services: Washington, DC.
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- 16 Loewenson et al. (2014a); Pham H (2014) in TARSC (2014); Nolen (2014); AHRQ (2012, 2013); IOM (2012); Rice et al. (2013).
- 17 Loewenson et al. (2014a); TARSC (2014) . AHRQ (2012); IOM (2012) .
- 18 Loewenson et al. (2014a); Pham H (2014) in TARSC (2014); Nolen (2014) .
- 19 Flinter (2014) in TARSC (2014) outlines ten widespread innovations underway in the USA as examples.
- 20 Chin MH, Walters AE, Cook SC and Huang ES (2007) 'Interventions to reduce racial and ethnic disparities in health care,' *Med care res rev.*64(5 Suppl): 7S–28S; Kaiser Family Foundation (2009) 'Community health centers', Kaiser Commission on Key Facts: Medicaid and the uninsured: Washington, DC; Quealy K and Sanger-Katz M (2014) 'Obama's health law: Who was helped most', *New York Times*, 29 Oct; Van Voorhees BW, Walters AE, Prochaska M, Quinn MT (2007) 'Reducing health disparities in depressive disorders process of care and outcomes between whites and ethnic minorities: Call for a comprehensive and pragmatic approach', *Medical care research and review* 64(5 Suppl):157S–194S; Choudhry NK, Bykov K, Shrank WH, Toscano M, Rawlins WS et al. (2014) 'Eliminating medication copayments reduces disparities in cardiovascular care', *Health affairs* 33(5):863; AHRQ (2013) 'National healthcare disparities report', AHRQ Publication No. 13-0002, prepared for Congress by the AHRQ: Rockville, MD.
- 21 A detailed comparative review of the four countries and the analysis of value for money of the practices reported is presented in Loewenson et al. (2014a).
- 22 Loewenson et al. (2014a) draws on and presents evidence from the country case studies and literature on the full range of practices where positive outcomes were recorded across multiple dimensions of value for money. This paper includes evidence only for those practices identified as relevant for the USA.
- 23 Risk cross-subsidies refer to redistribution of health spending between high- and low-risk individuals (risk subsidies) and income cross-subsidies refer to redistribution between high- and low-income individuals (equity subsidies).
- 24 Details of a wide range of promising practices and links to further sources of information on them can be found in the country case study reports in Moat et al. (2014), Frenz et al. (2014), Pennington and Whitehead (2014), Kringos and Klazinga (2014) and in the comparative review summarising these practices, the evidence of impact on value for money and further evidence on entry points for these practices in the USA in Loewenson et al. (2014a).
- 25 These practices were identified as being relevant and feasible from the entry points in existing policy and institutional practice in the USA, and as an outcome of the dialogue with US policy, practice, funding and academic institutions in the international convening reported in TARSC (2014); Loewenson et al. (2014a) provide detail on examples of similar US practices, some at demonstration or pilot level or within particular states.

- 26 Several bodies in the USA assess technology and research comparative effectiveness, but the ACA provides that the Medicare-funded Patient-Centered Outcomes Research Institute (PCORI) cannot issue coverage guidelines or make treatment recommendations using cost-effectiveness research or develop or employ a dollars-per-quality adjusted life year... as a threshold to establish what type of health care is cost effective or recommended. In contrast, many HMIC countries assess and apply evidence on the effectiveness and value for money of new technologies, treatments and drugs, with examples such as the UK National Institute for Health and Care Excellence (NICE) guidelines reported to have contributed to transparency in decision making on technology, the standardisation and improvement of practice in many areas of care and equity in access to new technologies. See further detail in Loewenson et al. (2014a) and Pennington and Whitehead (2014).
- 27 As pointed to, for example, from HMIC experience by Christiaens W, Kohn L, Léonard C, Denis A, Daue F et al. (2013) 'Models for citizen and patient involvement in health care policy. Part I: Exploration of their feasibility and acceptability' Report No.: KCE Report 195C, Belgian Health Care Knowledge Centre; Belgium; Cornwall A and Shankland A (2008) 'Engaging citizens: Lessons from building Brazil's national health system' *Social science and medicine* 66(10):2173-218; and Loewenson R and Gilson L (2012) 'Chapter 10: The health system and wider social determinants of health' in Smith R and Hanson K (2012) *Health systems in low- and middle-income countries: An economic and policy perspective*. Oxford University Press: Oxford 219–42.
- 28 As outlined in Loewenson et al. (2014) there are examples of such practices in the USA, such as in health literacy, patient navigator initiatives, in HealthBegins training of PC providers in social roles, in practice innovations within CHCs and CCHs and in ACO platforms providing opportunities for including population planning and area clustered services.
- 29 These are more fully described in Subsecretaría de Redes Asistenciales (2013b) 'Orientaciones para la implementación del modelo de atención integral de Salud Familiar y comunitaria dirigido a equipos de salud', Ministerio de Salud, Subsecretaría de Redes Asistenciales, División de Atención Primaria: Santiago.
- 30 Subsecretaría de Redes Asistenciales (2013a) 'Orientaciones para la planificación y programación en red año 2014', Ministerio de Salud, Subsecretaría de Redes Asistenciales, División de Atención Primaria: Santiago, and Frenz et al. (2014).
- 31 Presentation by Frenz, Chile, in TARSC (2014). A visual example is available in Subsecretaría de Redes Asistenciales (2013b) at [http://buenaspracticapsaps.cl/wp-content/uploads/2013/11/Orientaciones-para-la-implementacion-del-Modelo-de-Atencion-Integral-de-Salud-Familiar-y-Comunitaria\\_DIVAP\\_2013.pdf](http://buenaspracticapsaps.cl/wp-content/uploads/2013/11/Orientaciones-para-la-implementacion-del-Modelo-de-Atencion-Integral-de-Salud-Familiar-y-Comunitaria_DIVAP_2013.pdf).
- 32 Ministerio de Salud (2012) 'Orientaciones para la implementación del modelo de atención integral de salud familiar y comunitaria' Dirigido a equipos de salud. División de Atención Primaria: Santiago.
- 33 Subsecretaría de Redes Asistenciales (2013a) and Frenz et al. (2014).
- 34 Key informant PC provider cited in Frenz et al. (2014).
- 35 The rollout of the BPS is more fully described in Frenz et al. (2014) and in Montero J, Téllez A and Herrera C (2010) 'Reforma sanitaria chilena y la atención primaria de salud. Algunos aspectos críticos, Temas de la agenda pública', Centro de políticas públicas UC (38):1-12. AUGE defines a list of 80+ priority health conditions for PC level services with enforceable guarantees of: maximum waiting times, adherence to evidence-based clinical guidelines and co-payment ceilings. Family health teams apply AUGE guarantees at the territorial – PC catchment area - level.
- 36 It is not possible to directly attribute to the BPS alone and this also reflects the role of the defined benefit plan, 'AUGE', in widening care/coverage at PC, as applied by the family health teams. From Frenz et al. (2014); Bitrán (2013) 'Explicit health guarantees for Chileans: The AUGE benefits package', World Bank: Washington, DC; Superintendencia de Salud (2013b) 'Estudio de opinión a usuarios del sistema de salud, reforma y posicionamiento de la Superintendencia de Salud' Santiago; Salgado O (2012) 'Foro internacional de APS y redes integradas', Presentación. OPS Colombia: Bogotá; Bitrán R, Escobar L and Gassibe P (2010) 'After Chile's health reform: Increase in coverage and access, decline in hospitalization and death rates' *Health affairs* (Project Hope) 29(12):2161–70.
- 37 National Health Service (NHS) (2010) 'NHS Constitution for England', at: [www.gov.uk/government/publications/the-nhs-constitution-for-england](http://www.gov.uk/government/publications/the-nhs-constitution-for-england). PC services are delivered through general practices organised in NHS commissioning boards at local, regional and national levels.
- 38 NHS Confederation (2014) 'General Medical Services', NHS: London, at: [www.nhsconfed.org/gms](http://www.nhsconfed.org/gms).
- 39 Pennington and Whitehead (2014).
- 40 From Pennington and Whitehead (2014) and NHS England (2014) 'Health watchdogs and authorities' at: [www.nhs.uk/NHSEngland/thenhs/healthregulators/Pages/healthwatch-england.aspx](http://www.nhs.uk/NHSEngland/thenhs/healthregulators/Pages/healthwatch-england.aspx). Image used with permission of Healthwatch England.
- 41 As reported in Pennington and Whitehead (2014) and Healthwatch England (2014) 'Financial performance and position 2013/14' at [http://www.healthwatch.co.uk/sites/default/files/healthwatch\\_england\\_13-14\\_financial\\_summary.pdf](http://www.healthwatch.co.uk/sites/default/files/healthwatch_england_13-14_financial_summary.pdf)
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- 43 Kringos and Klazinga (2014); Batenburg R and Eyck A (2011) 'The growth and decline of health community centres in Netherlands: A macrohistorical analysis,' *Journal of management and marketing in healthcare* 4:242-46; Van Til T, de Wildt JE and Struijs J (2010) 'De organisatie van zorggroepen anno 2010', Huidige stand van zaken en de ontwikkelingen in de afgelopen jaren. RIVM: Bilthoven; Hansen J (2010) 'Monitor multidisciplinaire samenwerking in de eerste lijn', NIVEL: Utrecht.
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- 90 Such as debates on single- and multipayer arrangements, on options for resource mobilisation, on how the contributions and responsibilities of other sectors and private for profit actors are managed or on ethical issues and fair benefit from new technologies in health.
- 91 Drawing on the evidence from the project as in Loewenson et al. (2014a), its key informants, US and international peer reviewers and from the international convening (TARSC 2014).
- 92 There are opportunities for drawing and building on many existing processes as outlined in Public Health Law Center (2014) and Fulcher C (2014) 'Community commons: A unifying public good for healthy, sustainable, and livable communities', *National civic review*, Spring. Public health departments, ACOs, CHCs and non-profit hospitals are required to produce a community needs assessment. Tools, indicators and online resources are available from the Community Commons ([www.communitycommons.org](http://www.communitycommons.org)), including a Health Needs Assessment tool kit, and the National Association of City and County Health Officials' Community Health Status Indicators (<http://www.naccho.org>). There are existing plans on health literacy: US Department of Health and Human Services (2010) 'National Action Plan to Improve Health Literacy', US DHHS: Washington, DC; patient satisfaction surveys are required in many Medicaid 1,115 Waiver projects; the RWJF County Health Rankings (<http://www.countyhealthrankings.org>) raise the profile of prevention and PC; university-based and other organisations - IHI, HealthBegins- support innovation as do initiatives of the CMS Centre for Innovation. These provide useful foundations for integrating learning from other HMICs for participatory mapping, family genograms and prioritisation of health needs from a community/population health lens.
- 93 As raised by delegates at the international convening (TARSC 2014).
- 94 Public Health Law Center (2014). 'Conference report: A collaborative, cross-sectoral, and local approach to health', Creating Accountable Communities for Health Conference, September 2013: Duluth, Minnesota.
- 95 CMS (2014a) 'State Innovation Models Initiative: General information', CMS: Washington, DC; CMS (2014b) 'State Innovation Models Initiative: Model testing awards round one,' CMS, Washington, DC; CMS (2014c). 'State Innovation Models Initiative: Model design awards round one,' CMS: Washington, DC.
- 96 Institute of Medicine (2011) 'For the public's health: The role of measurement in action and accountability', *National academies press*, Washington, DC; Magnan S, Fisher E, Kindig D, Isham G, Wood D et al. (2012) 'Achieving accountability for health and health care,' *Minn med* 97(11):37-9; Public Health Law Center (2014). In Minnesota providers receive a risk-adjusted payment to provide Medicaid patients on their panel with integrated behavioural and long-term care, public health and community and social services, supported by interprofessional care teams and community health workers.
- 97 Early entrants may be PC models that already apply more community health-oriented care, including community health centres, community-centred health homes, patient-centred medical homes, practices that are part of ACOs, given the planning, payment and resource sharing arrangements in place to support population health and comprehensive care, and services linked to non-profit hospitals that are required to invest in community benefits. However, the AHCC should also include and transform practice in the wider spectrum of PC practices and institutions.
- 98 Suggested to be between 30,000 and 50,000 at the international convening (TARSC 2014).
- 99 As raised in Nolen (2014), Loewenson et al. (2014a) and TARSC (2014).
- 100 Flinter in TARSC (2014) and Cronholm PF, Shea JA, Werner RM, Miller-Day M, Tufano J et al. (2013) 'The patient-centered medical home: Mental models and practice culture driving the transformation process,' *Journal gen intern med* 28(9):1195-201, note that even when NPs and PAs are present, they do not work at the 'top of their license' but rather perform low level tasks; and that other team members, such as CHWs and social workers, are not effectively deployed into the community.
- 101 Flinter (2014) in TARSC (2014).
- 102 Such as is advanced in the Consensus Model for Advanced Practice Registered Nurse Regulation by Rounds LR, Zych JJ and Mallary LL (2012) 'The consensus model for regulation of APRNs: Implications for nurse practitioners,' *Journal of American academy of nurse practitioners* 25(4):180-5.
- 103 TARSC (2014); Wagner E, Austin B, Coleman C (2006) 'It takes a region: Creating a framework to improve chronic disease care', California HealthCare Foundation.
- 104 de Brantes F, Gosfield AG, Emery D, Rastogi A, D'Andrea G (2009) 'Sustaining the medical home: How PROMETHEUS payment can revitalize primary care', May 9, RWJ: Princeton, NJ; CMS (2010) 'Medicare demonstrations. Details for Medicare Acute Care Episode (ACE) demonstration', CMS: Washington, DC.
- 105 Dullabh P, Adler-Milstein J, Hovey L, Jha AK (2014) 'Key challenges to enabling health information exchange and how states can help', NORC at the University of Chicago, August. Available at: [www.healthit.gov/sites/default/files/state\\_hie\\_evaluation\\_stakeholder\\_discussions.pdf](http://www.healthit.gov/sites/default/files/state_hie_evaluation_stakeholder_discussions.pdf) (accessed 10 October 2014).
- 106 Health Level-7 (HL7) (2014) 'About HL7,' Available at: <http://www.hl7.org> (accessed 10 October 2014).
- 107 Loewenson R, Laurell AC, Hogstedt C, D'Ambruoso L, Shroff Z (2014b) 'Participatory action research in health systems: A methods reader', TARSC, AHPSR, WHO, IDRC Canada, EQUINET: Harare.
- 108 Frey JJ (2014) 'Is Obamacare working?', *British journal of general practice* 360-61; Kaiser Family Foundation (2014) 'Kaiser Health Tracking Poll: May 2014', KFF: Washington, DC.

