Learning from promising primary care practice
models for the USA

Desk review of promising primary care practice in high- and middle-income countries

Sarah Simpson

Training and Research Support Centre

April 2014

Support for this research was provided by a grant from the Robert Wood
Johnson Foundation through Charities Aids Foundation America

Training and Research Support Centre
TARSC

Contents

Cite as: Simpson S. (2014) *Desk review of promising primary care practice in high- and middle-income countries*. Training and Research Support Centre

Acknowledgements: Acknowledgements and sincere thanks to Rene Loewenson for guidance, review and technical edit and input on the paper. Thanks to Alexandra Nolen for internal review in the development of the paper, and to Don Matheson, Graham Watt, Margaret Flinter, Susan Mende and MaryJoan Ladden for their external peer review of the paper including invaluable suggestions and additional references.

This programme is being implemented by Training and Research Support Centre. It is funded by the Robert Wood Johnson Foundation (RWJF) through Charities Aids Foundation (America). For more than 40 years RWJF (www.rwjf.org) has worked to improve health and health care, to build a national culture of health that will enable all Americans to live longer, healthier lives now and for generations to come. Follow RWJF on Twitter at www.rwjf.org/twitter or on Facebook at www.rwjf.org/facebook.

Executive Summary

The project ‘Learning from Promising Primary Care Practice Models for the USA’ is being implemented through Training and Research Support Centre with partner institutions through a grant from Robert Wood Johnson Foundation (RWJF) with the purpose of: identifying and describing promising primary care (PC) practice models and approaches from international experience with better health outcomes at lower costs than in the US that have relevance to United States (US) application, to inform policy and practitioner dialogue on models and measures that could be adapted or adopted in the US. This paper aims to present the findings from a desk review of the (major secondary) literature of key features of promising primary care practices in countries achieving better health outcomes at lower cost than the US and to provide an initial basis for identifying or verifying selection of four country case study sites. It seeks to highlight features of promising practice in a range of high- and upper middle-income countries that have achieved better health outcomes at lower cost than the US over the past 10 to 15 years.

The paper describes the methods used to capture and analyse the secondary literature, the approach to analysis and the main findings including limitations of the evidence and implication for selection of countries for case study sites. The analysis drew on the conceptual and analytic framework developed for the project. This framework locates PC practice: (1) within the socio-political, economic and health context and within the context of the policies, laws, governance, organisation and resources of the wider health system; (2) key elements of the PC system itself in terms of its inputs, content, processes and features; (3) its interface with social roles in health systems and features of society to (4) produce health service outcomes and health outcomes generally and between different groups in the population; and (5) ‘change management’ explores the organisational features and systems that support innovation and change in PC systems.

Eleven countries (mostly high- and upper middle-income) (Australia, Brazil, Canada, Chile, Cuba, Denmark, the Netherlands, New Zealand, Switzerland, Thailand, the United Kingdom (UK,/England/Scotland depending on the available information and timing) provided the bulk of information for the review with key pieces of information included from other countries where a specific study provided key information (e.g. Germany and the lower costs of a PC diabetes care, Spain in terms of documenting the lessons learned from the health reforms beginning in the late 1970s) and or the country was included as part of a cross-country study (e.g. France).

Overall, there has been strong investment in a range of measures and in a range of health systems contexts, including: incentives such as pay for performance, payment/financing approaches (increase of blended/mixed payment models, from FFS to capitation and some FFS); development of new models for PC, at the meso level e.g. networks, associations or divisions for several general practices and micro level, e.g. models for reorienting from solo practices to group/family/community practices; getting GP buy-in and involvement; workforce development, training, and quality improvement – quality improvement frameworks, evidence based guidance, coverage lists based on assessed treatments and health technologies; movement to population based and multi-disciplinary approaches, widening workforce options including community health workers, and or lay workers, patient experts etc; use of information technology and reporting and electronic medical records. There are similarities between countries with promising PC practices from wider contextual factors to specific PC practices, such as in workforce arrangements or prioritisation of prevention. Twelve features of promising practice were identified and build on key categories in the conceptual framework: in four areas: (1) *wider context* including a policy orientation to PC, public participation in governance and or state intervention to support goals; (2) *health systems context* including (i) universal coverage of prepayment and financial protection, (ii) purchasing arrangements supporting cost control (capitation) and PC improvement and (iii)

value for money and benefit sharing in new technology; (3) *PC services* including (i) workforce development supporting PC, (ii) comprehensive, person-centred care, and or management of multimorbidity, (iii) first access, enrolment with measures to address equity, longitudinal continuity, (iv) integration of prevention and public health, wider determinants and/or co-ordination across services for SDH, (iv) relational continuity, gatekeeping, co-ordination across referral levels, and (v) informational continuity, electronic medical records, IT, support for innovation and for PC practice improvements especially for smaller practices; (4) *social roles* including the involvement of patients, family, communities in personal care and community roles in local services; and (5) *change management* including monitoring, evaluation, information sharing, and or communication for system reform. There are also differences between countries with promising PC practices, with different approaches leading to similar outcomes. Also judgements on what is *promising* depends on the outcomes aimed for, whether in health, in the distribution of health outcomes, in improved quality or experience of health care for both providers and clients, and in efficiency and management terms. There are different interests around these outcomes, and different time frames for achieving them. Furthermore, there are the limitations of using published literature to understand complex systems, where not all factors are documented and hence the need for more in-depth country case studies.

Many of the examples highlighted that while increasing health expenditure is important it is not the sole driver of change. More often than not a desire to improve care and outcomes with cost considered in relation to effectiveness (measured by outcomes and their distribution across the population) was equally as important. While the evidence about improved health outcomes attributable to PC changes is not equivocal, it is improving and there is evidence of improvements in coverage (overall and in reducing inequities in coverage), reductions in unmet need, increased use of PC as the first point of entry, and a reduction in avoidable hospitalisations of people with ambulatory sensitive conditions – all of which make a contribution to improved health outcomes. Evidence from a recent study indicates that comprehensive PC calls for investment, and potentially increased spending to improve systems, while slowing down the rate of increase in health care spending. Improved population health however is not achieved solely by investment in PC but as part of a wider approach that involves action on the social determinants to create conditions for healthier populations and policies that actively protect people from exposure to harmful factors such as environmental tobacco smoke, environmental toxins and traffic accidents. Therefore understanding the wider social and economic environment together with the health system needs to be considered in the development of approaches to strengthen PC for better health outcomes, including how action by and with other sectors plus other parts of the health system can contribute to realising better health outcomes and enhance the contribution of PC. This will assist in identifying levers for action and lessons for application in other country contexts.

Much of the drive for overall and PC reform has come from the need to address the burden of disease from NCDs and related risk factors, together with an ageing population in most countries. This is reflected in the content and service features of many PC programs and services. However, some countries have also retained a strong focus on the generalist and primary prevention components of PC as well as strengthening PC capacity for better tackling NCDs. Also some evidence suggests that in future multimorbidity at younger ages will pose more of a problem and calls for a general rather than disease focused approach in PC. The limited information available about mechanisms and enablers for change and reform highlights the need for more in depth case studies. However on the information available, incremental change, piloting/testing of new approaches, getting cross-party and constituents ‘buy-in’ together with making evidence about options for change available in a range of formats, all appear to be important features for making and sustaining change.

1. Introduction

Primary care (PC) services include first contact integrated and accessible health care services that address the main physical, mental and social health concerns, through a sustained partnership between patients and a team of health workers in a family and community context. It is a core component of the Primary Health Care approach that puts people at the centre of service delivery, through measures for population health, prevention and care according to need and involving population groups in decisions and actions on their health. Primary care guides patients through the health system, ensuring effective referral to higher levels and other supporting services (WHO, 2013; Loewenson and Whitehead, 2012). The value base of a PHC approach, its focus on equity, on the social determinants of health and social justice are critical to realising the full potential of the PC approach. Also, PC is comprehensive in that it manages all but the most unusual and complicated conditions that people present. In strong PC systems this contact and or care takes place where people live and or work. The definition of PC is further elaborated in the conceptual framework paper (Loewenson and Simpson 2014) developed to inform this work.

The project *Learning from Promising Primary care (PC) Practice Models for the USA* being implemented by Training and Research Support Centre (TARSC) with partners seeks to: identify and describe promising PC practice models and approaches from international experience with better health outcomes at lower costs than in the United States (US) that have relevance to US application, to inform policy and practitioner dialogue on models and measures that could be adapted or adopted in the US.

The paper presents the findings from a **desk review** of the (major secondary) literature of key features of promising primary care practices in countries achieving better health outcomes at lower cost than the US. It is one of four background papers used in a synthesis paper developed to identify countries for proposal as case study sites for deeper work in gathering evidence on promising PC systems and models and their contexts that have relevance to / match for US policy and practice (Loewenson, Simpson and Nolen 2014). This paper seeks to highlight features of promising practice in a range of high and middle income countries (HMICs) (largely upper middle income) that have achieved better health outcomes at lower cost than the US over the past 10 to 15 years.

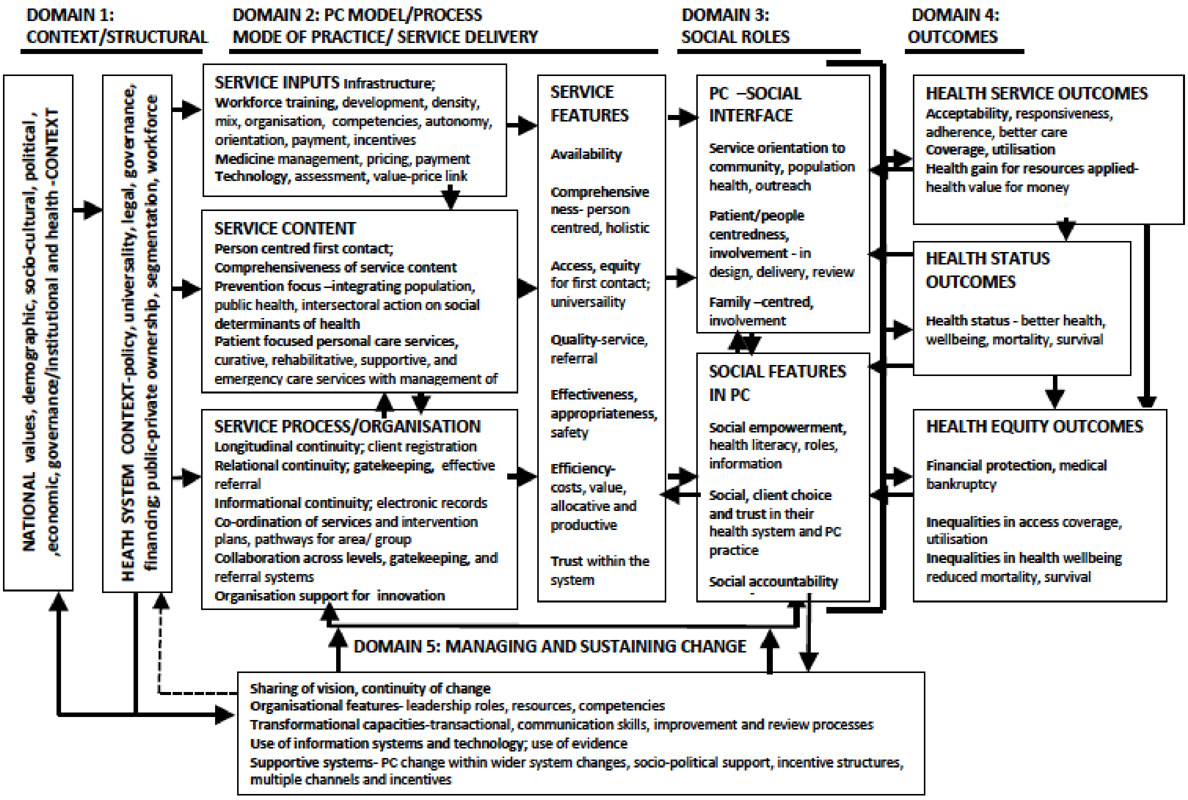
2. Methods

The analysis drew on the draft conceptual and analytic framework developed for the project shown in Figure 1 overleaf (Loewenson and Simpson 2014). This framework has 5 domains and locates PC practice within: (1) **structural contexts** for and structural determinants of PC systems including socioeconomic and the wider health system; (2) the **PC system** itself, and its inputs, what it covers, and the processes and features of the PC services; (3) the **social roles** in health systems, including the nature of the social interaction between personal care and population health services and their clients, their families and communities, addressing the diversity of communities and individuals in society, and the social features within the community; (4) the **outcomes** of the health and particularly the PC system, in terms of service outcomes such as acceptability and health service coverage; and health status outcomes overall and their distribution; and (5) **managing and sustaining change,** an important focus of this project including how change is introduced, managed, sustained (and resisted) in PC systems, across all levels.

2.1 Search strategies

The desk-review of the secondary literature used the main domains of the conceptual framework as above. It did not aim to implement the methods for a systematic review. The search thus sought to obtain an overview of the extent and size of the field of available literature. An initial search was undertaken using PubMed with key words for the five domains of the conceptual framework including: policy; workforce; models; financing/finance; participation – public participation, public consultation or public engagement; outcomes – equity or efficiency or effectiveness or continuity or low cost or access; and change management - continuous quality improvement or change management or quality improvement.

Figure 1: Conceptual framework for analysis of the role of PC



Source: Loewenson and Simpson 2014

The linked search terms were “Primary care” OR “Primary health care”, and NOT “United States” (MESH terms). Using PC OR PHC in relation to models was undertaken to identify if using the terms ‘family medicine’ and ‘general practice’ in the PC OR PHC category changed the results but found no additional articles. The time frame was 2000 onwards. No languages were excluded to allow for any articles in Spanish or French. Some of the searches generated more than 7,000+ abstracts for particular domains/terms e.g. financing, outcomes. Some of the initial sets of all the abstracts were reviewed e.g. policy and workforce, providing a useful overview of the range of countries (all income types) taking action and or key challenges with PC. It also gave some insight into the issues that have been arising and or how they are framed in the literature. To make the approach workable and refine its relevance, only reviews within each set of abstracts were reviewed. From this a much smaller set of publications was identified for review against each domain.

The European Observatory on Health Systems and Policies website, was also reviewed, particularly the online health systems in transition (HiT) reports and the Health Policy and Systems Monitor (HPSM). This further refined the selection of articles from the PubMed search, particularly those with reference to improved or better health outcomes. These were checked against latest HiT reports where available. Key reports such as the 2008 World Health Report on PC were identified and included as a result of previous search strategies (e.g. for the conceptual framework). Further reports were added through round of review and exchange between the author and other members of the team (R Loewenson and A Nolen). In total 83 references were used in the desk-based review. An overview of the 83 and a brief rationale for their inclusion is available from the author. There is *limited* reference to the US literature and or US developments except for multi-country studies, because these issues are covered in the US literature review.

2.2 Comment on the methods and limitations

The size and scope of the topic and field of PC means that the search is likely to have omitted some articles. Discussions with the other investigators on the project, helped to elicit some additional key references. Also, there was a need to find a balance between understanding enough detail about PC in specific country contexts and not undertaking a case study for each potential country identified. While the search was done using all fields, some articles may have been excluded that on further reading would have contained additional and new information, particularly around the gaps in the findings.

PubMed does not pick up grey literature and again this means that key pieces could have been missed. Grey literature included was identified through snowballing, further review of the literature e.g. reference lists, HiT reports identifying additional studies and or through the literature review for the conceptual framework. Although without language restrictions, it was not possible to review studies in any other languages than English given the timeframe. Some potentially relevant articles identified through the review of abstracts were excluded and this could represent a gap e.g., efforts in Germany to increase the appeal of PC and increased recruitment to PC. However publications such as the international profiles of health care systems (Thomson et al., 2013) provided enough supplementary information to be included. Also, a previous search for development of the framework of key sites for grey literature (The Commonwealth Fund, Kaiser Family Foundation, Health Systems Evidence, and Centre for Health Systems Change) identified additional key articles included in this review. Efforts to seek data that is comparable through use of reports and profiles such as those by the Commonwealth Fund can limit the field of comparator countries. The intention in this review is not to generate a list of all HMICs with PC experience but broadly representative evidence of recent experience in innovation, major system change and so on.

Finally what gets published in the grey or peer reviewed literature is not necessarily a reflection of what is happening in the field. It needs supplementation by follow up with key informants. The review sought to provide information to be used with other evidence to identify countries for such follow up deeper work, including key informant interview. Many of the papers provide evidence of system practices and reforms with inadequate information on their impact on health outcomes and on the debates or tensions around their introduction or the change management strategies. To better inform any model adaptation deeper analysis needs to be obtained through more detailed country work. This desk-based review describes what has been found, what is being done and what based on the information used, looks to be features of promising practice. Therefore these findings are not presented as an assessment, endorsement and or score for PC for any country, unless the information presented is based on such an exercise e.g. strength of PC study (Kringos et al., 2013a).

3. Findings

Development of the conceptual framework highlighted that the definition of primary care (PC) or primary health care is not easily captured. Loewenson and Simpson (2014) point to a diversity of understandings of PC, its application, purpose and potential. There are a diversity of assumptions about the drivers and health outcomes of PC and of the underlying values, principles and intent of approaches in PC, such as of equity as an outcome and ’patient’ or ‘people’ centred PC. None of the definitions reviewed captures PHC alone, or in its fullest sense or potential. Nor (quite intentionally) does the 2008 World Health Report (WHR) on PC provide a neat explicit definition of either PC or PHC. It both maps the changes in thinking and the focus of PHC through experience and application since Alma Ata in 1978 (see *Appendix 1*) and provides a 100+ page definition through its identification of 4 areas for reform (see *Section 3.2*) to better realise the goals of PHC. A key message is that people-centred PC also needs to be located as part of a wider PHC approach and that PHC needs to be seen as part of a wider health and social policy approach(es) (WHO, 2008).

A wide range and number of HMIC countries were identified from the abstracts[1]. From the search strategy only comparative studies were used, highlighting a set of cross-country studies/papers on PC and or health reforms with a strong and common focus on learning across the following 7 countries - Australia, Canada, Denmark, the Netherlands, New Zealand, the UK, and the United States (McDonald et al., 2008; Meyers, 2012; Naccarella et al., 2008; Willcox et al., 2011). For example, in 2012, the Journal of the American Board of Family Medicine (JABFM) published a series of papers from a 2010 event hosted by the Agency for Healthcare Research and Quality together with the Commonwealth Fund, to look at lessons learned from reforms within 6 PC systems around the world (Australia, Canada, Denmark, the Netherlands, New Zealand and the UK) (Goodyear-Smith et al., 2012; Nicholson et al., 2012; Pedersen et al., 2012; Roland et al., 2012; Strumpf et al., 2012; van Weel et al., 2012). Other country experiences were explored, including: an invited review paper on lessons from PC reform in Spain for the US context (Borkan et al., 2010); papers on PC and health outcomes in Cuba; and a global paper on the prospects for the PHC agenda in 12 countries using the 2008 World Health Report on Primary Health Care as a basis for analysis. The latter included 6 of the 7 countries above, (with the exception of Denmark) and also included a review of experience in Hong Kong, Japan, Singapore, South Korea, Taiwan, and Germany (Gauld et al., 2012). Therefore specific findings are largely presented with regard to experiences from the following 11 countries: Australia, Brazil, Canada, Chile, Cuba, Denmark, the Netherlands, New Zealand, Switzerland, Thailand and the UK (with specific differentiation between countries in the UK where relevant, and a particular focus on England and or Scotland). *Table 1* provides an overview of main contextual characteristics of these 11 countries to enable some comparison.

Table 1: Main characteristics of 11 countries of focus

Country	Population Size	Federal or unified	NHS or SHI system
Australia	23,390,571	Federal	NHS
Brazil	199,321,000	Federal	NHS
Canada	34,881,000	Federal	NHS
Chile	17,400,000	Unified	SHI
Cuba	11,164,000	Unified	NHS
Denmark	5,627,235	Unified	NHS
The Netherlands	16,825,841	Unified	SHI
New Zealand	4,514,728	Unified	NHS
Switzerland	8,112,200	Unified	SHI
Thailand	69,520,000	Unified	NHS
United Kingdom	63,700,000	Unified	NHS

Source for population size: Office of statistics in each country and or the World Population Statistics site - http://www.worldpopulationstatistics.com/ , accessed 20 February 2014).

3.1 Domain 1: Context

Health systems as a reflection of social values

As indicated the field of PC/PHC is underpinned by a strong values base – equity, social justice, and the wider determinants of health or community participation. Understanding both (1) the stated or explicit values of PC/PHC approaches e.g. equity, the right to health and (2) the underlying social values/beliefs/attitudes that influence or have influenced the type of PC/PHC options and approaches are relevant to this study. The former is more readily identifiable through review of PC policies or approaches and largely captured in *Section 3.2.* Very few studies of the underlying social values that drive or determine the PC approach, were identified, reflecting both a limitation of the literature reviewed as well as a different approach within the field of PC. Kringos et al (2013b) however used data from a 2009/2010 study on the strength of PC in 31 European countries (including 27 EU member states, Switzerland, Turkey, Norway and Iceland) supplemented with additional data to undertake a parallel analysis of the political, economic and cultural foundations of PC in Europe. This included an assessment of values/value systems

---

[1] Australia, Brazil, Canada, Chile, Cuba, Estonia, Finland, France, Germany, Greece, Hong Kong, Iran, Iraq, Japan, Korea (South), Kuwait, Latvia, Lithuania, Malaysia, the Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, South Africa, Spain, Switzerland, Taiwan, Thailand, Turkey, UK (England) and United Kingdom (Scotland) and the United States.

within a country about levels of government involvement, family-oriented care and social support systems, and science and technology to better illustrate the differences between countries in terms of healthcare policy priorities, service delivery, utilisation and outcomes. For example, *countries where people value*: (1) stronger government involvement were associated with higher accessibility of PC; (2) tight family orientation had a significantly weaker PC structure and coordination of PC, and smaller scope of PC services provision; and (3) value the use of science and technology had more comprehensive PC services delivery, especially in countries with National Health Services (NHS) and Social Health Insurance (SHI) (Kringos et al, 2013b).

Cornwall and Shankland (2008) argue that the 'users as choosers' logic dominates the values base for health systems reforms in north and south countries (Cornwall and Shankland, 2008): 2174). Both Brazil and Scotland however appear to have moved beyond this a market-based approach and reoriented their health systems more in line with rights-based principles (Brazil) and or the language of mutuality (Scotland), and shared social contracts. For example, the principles of **Brazil's** Sistema Unico de Saude (SUS) are universality, comprehensive care, equity, decentralisation and *controle social* (social oversight), with the right to health as the explicit duty of the State as reflected in the 1988 Constitution. The "paradigm shift" to a rights-based system with PHC focus, is the result of a combination of factors in the post-dictatorship period (1985+) including: the democratisation of political and societal institutions; building on popular discontent which mobilised in "people's health movements"; having leading (public health) reformers in key positions in federal and state-level health bureaucracies; innovative institutional experiments – people's health councils established as part of earlier community health action/advocacy for greater accountability; and a political commitment to the provision of publicly funded services to all Brazilians. The SUS has moved from its early party political origins to "… become state policy – embedded in the fabric of the State and therefore very difficult to supplant." (Cornwall and Shankland, 2008); 2175) (see *Section 3.4* and *Appendix 14*).

Reorientation away from a market driven approach in **Scotland** is argued to have its roots more in developing a distinctive national approach to health and public services as part of devolution. The Scottish Labour manifesto for the 1997 UK general election promised early action to abolish the internal market. Even prior to 1997 the Scottish Conservative party was cautious about adoption of the market driven approach. Responsibility for health was devolved to the first Scottish Parliament and Executive in 1999. *Appendix 2* outlines relevant major policy statements and reforms in Scotland between 1997-2011 that includes 3 stages – dismantling of the internal market, an emphasis on integration and collaboration, and the concept of mutuality (2007+). The latter reflects the language of the Scottish National Party government referring to building on "our traditional values". Key documents since 2007 emphasise the continuation of a publicly provided services (albeit more outcome-focused, integrated and collaborative), and that the Scottish people are not just users of the NHS but also owners with rights and responsibilities. Steel and Cylus (2012) argue that all three political parties share similar objectives for the Scottish health system with "… near unanimity of political support for the aims of health policy and for preserving the distinctive character of the health system in Scotland." (Steel and Cylus, 2012): 121).

Demography and epidemiology as drivers of change and PC orientation

In most of the 11 countries reviewed, ageing together with noncommunicable diseases (NCDs) and or chronic conditions including HIV (now a chronic disease in many countries due to the success of treatment with ARVs) are an important driver for changes to the health and or PC system.

The burden of disease, workforce pressures and effects on patient wellbeing from increasing rates of chronic disease, is 1 of 3 reasons given for the need for reforms to PHC service provision and restructuring of the health system in **Australia**. Population ageing predominantly affects the burden of disease despite an increase in fertility rates and migrants. The other 2 (interrelated) reasons for change are ensuring appropriate care and improving equity (Department of Health and Ageing, 2009b). Healthy ageing is emphasised in the 2009 prevention strategy including adapting health systems to the needs of older people (Department of Health and Ageing, 2009a). A range of funding programs/initiatives for GPs, PC practices and or Divisions of General Practice, were introduced from the late 1990s onwards to respond to the need for changes to PC practices in management of NCDs, facilitate multidisciplinary planning and improve access to people living in rural areas including: Practice Incentive Payments, Service Incentive Payments, Service Outcome Payments, and Enhanced Primary Care (McDonald et al., 2008). Home medication review programs were part of this and targeted older people. While Urbis Keys Young (2005) found that pharmacists expressed satisfaction at participation in the program a lack of accredited pharmacists constrained the uptake, as well as concerns about the level of remuneration (McDonald et al., 2006). Rebates for GPs in chronic disease management were introduced in the payment schedule for care in 2005 (McDonald et al., 2006; 2008).

Spain's care programme for older people is part of its generalist PC services and package of care through the Spanish national health system (SNS). It includes targeted health promotion and prevention activities, monitoring of people with multimorbidity and multimedication,together with detection and follow-up of older people in a situation of social risk (García-Armesto et al., 2010). In **Cuba**, NCDs are the cause of 76% of all mortality with annual NCD-related mortality at 642.2 per 100,000. A policy commitment to address NCD risk factors was ratified in 1992 followed by a national NCD Program in 1996 emphasising PC, the role of hospitals and provincial hygiene and epidemiology centres. In 2007, building on previous NCD surveillance efforts, Cuba redesigned and implemented a decentralised surveillance strategy in 12 municipalities to be able to identify the distribution and trends of major risk factors for NCDs at the municipal level (Varona et al., 2014).

A WHO consultation with European countries, on PC and NCDs, stressed that while the epidemiology shows high rates of NCDs such as diabetes or cardiovascular disease (CVD), it is also important to focus on **multi-morbidity** (MM) or co-morbidities (WHO, 2012). While the literature reviewed touched on multi-morbidity, there was limited information about specific interventions or PC approaches to multi-morbidity per se. Starfield (2011) also highlighted the need for attention to multi-morbidity, especially in PC practice stressing its value as a people not disease focused practice, and to ensure resources can be effectively used. She proposed development of guidelines for multi-morbidity for PC with a focus on people and populations and the interrelationships between risk factors and illnesses (Starfield, 2011). While multi-morbidity does increase with age, a recent study from **Scotland** highlights the importance of *also* acting during middle age. Key findings were: (1) although multiple morbidity rises with age, most people with MM are under 65 (in Scotland); (2) of the 40 most common chronic conditions, *people with only one of each condition are always a minority* – most people have several problems, sometimes clustering around CVD, diabetes, hypertension etc but often involving disparate conditions such as depression and prescription analgesics for undiagnosed pain; and (3) multi-morbidity occurs 10-15 years earlier in deprived populations, where mental health problems are the commonest co-morbidity. The authors note that the single-disease framework approach which informs most health care, medical research and education is limited and recommend a complementary approach supporting GPs to provide personalised, comprehensive continuity of care, especially in socioeconomically deprived areas. (Barnett et al., 2012). The Scottish study was possible because of availability of electronic health records, which are used for registration of patients, morbidity recording and prescriptions (see *Section 3.3.*).

'Care Plus' is a separate funding arrangement established in **New Zealand** (2004) as part of the 2001 PHC Strategy, for those with chronic illnesses (McDonald et al., 2008). It aims to improve chronic care management, decrease inequalities, improve PHC teamwork and decrease the cost of services for people who are designated to be "high-need PHC users". A Care Plus patient receives comprehensive assessment and health needs planning with regular follow-ups, at a low or reduced cost as part of the scheme (Ministry of Health, 2011b; Centre for Health Services Research and Policy, 2004). A 2007 evaluation found that enrolment had been slower than expected and uneven across Primary Health Organisations (PHOs), and it was not well suited to people who needed intensive support for chronic conditions such as those with mental health problems. However the program was positively regarded by all actors - government, GPs, PHOs and patients (Gomez and Ashton, 2007). Overall funding is based on a capitation formula, with the level of funding paid to PHOs dependent on the percentage of the eligible number of Care

Plus patients receiving Care Plus services. As the PHO enrols more Care Plus patients their level of funding increases (Ministry of Health, 2011b).

In **England**, there has been a decrease in mortality from heart disease together with the increase or plateauing of avoidable mortality from some cancers. This has been attributed to a combination of factors including changes in lifestyle and behavioural risk factors and wider policy and population initiatives, such as smoke free legislation and a ban on tobacco advertising (Boyle, 2011; Office of National Statistics, 2013) (see *Section 3.5*). It also highlights that much of the existing demography and epidemiology influencing NCDs is also linked to the wider social and economic context in which health is created and wider public health efforts (*Section 3.2*).

Limited investment in preventive medicine and health promotion in **Chile** prior to this century increased health care gaps among people in a country experiencing a late stage of epidemiologic transition away from infectious diseases to degenerative diseases (Szot 2003; Concha and Aguilera, 1996 in (Bastias et al., 2008) and with an ageing population. This profile has informed reorientation and reform of the PHC system in Chile, which has retained a focus on general PC. For example through 3 programs: (1) well-baby and healthy children (0-9years); (2) Maternal Health including family planning and prenatal care with coverage of 90+%; and (3) Adult Health, preventing and managing risk factors among adults and people aged 65+ years together with programs dedicated to managing chronic diseases. Primary prevention begins with ante-natal care at the primary health clinics, the entry point for *Chile Crece Contigo*, the intersectoral early child development program, continuing to 4 years of age (see *Section 3.2*) (Vega, 2011). Also, Chile, England and Australia implemented changes in the past 15+ years to improve mental health care and or access to mental health practitioners at the primary level (Araya et al., 2012; McDonald et al., 2008; Roland et al., 2012), (see *Section 3.3*..

In the **Netherlands** PC has been reoriented to emphasise prevention by including more diagnostic and surgical procedures, and funding arrangements to enable delivery of more coordinated care for chronic conditions. Also some (large) groups of family practices work in cooperatives to jointly contract support facilities, such as laboratory facilities to measure pulmonary function in combination with expert advice on diagnosis and management and support for the management of diabetes mellitus (van Weel et al., 2012). PC seems to have also retained its generalist focus, with high levels of vaccination coverage and early child visits to PC as a key feature, and most prenatal care and childbirth under the care of (non-nurse) midwives, including homebirths for uncomplicated deliveries (Schäfer et al., 2010). In **Singapore**, HealthConnect aims to reorganise services around the needs of patients with chronic disease and provide the tools for self-care (Gauld et al., 2012).

During the 2000s, **England** focused on the health of people in 70 local authority areas with the worst health and deprivation indicators (28% of the population) “spearhead groups”. The groups were prioritised as a focal point for delivery of specific health programmes to improve prevention of ill health (improved reach of diagnosis and referral for conditions such as CVD) and treatment through PC (Department of Health, 2009). The former Primary Care Trusts partnered with local authorities to identify local health inequalities targets and by more effective prioritisation and targeting of disadvantaged groups including action such as: better management of blood pressure and cholesterol levels by GPs; and reducing smoking during pregnancy and adult smoking prevalence as a whole (Department of Health, 2005). Also the policy *Choosing Health: Making Healthier Choices Easier* (2004) aimed to make it easier for people to make healthier choices offering practical help to adopt healthier lifestyles covering alcohol, smoking, mental health and wellbeing and obesity. The evidence about impact on inequalities as a result of the English strategy including these actions is not equivocal, with some inequalities widening largely due to poor policy design, limited scale of implementation and unrealistic timeframes (Mackenbach, 2011). In addition, a range of examples of PC action focused on improving the access of disadvantaged groups to health systems and services from wider Europe are documented in three WHO publications and a related website of health systems actions to tackle socially determined health inequalities (e.g. a programme to improve the access of homeless people in Austria to primary care) (Koller, 2010; Harrington and Simpson, 2010a; WHO, 2010; Loewenson and Whitehead, 2012).

Finally, re-educating and or providing training to PC providers in self-management is an important component for enabling improved provider capacity to support patient's self-management of chronic conditions and thereby improve their health and care. This requires providers to have specific core competencies (e.g. conducting holistic and comprehensive assessments) and for the PC services and systems to be designed in ways that respect inclusion of self-management support as a key objective of care (Department of Health Victoria, 2014) (*Sections 3.2 and 3.3*).

Governance of health systems

Of the 11 countries reviewed, Australia, Canada and Brazil are federal systems, and as such have contextual relevance for the US. *Appendix 3* provides an overview of the organization of the health systems in Canada and in Australia. **Australia's** system is quite convoluted with two levels of government responsible for PC funding, organization and management in Australia making it a *mixed* Commonwealth/State responsibility. Canada by way of contrast, places funding and policy responsibility for PC at the *jurisdictional* level (Healy et al., 2006; McDonald et al., 2006; Marchildon, 2013) – see *Appendix 3*.

Canada has 13 provincial and territorial health care systems that operate within the Canada Health Act (1984). The act sets out the standards to which provincial health insurance programs must conform to receive federal funding (Canada Health Transfer): universality, portability of coverage among provinces, public administration, accessibility, and comprehensiveness (defined as medically necessary health services provided by hospitals and physicians) (Marchildon 2005 in (Hutchison et al., 2011). The federal government keeps important "steering" responsibilities through the act with provinces wanting to receive their full funding. However in times of crisis, the federal government cannot reduce funding levels without agreeing to some trade-off with the provinces, so full funding has continued but there has been no sustained effort to expand the basket of universally covered services, which has enabled "narrow but deep" coverage to continue (Marchildon, 2013): 122). After 2014 the federal transfers will be done on a per capita basis (rather than including a regional equalisation component). The transfer will increase by 6% for the 3 years following 2014, and after this any increases in the transfer will be tied to Canada's rate of economic growth with a minimum floor of 3%. In addition, the federal government will no longer use federal spending power to encourage or set health system goals – this will need to be done by provincial governments (Marchildon, 2013).

Health benefits through employment based health insurance are not taxed, so as to encourage Private Health Insurance (PHI) coverage for non-Medicare services and pharmaceuticals (Marchildon, 2013): 22-23). Health Canada, also provides supplemental coverage for a range of non-insured health benefits (e.g. dental and vision care, medical transportation to access medical services etc) for registered Indians and recognised residents, and with the Public Health Agency of Canada provides population and community health programmes in First Nation and Inuit Communities (Marchildon, 2013). At the provincial/territorial level, legislation is in place for governing the administration of a single-payer system for universal hospital and physician services (Medicare) (Marchildon, 2009 in (Marchildon, 2013). Regional Health Authorities (RHAs) are responsible (in most provinces) for providing and purchasing hospital and long-term care and other services designated by provincial law since the late 1980s but are not funded for provision of physician services. Provinces set the rate of remuneration for physicians in negotiation with provincial medical associations (Marchildon, 2013).

In 2000, the First Ministers (Prime Minister of Canada, and Premiers of each province or territory) established a CAN $800 million PHC Transition Fund to accelerate PHC reform. This has been used to support pilot and demonstration projects plus research at the provincial/territorial and national levels, see *Section 3.3* and *Appendix 10* for more about the impact of the Fund. This reform process was given additional stimulus from 2 national reviews of health care in 2002, together with growing concern by politicians and the public about health care access and equity, and PC practitioners themselves about working conditions, ability to provide high quality care and a decreasing interest in PC as a profession among medical students. Despite a decentralized and voluntary approach to reform, Hutchison et al (2011) note that the objectives of PC reform have been largely similar across provinces and territories, with some differences in terms of patient experiences, capacity for quality improvement and mechanisms for wider public engagement (Hutchison et al., 2011).

Brazil has a mixed health system (Sistema Unico de Saude, SUS) with a variety of financing and provision arrangements, with supply of health services split into 3 main subsystems. SUS accounts for less than 50% of total health expenditure, private insurance 24% and household out of pocket expenditure 31%. The SUS is fully and jointly funded by taxes from all 3 levels of government. Key reforms as part of the introduction of the SUS included federal capitated and variable funding; explicit agreements between different levels of government outlining roles, responsibilities, indicators and targets; and continuous monitoring of performance indicators including changes to making results available to the public (Couttolenc and Dmytraczenko, 2013) (see *Section 3.2*).

An overview of key PC policies and reforms in countries

Previous sections have documented that health and or PC reforms reflect a range of drivers and objectives, including cost containment of health care, better health care (improvement in coverage, use of services, effectiveness and quality) and improved health as a result (reduced risk factors and or related chronic diseases, better management of existing chronic disease, reduced need for higher levels of care), and more equitable distribution of both health care and health outcomes. In some countries reforms or developments were part of an overall major or radical reform to the health system, focusing on health for all and or improving universal coverage (e.g. Turkey) usually part of wider socio-political change within the country (Spain, Brazil and Thailand) (Borkan et al., 2010; Cornwall and Shankland, 2008; Couttolenc and Dmytraczenko, 2013; Yiengprugsawan et al., 2010). While in other countries the reforms have been to well-established health care systems with strong attention to universal coverage, where PC has long been the first point of entry to the system (such as UK, the Netherlands and Denmark) (Pedersen et al., 2012; Roland et al., 2012; van Weel et al., 2012). The brief summary descriptions of the reforms do not capture the policy tensions, debates, and links to wider political, economic, social and market reforms.

At the **global** level, the 2008 World Health Report on PC set out four sets of ‘desired’ PC reforms: (i) universal health coverage to improve health equity; (ii) service delivery reforms to make health systems people-centred; (iii) public policy reforms to promote and protect the health of communities; and (iv) leadership reforms to make health authorities more reliable (WHO, 2008). The subsequent WHR in 2010 focused on health systems financing and the path to universal coverage, raising a range of issues about the concept of universal health coverage (UHC) and how health financing reforms can be used to influence specific health system goals and or intermediate objectives (see *Section 3.2*).

In **New Zealand** the national PC policy in place since 2001 aims for a primary care-led health system with an emphasis on health promotion, prevention and population based care, implemented through new PHOs largely via capitation funding (Goodyear-Smith et al., 2012). This funding reform was significant, given a 50-year debate between GPs and the government, with the medical profession preferring fee-for-service (FSS) (Matheson and Neuwelt, 2012). A report by a key advisory group to government (National Health Committee) provided evidence for the different approaches, based on a review of the international literature for PC and successful interventions. During the 1990s action on PC included establishment of the Independent Practitioner Associations (for GPs) (usually networks of 30-40 GPs) and devolution of purchasing PC to the Regional Health Authorities. The structure and funding for PHOs has changed over the years (Quin, 2009)) (see *Section 3.3*). A new policy direction/initiative, *Better, Sooner, More Convenient*, (2009) was introduced to create *better* services for patients by removing barriers and creating a continuous health service, where they receive services *sooner* and more *convenient* to where they live, given that more people live close to their GP that the local hospital (Ministry of Health, 2011a). The new policy left the 2001 structural changes largely in place and focused more on improving efficiency (rather than equity) (Matheson and Neuwelt, 2012).

PC reforms in **Australia** began in the 1990s but it was not until 2010 that Australia had its first national PC policy to build: “A strong, responsive and cost-effective primary health care system … central to equipping the Australian health system to meet future challenges.” (Department of Health and Ageing, 2010): 10). This is being implemented as part of a wider National Health Reform process (Department of Health and Ageing, 2011a). A change of national government in September 2013 means further changes are likely but these were not yet publicly available at the time of writing. Aboriginal and or Aboriginal and Torres Strait Islanders, are covered as part of the mainstream PC and health care arrangements. In addition, nationally funded Aboriginal and Torres Strait Islander-specific primary care services are also available, however, a 2010/2011 assessment found that only 54.5 per cent of Australia’s Aboriginal and Torres Strait Islander peoples accessed these services and that in 2008, only 13 per cent of these services were located in major cities. Greater involvement of Australian Aboriginal and Torres Strait Islander people’s in PC services, building the capacity of Aboriginal community-controlled primary care services, and strengthening of mainstream PC services and practices to be more responsive to Aboriginal people’s needs were key recommendations (Australian Medical Association, 2011). Recognizing the challenges, there are some important and innovative approaches to quality improvement for PC among Aboriginal community-controlled health services in Australia, (see *Section 3.5*).

In the **Netherlands**, the Sick Fund Law has been in place since 1941, with the purpose of improving the health of the Dutch population. It required people to be listed with a family physician who provides them with health care and coordinates access to other levels of care. Major reforms to the Dutch system in 2006 introduced a single compulsory SHI scheme, where multiple private health insurers compete for insured persons. The aim is for universal private insurance, whereby patients are covered by a single insurance company of their choice for their health care – everybody must have insurance, and insurers must provide coverage irrespective of existing health status and for a statutory set of services (see *Section 3.2).* Key changes included: more market mechanisms to create incentives for increased organisational efficiency and reduced health care expenditure; changing the role of government from direct controls to setting “the rules of the game” and oversight; and the health insurers, health care providers and citizens became the market players, and who interact with each other at 3 different levels (Schäfer et al., 2010). PC remains a guiding principle (van Weel et al., 2012). Also the reforms were proceeded by a range of incremental and piloted changes (Schäfer et al., 2010), outlined in more detail in *Appendix 4*. In **Thailand**, a Universal Coverage Scheme (UCS) was introduced in 2001 through two main reform initiatives – reform of the budget allocation and strengthening PC with continued investment in resources such as primary health care centres (Pongpirul et al., 2009; Yiengprugsawan et al., 2010) (see *Appendix 5* about the change particularly harmonising finances for UHC).

A new strategy (FHP) for reorganising PC around a family health approach was introduced in **Brazil** the 1990s including a comprehensive package of services and specific population programs e.g. indigenous groups, prisoners and newly immigrated populations. Reforms have included: federal capitated and variable funding; explicit agreements between different levels of government outlining roles, responsibilities, indicators and targets; continuous monitoring of performance indicators including changes to making results available to the public; and changing employment arrangements so that municipalities that implement the FHP can use contract workers, particularly in the face of budget restrictions (Couttolenc and Dmytraczenko, 2013).

In **England** the policy context has been changing rapidly since 2010. From 1990-2010, PC reform took place within a well-established NHS, with district health authorities replaced by Primary Care Trusts (PCTs) beginning in April 2000 and 303 established by April 2002. PCTs were initially established with 3 objectives: to purchase care for local communities from hospitals and other local providers; to directly provide services such as community care; and to work with local agencies to tackle health inequalities and improve public health. PCTs were responsible for these areas with a view to meeting the health needs of their local communities/their local geographically defined population (Primary Care Trust Network, undated.; Boyle, 2011). Since 2010 the Coalition government passed reforms, with some contestation, titled *Liberating the NHS* removing the obligation of the state to provide health care, opening the way for new actors, and with the stated policy intention of emphasising patient choice, accountability and reduced bureaucracy, moving towards GP led Clinical Commissioning Groups (CCGs) in 2013 (Department of Health, 2010; Roland et al., 2012), dramatically changing the policy landscape. While, Scotland and England have had largely similar health system and PC objectives in the past 15+ years they have pursued different approaches to achieving these objectives (Steel and Cylus, 2012) (see *Section 3.2*), potentially reflecting different (underlying) social values between the two countries about liberalisation, universality and cost-efficiency and or different opportunities and mechanisms for societal input and debate.

Wider public policy and public health efforts

The literature on health systems performance now better reflects the need to consider both the wider social determinants and their contribution to health. This includes how the health system operates as a social determinant of health (SDH) (such as in terms of accessibility, universality, PC focus) and as a system that is socially determined, by the wider values that underpin the system, the resources allocated, the role of government and or private sector and the regulation of harmful substances. Intersectorality is therefore understood to be an element of organisation and governance in health systems for improved public health (Rechel et al., 2010) Wider public policy is important in considering how to improve health outcomes (WHO, 2008) and maximise the gains from investment in PC, through:

i. Direct policy action on SDH such as education and income and employment conditions, such as a minimum wage for healthy living (UCL Institute of Health Equity, 2013) or intersectoral early child development programs such as Chile’s Crece Contigo (Vega, 2011);
ii. Remedial action on inequalities that result from unequal distribution of SDH, such as social protection or cash transfers in Brazil’s Bolsa Família (Couttolenc and Dmytraczenko, 2013) and or unequal access to health services as a result of the inverse care law; and
iii. Health action on wider factors (particularly at the economic and environmental level) that can harm or promote health, such as regulation and high taxation of tobacco products, or a minimum pricing for alcohol, as embodied in the Scottish government’s policy commitment to a minimum pricing for alcohol (although this is currently held up in the courts in a challenge by the Scottish Whisky Association (Christie, 2013).

A global review of the evidence on **diabetes** identified links between health sector and intersectoral policies to improve health outcomes including: (1) limiting the availability of unhealthy food and environments; (2) tackling the obesogenic environment through actions such as improving urban infrastructure to promote physical activity; and (3) reducing exposure and addressing increased vulnerability among certain groups in the population by improving access to health care, increased and improved screening (Whiting et al., 2010) and by improving the quality and responsiveness of PC and other health care providers in working with disadvantaged groups. **Chile** applied the same framework used in the global diabetes work, to review and redesign 6 national healthcare programs, including cardiovascular health. A specific objective was to quantify the gap in access to primary prevention, case detection and treatment because 25% of health inequities are due to a lack of access for some people to quality health care, particularly primary prevention and care services (see *Appendix 6* for more detail).

In **Cuba,** a 99% literacy rate, use of ration cards as a bottom line for food security and improvements in nutrition contributed to improved health outcomes in the previous century, complementing features of the health system supporting access to and early uptake of care, such as no copayments for health care (Dresang et al., 2005): 297). Also wider public policies are used to tackle NCDs, for example, cigarettes can no longer be purchased with monthly ration cards, with a decrease in smoking rates (Campion and Morrissey, 2013). Also the potential health impacts (positive and negative) of the ‘economic embargo’ may potentially have protected Cubans from “too much” of unhealthy commodities, with “too little” in terms of pharmaceuticals/essential medicines, although this resulted in innovation and development of their pharmaceutical industry (Campion and Morrissey, 2013; Devi, 2014).

Financing of health and payments in the PC system

Health system financing is an important focus of PC reforms and practice, incorporating not only the progressiveness and adequacy of resources mobilised through prepayment, (taxation or insurance), but also how the financing measures influence the achievement of objectives for the health system and for population health (Kutzin, 2013). The conceptual framework identifies numerous areas of relevance to financing of the health system, including the government role, type and or balance of financing (public, private etc), what type of benefits are provided in coverage, what exemptions, level of out of pocket expenditure including pharmaceuticals, how PC providers or practices are remunerated, and cost containment strategies (Loewenson and Simpson 2014). A separate report in the programme explores international data on key indicators of health expenditure with health system and health outcomes in high- and middle-income countries so this is not repeated in this report (Loewenson 2014). This section gives focus to the payment systems in PC including resource mobilisation sources, pooling and allocation, purchasing strategies, cost containment strategies, and health service coverage. See *Appendix 5* for information about the revenue collection, pooling and purchasing approaches used for Thailand to progress towards UHC and reduce household catastrophic payments from 31% in 2000 to 14.6% in 2004 (Yiengprugsawan et al., 2010).

Appendix 7 summarises information related to these issues particularly public, private and out of pocket health expenditures, public/private funding, the benefit design, the caps on cost sharing and exemptions or low income protection and the form of PC provider payment from Thomson et al (2013) for 10 high and upper-middle income countries including the US (Thomson et al., 2013).

Resource mobilisation: **Chile's** health care system is funded by a universal income tax deduction, equivalent to 7% of every worker's wage. Chileans can opt for coverage through either the public National Health Insurance Fund (FONASA) (80% of the population in 2013) or through the private health insurance system (ISAPRES) (Bastias et al., 2008; Frenz et al., 2013). Under the health system in the **Netherlands**, all insured people contribute to a flat rate premium and make an income-dependent contribution, and health plans are obliged to cover PC as part of a statutory benefits package (van Weel et al., 2012). The SUS in **Brazil** is fully and jointly funded by taxes from all 3 levels of government. Total health expenditures in Brazil (2012) amount to 8.8% of GDP, an increase driven by an increase in public expenditures and spending on private insurance, and out-of-pocket expenditures have not changed much (1995-2003) but the burden on low-income households has been significantly reduced (Couttolenc and Dmytraczenko, 2013).

Pooling: Despite insurers in **Switzerland** being obliged to accept applicants with the aim of avoiding risk-selection across companies, the risk adjustment system has poor performance, and within a given region the premium charge variation between insurers can be significant. In response to failed efforts to contain costs, Switzerland introduced changes to its risk equalisation formula in 2012 for the SHI to create incentives for providers to control costs (Camenzind, 2013). As well as age, sex and canton, the formula now includes prior hospitalisation (i.e. inpatient stay of four days or longer). The system will become a fully prospective system in 2014 (Camenzind, 2013). In addition, use of managed care plans that have gatekeeping and capitation-based physician payment have been steadily on the increase, increasing the prospective for reduced expenditure, improved access and more effective/appropriate care (see *Section 3.3* for the types of integrated care in Switzerland) (Berchtold and Peytremann-Bridevaux, 2011). In **Germany**, sickness funds' contributions are centrally pooled and then reallocated to each fund based on a risk-adjusted capitation formula that includes age, sex, and morbidity from 80 chronic and/or serious illnesses (Blumel, 2013). Also in the **Netherlands** the contributions for insurance are pooled centrally and distributed to insurers based on a risk-adjusted capitation formula (see *Appendix 4*) (Westert and Wammes, 2013).

Purchasing strategies: A mixed payment system of capitation and fee-for-service (FFS) - without specification of percentage or balance of each - is argued by some to combine two types of incentives, with the need to strike a good balance (Pedersen et al., 2012): S36). Many countries use a blend of capitation, fee for service, and for specified conditions some payment for specific areas of health outcomes. There are no co-payments for medical or hospital services in the **UK** and low co-payments for pharmaceuticals (children, pensioners, those on low income and with selected chronic conditions are exempt), with these being abolished in Wales, Scotland and Northern Ireland (Timmins, 2013). The breakdown of practice income is approximately 75%

capitation, 20% pay-for-performance (P4P) under the previous Quality and Outcomes Framework and 5% from Enhanced Services' contracts (Roland et al., 2012).

Singapore's PC provider payment system is FFS in private and government funded clinics. Co-payments are seen as central to HS funding given the emphasis on shared responsibility, although these are generally removed for core/priority public health issues such as communicable diseases and prenatal care. Private GPs are the main model for PC in Singapore, and do not receive any government subsidies and dispense their own medicines. PHC at a lower cost is provided at government-funded polyclinics with subsidised fees and also offering screening and health promotion services. A Primary Care Partnership (PCP) scheme allows older people to pay polyclinic rates for private GP consultations (Gauld et al., 2012). In **Brazil**, the variable component of the capitated funding (PAB) is to promote implementation of priority programs such as the FHP and the Community Health Agents Program (PACS) including population coverage through the FHP. The funding takes into account of the level of vulnerability of municipalities (determined by its score on the Human Development Index). The more vulnerable municipalities receive the larger sum of funding. Receipt of the variable PAB is dependent on approval of a proposal to implement or expand the FHP and register FH teams and populate the health management and information system with data (Couttolenc and Dmytraczenko, 2013).

Coverage - what's in the basket? A third strategy for achieving UHC in addition to extending coverage to the uninsured and reducing cost-sharing, is changing coverage i.e. what services and treatments are included (WHO, 2008). Most countries included in the review organise services to achieve universal coverage, with varying degrees of achievement of this. Service coverage is increasingly informed by use of evidence-based assessments and approaches outlined in the previous section, with greater or lesser success. In **Chile**, a 10-year program of reform (policy and legislative) was introduced in 2000 with the goal of improving population health and health equity. It included a new model of healthcare with a focus on prevention, promotion and timely access to quality services at the appropriate level of care. A feature of the reform is the Regime of Explicit Guarantees in Health Law which includes: universal coverage for all citizens, a medical benefits package that sets out a prioritised list of diagnoses and treatments for 56 health conditions to be covered (AUGE), and a set of guarantees specific to the universal health plan and enforced law – access, quality, opportunity and financial protection (Bastias et al., 2008; Frenz et al., 2013). More details about the explicit guarantees, and methodology used to develop the prioritised list of initial conditions to be covered under AUGE can be found in *Tables 1-2* and *Appendix 1* of Bastias et al (2008).

The SHI system in **Switzerland** applies to individuals and coverage is defined in terms of access to benefits covered by the SHI and the MOH defines what services are included in the basket by evaluating whether a service is effective, appropriate and cost-effective. Swissmedic (the agency responsible for authorisation and supervision of therapeutic products) together with the Federal Office of Public Health provide technical support to this process. Most out-of-pocket payments are spent on dentistry and long-term care outside the benefit package (Camenzind, 2013). This is not unique to Switzerland, also seen in some other countries reviewed where data on private OOP spending was available including Australia, Canada and Denmark (Thomson et al., 2013). In the **Netherlands**, the statutory benefits package based on the advice from the Health Care Insurance Board and includes for example: medical care provided by GPs, hospitals, specialists and midwives; dental care to age 18; prescription drugs; medical aids and devices; maternity care; ambulance and patient transport services: Some treatments are only partially covered e.g. weight management advice which is limited to 3 hours per year and since January 2012 the first 20 sessions of physiotherapy a year is only covered for those people with specific chronic conditions (Westert and Wammes, 2013).

The **Thai** UCS comprises 3 main benefits packages, a curative package covering most common diagnoses and treatments, a high-cost care package and a preventive package (Yiengprugsawan et al., 2010). Coverage in **England** is universal – available to all those 'ordinarily' resident in England and services include: preventive services (screening, immunization, and vaccination programs); inpatient and outpatient hospital care; physician services; inpatient and outpatient drugs; some dental care; some eye care; mental health care, including some care for those with learning disabilities; palliative care; some long-term care; rehabilitation, including physiotherapy (e.g., after-stroke care); and home visits by community-based nurses. The scope of coverage is not specified in any statute or regulation (Harrison, 2013 in (Thomson et al., 2013). The specific content of services for PC are further discussed in *Section 3.3.*

Cost containment and health expenditure: Kringos et al (2013c) examining health expenditures, quality of care, and population health in the European region (2000-2009) found that countries with more comprehensive stronger PC systems had higher overall health expenditures, but a slower increase in health care spending compared to countries with less comprehensive weaker PC system. With caution in interpreting the data the authors suggested that maintaining a strong PC structure requires investment in decentralisation of services delivery, protection of patients' rights, implementation of proper financial mechanisms and providing a solid educational system for PC professionals (Kringos et al, 2013c). As found in other studies, countries with stronger PC structures, particularly where PC plays a gatekeeper role, were seen to have better capacity to control rising health care costs (Delnoij et al, 2000 in (Kringos et al., 2013c). Payment systems can provide incentives for cost containment. A review of strategies for cost containment used in **Canada** (provinces of Ontario, British Colombia, Manitoba, Saskatchewan and Alberta), **England, France and Germany** for 2000-2010 identified four main strategies: (i) budget shifting either onto households or private insurers or through cost-shifting to other parts of government (hence the importance of looking at wider policy interventions as outlined in *Section 3.2*); (ii) population coverage (universality) by for example creating financial barriers to access e.g. age restrictions on coverage for certain types of conditions or rejoining the public system (e.g. Germany); (iii) service coverage by removing items in the publicly funded benefits package e.g. adult dental care or all dental care except for families on low incomes (see also *Sections 3.2* and *3.3)*; and (iv) cost coverage by for example introducing a co-payment, particularly for pharmaceuticals (Stabile et al., 2012). Overall, while countries continue to use the budget setting and price controls, there has been "… a shift away from strategies that simply shift costs to households – through … rationing of services, and higher user charges – towards policies aimed at changing the cost-benefit ratio by tailoring payment to value." (Stabile et al., 2012): 644). Strategies thus seek to jointly contain costs and to achieve other policy goals including, quality, efficiency and equity (Stabile et al., 2012).

In terms of cost coverage, **Chile** has used the AUGE to both manage costs and work towards improved UHC and equity, starting with a guaranteed care for 25 conditions in 2005, increasing to 40 in 2006 and reaching coverage for the full 56 priorities in 2010, with plans to expand to 80 problems or health conditions by July 2013 (Frenz et al., 2013) (*Appendix 1* of Bastias et al, 2008 includes information on the original 56 conditions).

New technology and pharmaceuticals can be key drivers of costs and inequalities in benefits, depending on how they are managed. Many countries have responded by creating health technology and or pharmaceutical agencies, to assess the value of new technologies, treatments and drugs, including: the Canadian Agency for Drugs and Technologies in Health (2003); the National Institute for Health and Clinical Excellence (1999) UK; the National Health Authority (2004) France; and the Institute for Quality and Efficiency in Health Care (2004) in Germany (Stabile et al., 2012). The remit of NICE has broadened from attention to use of new drugs to guidelines/guidance to also include guidance on the promotion of good health and the prevention of ill-health in 2005 (Stabile et al., 2012), and guidance includes evidence on related social care measures such as provision of housing etc (NICE, 2010). The process for development of such guidance is well established and evidence informed (see *Appendix 8*).

Diagnostic imaging is another area where there is room for improvement in cost and quality of care. In a study of the US and 11 other OECD countries (Australia, Canada, Denmark, France, Germany, Netherlands, New Zealand, Norway, Sweden, Switzerland, the UK), Squires (2011) found that the supply, use and costs of diagnostic imaging (Magnetic Resonance and CT scanners) were highest in the US (Squires, 2011): 7-8).

Australia introduced an assessment of value as a prerequisite for adding new medicines, known as the “fourth hurdle” in the 1990s, where a drug is also assessed for safety, efficacy, and quality as well as comparing the clinical and economic value of the proposed new drug to existing ones. The program does not directly control drug prices or ration prescription drugs but supports patients’ access to important, innovative medications deemed to be cost-effective (Lopert and Elshaug, 2013). In **Spain**, the Spanish Ministry of Health and Social Policy directly negotiates the cost of medications with large multinational corporations and this has been effective in decreasing the cost of pharmaceuticals and still providing a viable model for the pharmaceutical industry (Borkan et al., 2010). Further, in **France** and **Germany** reforms in payments for medicines incentivise pharmacists to dispense lower cost drugs (Stabile et al., 2012). For example, the ‘generic versus third party’ scheme in France where patients who agree to generic substitution do not have to pay anything in exchange for their drugs, achieving an increase in the substitution rate by 13% in one year leading to cost savings of over US$270 million (Durand-Zaleski, 2013).

Workforce

Nearly all the countries identified have an urgent workforce shortage, including for PC personnel, (Kringos et al., 2013a) with the exception of Cuba, although this is also changing. Also in the Netherlands the number of midwives has increased by 39.2% between 2001-2007 and aged care workers are also not in short supply (Schäfer et al., 2010): 127). However the overall urgent workforce shortage however is due to a combination of the ageing of the profession, (previous) quotas on GP training and or remuneration conditions, and or status within the medical or healthcare profession.

Canada is the exception among the countries reviewed, with the proportion of Canadian medical school graduates choosing postgraduate training in family medicine as a first choice increasing from 25% in 2003 to 34% in 2011. PC reforms such as new organisational forms of working in PC, which make family medicine more attractive as a field of practice are one possible reason, and have also contributed to recruitment and retention of those already within the field (Strumpf et al., 2012). For example, being part of a group practice with arrangements with an after-hours service means more regular working hours making PC attractive. The Northwest Territories government negotiated a wholesale transition from FFS practice to salary remuneration for family physicians in 2001, with 95% of FPs on a salary based contract that includes sick leave, maternity leave, recruitment and retention bonuses by 2009 (Hutchison et al., 2011).

The **UK** new General Medical Services (GMS) contract (2004) responds to the increasing feminisation of the workforce including accommodating female doctors needs during childbearing years. However the quest and interest for more flexible and part-time working arrangements is not limited to female physicians (Roberts et al., 2011; Roland et al., 2012). A systematic review of innovations in service provisions to improve access to PC noted that there is some evidence of improvement in GP recruitment and retention, and that it has attracted the attention of potential GP workforce such as inactive GPs and locums (Sibbald et al, 2002 in (Chapman et al., 2004). **Switzerland’s** Masterplan to address the shortage of GPs focuses on training, further education, research, new models of care, After-Hours care, and a specific section on charges for GPs in the payment scheme (Camenzind, 2013).

Cuba, very high family physician-to-patient ratio, 6.7 PC providers per 1000 people (Devi, 2014; Dresang et al., 2005) relates to a range of factors including family medicine as the mandatory first residency for all physicians (Reed, 2008). Cuba has also been educating foreign medical students since the 1960s, opening the Latin American Medical School (ELAM) in 1999 as the government’s main, long-term contribution to the global health crisis. Curricular reform transferring academic training from medical school campuses to community polyclinics, increased both doctors trained to work in Cuba and abroad. The Barrio-Adentro program extended PHC to the Venezeula through community-based clinics staffed largely by Cuban doctors who trained another 20,000-30,000 physicians. In 2008 approximately 20% of Cuban physicians were working abroad. This lead to accelerated training of more Cuban doctors to work at home and the development of a new mentoring model for capacitating PHC services, following a principle of ‘each one, teach one’. Challenges exist, including quality assurance, assessing impact on health outcomes, adapting new models to countries with fewer resources and in overcoming opposition to physician training on such a large scale, especially where the profession may be less open to considering new options (Morales et al., 2008).

Factors that predict and influence family medicine (FM) as a choice during medical school include: early and continued exposure to FM/PC doctors throughout the curriculum; the presence of a FM Department at the medical school; targeted efforts to identify and cultivate medical students interest in FM such as early clinical experiences in the preclinical years; paying students for participation in extracurricular experiences such as immersion in a PC practice during a break; creating special tracks for FM that are brought together in curriculum development; starting special interest groups at medical schools to inform and support students interested in FM; and developing loan repayment and scholarship programs for those choosing PC and or PC in underserved areas (Roberts et al., 2011) such as rural and remote **Australia**. For example, PC strategy funding of AUD$8.2 2009/10-2014/15 for 1,000 extra clinical placement scholarships for allied health students over the next decade in Australia. Also incentives for upskilling of practitioners working in aged care (nurses and aged care workers) include 750 aged care enrolled nurse training places and 375 aged care nurse scholarships over five years to 2014–15 (Department of Health and Ageing, 2011b). The trend in vocational training is away from time spent to competencies (see **Denmark** for example, with a 5 year program with 119 competencies to be demonstrated). A balance needs to be struck between training and handing over before “trainee fatigue” sets in (Roberts et al., 2011; Pedersen et al., 2012).

Ongoing professional development approaches have included mentoring by trained PC physicians of community-based physicians, providing a practice pathway to qualification through a structured learning program, or qualifying community physicians through an online curriculum (e.g. Profam in Argentina) or a revalidation scheme as was introduced in the **UK** in 2012 (Roberts et al., 2011). The **Dutch** have focused on continuous medical education, and the quality structure, supervised by the Dutch College of General Practitioners (DCGP), has moved from individual to team performance (Roberts et al., 2011). The involvement of patients, communities and or society to orient and capacitate personnel towards community roles and needs is missing from this discourse (Roberts et al., 2011; Naccarella et al., 2010). While new models also include widening the scope of personnel in PC, evidence suggests that work still needs to be done to move beyond collocation of PC practitioners in one space/place to getting them to function as an integrated team and: “… incorporate behavioural and mental health screening and assessment into the training and duties of all members of the primary health care team.” (Roberts et al., 2011): S85).

Appendix 9 provides an overview of the different physician working arrangements in PC organization, payment and training arrangements in 12 countries, including for Australia, the Netherlands, England, Cuba, Singapore and the US (Thomson et al., 2013); (Campion and Morrissey, 2013; Gauld et al., 2012; Hays and Morgan, 2011; Pedersen et al., 2012; Reed, 2008; Willcox et al., 2011). It illustrates the dominance of the independent model in PC and shows that over half the countries included are using a blend of payment approaches to the workforce, usually FFS based with capitation and or capitation/FFS/P4P. A few have salaried GPs e.g. UK.

Capitation funding for PHOs in **New Zealand** makes funding available for PC teachers and networks to support wider functions (e.g. training, IT, HR, workforce planning) and where collocation is not possible a “hub and spoke” approach to enable networks to diversify the nature and location of services. However, the dominance of the FFS model in New Zealand is potentially affecting the capacity of PC to achieve the current policy objectives outlined by the government in 2009 (Goodyear-Smith et al., 2012). Also, **Canada, England, France** and **Germany** used a range of strategies in the past 20 years to control physician remuneration such as rates freezes in France (1998-2006), England (2011) Germany (2012), and Ontario (2012) (Stabile et al., 2012). In the **UK,** financial incentives for improved performance have introduced as part of the new General Medical Services (nGMS) contract in 2004, which incorporates the Quality and Outcomes Framework (McDonald et al., 2008). The UK has a well-regarded and established system for GP education and training e.g. MRCGP exam, and vocational training for professional development is compulsory (Horder and Swift, 1979).

Regarding remuneration and potential prestige, the average net pay of a GP in 2012 was slightly more than the average NHS income of a specialist (Roland et al., 2012). In **Denmark**, the GP's annual income level is on average higher than that of senior hospital consultants – described as a deliberate policy to attract and retain GPs: "… although being a GP may not be as prestigious as a cardiac surgeon, there at least should be an added monetary reward." (Pedersen et al., 2012): S36).

The **Ontario** government has also undertaken workforce initiatives to support the inter-professional focus of PC reforms including (1) expanded medical, nurse practitioner (NP) and midwifery education programs, (2) increasing the number of family medicine residency positions (3) establishing educational programs for physician assistants and (4) expanding the scope of practice for NPs, midwives and pharmacists (Hutchison and Glazier, 2013) (see *Appendix 10* for more detail). Nurses are able to substitute for GPs in many aspects of PC without a loss of quality, and the increasing use of nurses in chronic disease management has been associated with improvements in quality of care (Roland et al., 2012). Inclusion of new personnel and the role of teamwork are covered in *Section 3.3.* In the **UK,** primary care mental health workers were a new category of PC worker to help GPs manage and treat common mental health conditions in all age groups through a mixture of client and practice teamwork and community roles. Progress with recruitment and training was slower than expected and the below target employment meant that they workers were seeing fewer workers than originally planned. Expanding and changing the PC team composition seems to depend on the existing team and how they work together, training and availability, and whether the roles are more than task shifting/substitution (Sibbald et al., 2004, 2006; McDonald et al., 2006). Finally, **Chile** as part of its scale up of its National Depression Detection and Treatment program, (PNDTD), took advantage of a surplus of psychologists to take the program to scale and a strategic alliance between the PC and Mental Health programs in the Ministry of Health so that by 2003 psychologists were hired and part of all PC clinics, becoming the "cornerstone" of the program. This approach also addressed the issue that it was not possible (availability and financially) to have psychiatrists in all PHCs. The program has been successful in terms of widening the scope of primary care to address and important health issue for Chile, and at the same time made use of a trained workforce who were affordable and widely available (Araya et al., 2012).

3.2 Domain 2: PC Service Delivery

This section examines PC practice models more closely, in terms of their inputs, content, processes and features. Some of the findings outlined in *Section 3.2* above apply more specifically to PC practice and are cross-referenced rather than repeated.

Service inputs

In most of the countries reviewed, including where PC practices are still predominantly privately owned/independently operated, funding measures are being used to shift from individual practitioner approaches to larger, multi-service PC practices including population based approaches. This is particularly the case in the Netherlands, New Zealand and UK (England) (Smith et al., 2013). The models in the countries reviewed all largely involve (blended) alternative GP payment mechanisms (salaries/sessional payments), capitated/global funding, the incorporation of multidisciplinary approaches, a strong community orientation and community development and intersectoral approaches to address the often complex needs of disadvantaged groups. Another model at the meso level is one of PC practices that are government funded and staffed (e.g. Brazil, Cuba). Irrespective of the model, the literature provides evidence of range of initiatives aimed at improving and supporting co-ordination of inputs between PC practices and encouraging a multidisciplinary PC, including: incentives for GPs to undertake comprehensive health assessments, multidisciplinary care plans and case conferencing through enhanced PC and rebates for chronic disease management; improving access to allied health services in rural areas; improving access to allied services such as for mental health (McDonald et al., 2008).

From the literature reviewed, there appear to be 3 types of approaches – networks and professional affiliations, delivery models/mechanisms (e.g. PHOs), and developing cadres of PC workers. All approaches are incentivised (usually by funding or new funding arrangements) with a view to increasing and improving the potential for multidisciplinary PC teams to improve the quality and comprehensiveness of PC. In terms of the level of PC practice, network approaches are usually at the meso level e.g. former Divisions of General Practice in Australia and comprising membership of solo or group PC practices. Funding can be both levels – meso and micro – but sometimes is mediated through the meso level structures such as PHOs or the contracted unit for PC in Thailand, which then makes the funding available to PC practices at the micro-level. A review on the future of general practice in England by the King's Fund identified 21 models for PC and identified 4 organisational types that show the greatest promise: networks and federations; super-partnerships; regional and national multi-practice organisations; and community health organisations (see *Appendix 11*) (Smith et al., 2013) and 3 of which were identified and are outlined below e.g. New Zealand community-governed PC organisations.

In **New Zealand**, population-based funding is distributed to 20 geographically based district health boards that provide hospital services and contract for primary and community care services. PHOs are funded by the district health boards (PC subsidies via capitation) to support the provision of essential primary health care services through general practices to those people who are enrolled with the PHO. Evidence from the small number of capitation-funded practices prior to 2002, indicated that they employed more nurses, community workers and Maori staff than FFS practices thereby enabling a different range of services. PHOs are comprised of PC practices (solo or group and at the micro level). Nearly 100% of New Zealanders are enrolled through a PHO. PHOs aim to ensure GP services are better linked with other primary health services (such as allied health services) to seamless continuity of care, in particular to better manage long term conditions (Quin, 2009). Since 2007, PHOs with similar demographics and special needs received similar funding, and very low cost practices were introduced, receiving extra government subsidies provided they offer free services for children under six and a range of lower charges for other patients (Quin, 2009). Funding was also provided to reduce patient copayments, and it was expected that capitation would extend to the practice/provider level longer term. PC practitioners however maintained the right to set patient fees at the point of service, and the emphasis on patient fees still presents a barrier to seeking care (Goodyear-Smith et al., 2012) for approximately 25% of New Zealanders with 1 in 4 adults and 1 in 4 children reporting unmet need for PHC in the past year (Ministry of Health, 2013). In December 2011, there were 31 PHOs, with diverse population sizes and compositions, and all non-profit (Ministry of Health, nd).

The other meso level model in **New Zealand** is the not-for-profit community-governed PC organisation where the teams are larger and diverse employing GPs, nurses, managers, reception staff, administrative staff, community workers and midwives (34%) also, affecting the range of services (Crampton, 2005; Goodyear-Smith et al., 2012; McDonald et al., 2008). The 2009 government policy emphasising efficiency includes development of integrated family health centres as one model, and where services cannot be collocated, a "hub and spoke" approach is used to diversify and expand the nature and availability of services. This includes home, workplace, school and Maori community complex visits by shared PHO/network providers such as community health workers and or immunisation coordinators (Goodyear-Smith et al., 2012).

In the **UK**[2], GPs work in small practices that they usually own in partnership with 4-6 physicians on average. Most of their income is derived from contracts to provide NHS patient care (in England previously through the Primary Care Trusts and now Clinical Commissioning Groups. In Scotland 14 geographically based NHS Boards are responsible for planning and delivering healthcare services). Both Trusts/Groups and Health Boards are responsible for implementing national policy, monitoring practices and implementing quality improvement and financial incentive schemes (Boyle, 2011; Steel and Cylus, 2012; Timmins, 2013). The Personal Medical Services (PMS) scheme introduced in 2004, is a mechanism for increasing the freedom for PC

---

[2] This information generally applies to England, Scotland and Wales, and Northern Ireland. Differences and similarities in the health system between all 4 countries are summarised by Timmins (2013) and or in more detail in the individual HiT reports for England, Scotland and Wales (Boyle, 2011; Steel and Cylus, 2012). Here differences between Scotland and England are indicated because of the divergence between the two systems in the past 10-15 years.

practices to address the needs of patients through flexible and innovative ways of working and multidisciplinary approaches to care. Funding is provided to practices not GPs by the former PCTs to provide General Medical Services or to provide a broader range of services such as community nursing and services to a specific population group, necessitating the engagement of a more-multidisciplinary team. While PMS enabled a change of cultural values in the working team, especially among GPs, nurse and practice, staff, none of the original PMS pilots lead by nurses have continued. PMS also facilitated a shift towards a more community oriented/public health model where there was an explicit focus on vulnerable groups (Riley et al, 2003 in McDonald, 2006) and made quality improvements to basic PC provision, chronic disease management, and less so to PC for older people. The latter also applies to the practices contracted using the new GMS model, in Scotland. However while patient assessment of quality of their primary care remained the same, (relational) continuity of care declined at a faster rate for PMS practices. (Steiner et al, 2002 in McDonald et al, 2006). It is challenging to identify the specific contribution of each initiative to improved service delivery or changes because they were introduced at roughly the same time (i.e. PMS, nGMS, PB commissioning, PC mental health workers, community matrons) and as part of wider health system changes (McDonald et al., 2006, 2008; Health Council of the Netherlands, 2004).

Australia has also invested in reorienting PC from solo practice towards working together**.** The PCOs include Divisions of GP, Area Health Services, PC Partnerships, Primary Health Partnerships, community health services and Multi-Purpose Services. The former Divisions of GP, established in 1992/1993 (Gauld et al., 2012) were voluntary with the aim to support development of PC in a range of areas including improving quality and evidence-based care, encouraging integration and multidisciplinary care, improving access and being more client/people-focused. Seven state based organisations and one peak national organisation were established in 1998 to provide leadership, advocacy, policy and program support and represent the Divisions with the national and state level health authorities (McDonald et al., 2006). All funding for the Divisions of GP was transferred to 61 Medicare Locals in June 2012, independent companies limited by guarantee, managed by skills based boards. Medicare Locals are responsible for a range of functions aimed at: making it easier for patients to navigate the local health care system; providing more integrated care; ensuring more responsive local PC and PHC services to meet the needs and priorities of patients and communities; and making PHC work as an effective part of the overall health system including working with the 27 Local Hospital Networks (Nicholson et al., 2012). Australia has also provided subsidies to allied health professionals working in private practice to enhance access to multidisciplinary care for patients with chronic and complex conditions; and subsidies for practices and Aboriginal Community Controlled Health Services ACCHS) to support care from practice nurses, primary health nurses, midwives and registered Aboriginal health workers in remote and rural areas (McDonald et al., 2008).

From the literature reviewed a key message appears to be that irrespective of the specific mechanisms (additional PC professionals to the team or a new cadre of workers), the context of the local team, team dynamics, the issue of focus and the profile of the local population can all significantly impact on capacity for more comprehensive and coordinated care. Moving towards multidisciplinary teams therefore, requires appropriate staff education and training; removal of unhelpful boundary demarcations between staff or service sectors; appropriate pay and reward systems; and good strategic planning and human resource management. In terms of workforce composition, appropriately trained nurses can provide the same quality of care and achieve as good health outcomes for patients as doctors, at least in the short term (Mundinger et al., 2000; Laurant et al., 2004; Horrocks et al., 2002) in (McDonald et al., 2006). Also, a more recent review comparing models of family-centred care in Ontario, Canada found that practices with a larger number of Nurse Practitioners and clinical services on-site were associated with a higher patient-score for family-centred care (Mayo-Bruinsma et al., 2013).

The development of multidisciplinary, interprofessional primary health care teams is seen as the “centrepiece” of reform in many **Canadian** provinces – with 3 of the 13 provinces taking up this initiative at the system level (Alberta, Ontario and Quebec). These teams are designed to improve access to care, continuity and coordination and quality of PC services. In Quebec, local health and social services networks employ nurses, who work in clinics and provider groups under contract. As identified, in **Ontario**, nurse practitioners (NP) and other health professionals are paid by provider groups who receive funding earmarked for this purpose (Strumpf et al., 2012) (see *Appendix 10*). A cross-sectional study of 3 types of PC models in Ontario comparing referral rates to specialists found that the model is significantly associated with the referral rate. Fee-for-service providers have the lowest referral rate compared to capitation-funded practices with a non-interdisciplinary structure/team in the practice (GP providers only) and capitation-funded practices with an interdisciplinary structure/team. These differences equated to 111,059 and 37,391 fewer referrals by FFS providers compared to CAP-NI and CAP-I respectively. The authors note that it is not clear whether the lower referral rate is appropriate and further investigation of other organisational features associated with the PC model is required (Liddy et al., 2014).

Within the municipalities in **Brazil** the Family Health teams are multidisciplinary including 1 physician, nurse, and medical assistants plus 4-6 community health agents who with other health professionals undertake regular home visits and neighbourhood health promotion activities. Some teams include dental professionals. The population for each team is 1,000 households or up to 4,000 people. The recommended average is 3,000 people per team. However the population size per team is at the discretion of the municipality and the Primary Care Strategy recommended that vulnerability be used as a criterion so that municipalities with a greater number of vulnerable groups should have teams providing services to a smaller population (the capitation formula for municipalities includes a calculation for vulnerability) (Couttolenc and Dmytraczenko, 2013).

Care delivered by GPs in the **Netherlands** is free to patients. Most GPs own their own practices and are reimbursed through capitation for registered patients and fee for service. There has been a shift from solo to group practices and health centres in the past few years with 30% solo; 30% multidisciplinary health centres; and 40% in group practices. Practices employ NPs from their practice overhead or through special arrangements with insurers to design health programs based on population needs. The focus is usually disease prevention, chronic care management, mental health services etc and extending payment for NPs through the new private insurance scheme is seen as potentially positive because it adds to the health of their beneficiaries (van Weel et al., 2012). Also Regional Support Structures (ROS) support PC workers in developing mono- and multi-disciplinary teamwork, implementing quality of care policies and improving continuity of care. Funding for the ROS is partly from health insurers, municipalities and provinces. For example integration of PC with other services that municipalities are responsible for such as prevention, social support and youth care (Schäfer et al., 2010): 105). A collaborative project to improve quality of care for people with depression found most of the team coordinators were employed by the ROS and identified important facilitators as being financial support for time spent on the project from an insurance company e.g. reimbursement of GPs for the time spent on the project and funding for the team coordinator to support the team (Franx et al., 2009).

The role of community health workers (CHWs), peer mediators and or patient experts as innovative responses to dealing with workforce shortages in PC, did not emerge as a strong theme in the studies reviewed. However CHWs have been used in low-income settings and in the US context as an innovative model for tackling workforce shortages, as well as improving access and reach of PC. This is further discussed in *Section 3.3*. Furthermore, workplaces and schools provide important settings for advancing primary prevention, care and or health promotion, however no specific initiatives were identified in the PC literature reviewed. Some examples are also outlined earlier.

Service content

The strength of PC study in Europe found the most comprehensive set of PC services, both curative and preventive, offered in **Belgium, Bulgaria, Finland, France, Lithuania, Norway, Portugal, Spain, Sweden**, and the **UK**. Five of these countries had an overall PC system rating of strong (Belgium, Lithuania, Portugal, Spain and the UK (Kringos et al., 2013a). The structure, accessibility, coordination and comprehensiveness of PC in further analysis however showed no association with healthcare system type (i.e. national health system or SHI) or with social values on the role of the state, except some positive association with value of the use of science and technology to improve health (Kringos et al., 2013b). **Spain** has undertaken extensive development of the PC sector since the early 1980s. The common services package provides for PHC services in 8 areas: health care organised around family context relevant to age, sex and risk patient groups; prevention such as immunisation etc; basic rehabilitation services; palliative care for terminally ill patients usually delivered at home by a specialised team comprising a doctor and a nurse; mental health care in coordination with specialised services; dental care; epidemiological and surveillance information that feeds into other systems such as the Notifiable Diseases Registry; and community outreach, which was an integral part of the PHC approach in the beginning but gradually eroded due to pressure of demand for services over the longer term (García-Armesto et al., 2010): 193-201).

Generally, all countries reviewed provide measures to assure a range of PC services, with attention to new areas in response to public health concerns. While there is rising attention to NCDs, management of co-morbidity and multimorbidity is less well documented in the literature reviewed. Starfield (2011) proposed guidelines for multimorbidity for PC with a focus on people and populations and the interrelationships between risk factors and illnesses (Starfield, 2011) and others have described PC as "… overlooked as a source of comprehensive care that integrates and coordinates care for all health problems…", (Maeseneer et al., 2012): 1860). The King's Fund study on PC also emphasised the importance of a focus on multimorbidity (Smith et al., 2013).

In the **Netherlands** GPs offer a range of services, including preventive services and management of chronic diseases and 92% of all new health problems are managed within PHC (van Weel et al., 2012). Most prenatal care and uncomplicated deliveries at home are attended by non-nurse midwives (Schäfer et al., 2010). Initiatives for individual patients are connected with wider population-based initiatives in collaboration with the 29 municipal public health authorities (Gemeentelijk Gezondheidsdiensten (GGDs) (van Weel et al., 2012). GGDs are largely responsible for disease prevention, health promotion and health protection and undertake these tasks for all (443) municipalities. Examples of key health tasks to fulfil the municipal public health and prevention mandate include collecting information on the health situation of the population, contributing to prevention programmes, implementing youth health care and the control of infectious diseases (Schäfer et al., 2010). Care coordination is supported by, national guidelines and care pathways for chronic diseases, introduction of NPs and physician assistants, and "care groups" that coordinate care through cooperating regional general practices. These collaborative groups do not include local health authorities, and recent studies show that coordination problems remain (Schäfer et al., 2010; Gauld et al., 2012). Also, indicators for the promotion of a healthy lifestyle are less favourable, including a shortfall in a systematic approach by GPs to providing their patients with specific lifestyle recommendations or in a wider intersectoral approach to prevention, through co-operation with other sectors such as schools (Grol and Faber 2007; Schoen et al. 2007; Schäfer et al., 2010).

School doctors provide regular preventive checks for all school children at 5, 10 and 13 years of age in the **Netherlands** (Schäfer et al., 2010). ActNOW BC is a major health promotion initiative between the provincial government, voluntary sector and civil society in **British Colombia, Canada** that targets 6 population areas including physical activity, diet, schools, work environments, communities, pregnancy and tobacco use. Ontario also has a programmes for dental care targeting school children including the Children In Need Of Treatment and Health Smiles Ontario initiatives, the latter has a focus on children from low-income backgrounds and was launched in 2010 (Marchildon, 2013). In England services for children and adolescents aged less than 18 years tend to be delivered by specialist teams provided by Child and Adolescent Mental Health Services, and in terms of primary care this usually includes GPs, school nurses and teachers (Boyle, 2011). **Germany** has a strong tradition of workplace health promotion and prevention initiatives where health insurers use *Health reports* and *health circles* as two approaches used to reduce inequalities in lifestyle factors (such as smoking and alcohol consumption) as linked to preventable issues in the workplace in the technical and organizational processes, in the motivation and satisfaction of the employees and in the workplace climate as well as individual issues (Pruessmann and Simpson, 2010).

Also **Germany** introduced 2002 a series of disease management programmes in 2002 beginning with diabetes and expanding to breast cancer, asthma or chronic obstructive pulmonary disease (COPD) and coronary heart disease by 2010. The programs
focus on improving physician and patient adherence for secondary prevention i.e. managing diabetes so that it does not progress. For example, improving the quality and efficiency of diabetes care by facilitating adherence to evidence based guidelines. Key elements include: (a) analysing patterns of care such as benchmarking of prescribing behaviour for individual physicians with the average of their peers to support active prevention, patient reminders for follow up appointments; (b) PC physicians enrol, educate and advise patients in managing their disease and use of the health system; (c) patient participation, while voluntary, patients must sign up with PC provider, attend diabetes education classes and agree to regular follow up visits to receive other incentives. Exemption from co-payments is an incentive for enrolled patients and sickness funds receive a higher lump sum payment from the Risk Compensation Scheme for patients who are insured *and* enrolled. A 4-year follow up study showed significantly lower overall mortality for patients, and for drug and hospital costs for participants compared to other patients with similar health profiles but not in the program (Stock et al., 2010), see *Section 3.5*.

The SHI “basket” of services in **Switzerland**, covers most GP and specialist services, an extensive list of pharmaceuticals, medical devices, home health care, physiotherapy where prescribed by a physician, and some preventive measures e.g. some vaccinations, some general health examinations and screening for early detection of disease among certain risk groups for certain diseases e.g. women with a family of breast cancer. While dental and optical care, are largely excluded from the basic basket, optometry for children is now covered. Hospital services are covered by the SHI. A policy priority in the Swiss 2020 national strategy is prevention and screening for NCDs to decrease both the number of new cases and the impact on people and the economy (Camenzind, 2013).

The UCS preventive package in **Thailand** includes immunisations, annual check-up, dental healthcare, plus antenatal care and other reproductive health services. Prevention is further supported through the Thai Health Promotion Foundation which undertakes settings and population based approaches to health promotion such as health promoting schools and workplaces, funded from the 2% surcharge levied on alcohol and tobacco (approximately USD $50-60 million per annum) (Yiengprugsawan et al., 2010), illustrating a commitment to PC as part of a set of wider public policy actions (see *Section 6.2*). The list of services covered as part of the PCS in **Brazil** is based on general criteria with a loose link to cost-effectiveness and health benefits, evolving over time to include treatment and control of hypertension and diabetes prevention(Couttolenc and Dmytraczenko, 2013) through implementation of clinical guidelines and reporting on chronic-disease prevalence at the municipal level (Macinko et al., 2010).

The service content of **Cuba’s** PC has changed and expanded over the years from multi-speciality polyclinics in the 1970s to include a family doctor-and-nurse programme in the mid-1980s, with increased capacity to deliver on prevention and community health. Under half of the 498 polyclinics today include services previously only available in hospitals. The average polyclinic offers 22 services including rehabilitation, X-ray, optometry, emergency services, family planning, maternal-child care, immunisation and diabetic and elderly care. Family physicians, nurses and other health workers deliver PC and preventive services to populations of about 1000 in urban areas, living in the community they serve with potentially a greater focus on population health and client co-morbidity. Patient information is recorded about health risk and reviewed using family and community information, based on medical records organised by family. The population/community focus means that the basic set of services in each polyclinic can be tailored to respond to the specific health picture of the community, using disease surveillance and active screening e.g. tobacco cessation provided in those communities with high rates of smokers (Campion and Morrissey, 2013; Dresang et al., 2005; Reed, 2008; Varona et al., 2014).

The former Primary Care Trust model in **England**, integrated family health services and community health care within one organisational structure (McDonald et al., 2008). PCTs worked closely with a broader, often co-located primary health care team employed directly by the NHS such as district nurses, health visitors, and to a lesser extent midwives, community psychiatric nurses, and allied health professionals (Roland et al., 2012). A King's Fund report argues that early identification of people with Ambulatory Care Sensitive (ACS) conditions is one of 10 priorities necessary to transform the English health care system, and that risk stratification tools and clinical decision support software within PC practices seem to make GPs well placed for this task. Evidence-based interventions for avoidable admissions for ACS include: disease management, support for self-management for chronic conditions; telephone health coaching; and behavioural change programmes to encourage patient lifestyle change, with a note that such programmes be evaluated for relevance to local context (Naylor et al., 2013). A systematic review of innovations to improve service provision such as telephone health coaching found evidence that they may make inequalities worse either by reducing access for those without a telephone or providing additional access to people already making good use of the health system (Chapman et al., 2004) (*Section 3.5*). Reducing unplanned hospitalisations for people with chronic ambulatory care sensitive conditions and with asthma, diabetes and or epilepsy are identified as key areas for outcomes and performance measurement in the UK (NHS, 2013).

Service process

In relation to *continuity* 10 of 31 **European** countries in the strength of PC study had no registration system, and patients can visit any GP, although many people usually visit the same GP. The study also found room for improvement in both informational and interpersonal continuity particular with regard to application of information technology such as EMRs including using more adequate software and providing training. **Belgium, the Czech Republic, Denmark, Estonia, Germany, Iceland, Ireland, Latvia, Slovak Republic** and **Spain** scored well on *continuity* (Kringos et al., 2013a). In **Spain**, patients' EMRs can be activated by an individual health insurance card, which when swiped on the card reader gives providers all the information on the patient's medical history, medications and important diagnostic test results – all Spanish citizens have individual current health insurance cards and they are used in 98% of PC consultations. By 2007, 97% of all consultations in Spanish PC centres were supported by electronic health record management software. Online Health (Sanidad en Linea) is a next step and is the development of a an integrated electronic health record system to enable free exchange of information across regional boundaries (Borkan et al., 2010).

For *coordination* of PC, referral systems are in place in some form in most countries in **Europe** and obligatory in 14 of the countries for medical specialist visits, where a visit without referral often incurs an out-of-pocket payment. However the study also found limited *coordination and cooperation* between GPs and medical specialists, and nurses having a limited role in PC, except in the UK and Spain. In terms of *coordination* **Denmark, Greece, Lithuania, Malta, the Netherlands, Poland, Slovenia, Spain, Sweden** and the **UK** scored well. Also GPs that worked in group practices had more face-to-face meetings both with colleagues and tended to offer special clinical sessions more often (Kringos et al., 2013a). In **Brazil**, the effectiveness of PC has been hindered by difficulties in horizontal and vertical integration. FHS teams are not currently able to monitor or follow their patients through secondary or tertiary care, in part due to limitations in the information system and patient records. In response to this, the MOH accelerated its efforts in to establish strong integrated health care networks with the launch of the SUS Healthcare Network Policy in 2010 (Couttolenc and Dmytraczenko, 2013).

Arrangements for PC payments and organisations plus after-hours (AH) care for 12 countries are detailed in *Appendix 9*. The arrangements for and quality of after-hours care and services were significantly revised in the **Netherlands** as part of the 2006 healthcare reforms including the creation of Family Practice regional out of hours consortia. PC staff rotate duties for telephone coverage to ensure evening, night and weekend coverage, urgent practice visits and home visits. Access to each patient's EMR enables continuity of care (van Weel et al., 2012). Similar arrangements exist in **Denmark** since 1992, where GPs in a given geographical area rotate staffing for AH service centres, usually located at but independent of the local hospital emergency departments, as well as telephone or email consultations, and or organising a home visit by the “roaming” mobile GP unit. Going directly to hospital emergency departments increasingly requires a referral by a GP or staff at the AH service (Pedersen et al., 2012; Vrangbaek, 2013). More recent developments include experienced nurses undertaking the initial triage function, and also merging hospital acute admission departments or A&E with the out-of-hours services. The latter was not well received by the Organisation of GPs (Pedersen et al., 2012) and an English study suggests the evidence does not support it when compared to usual care nor as a solution to mitigate Emergency Department problems (Khangura et al., 2012): 1) In 2013 in **England**, AH care became the responsibility of the Clinical Commissioning Group (Roland et al., 2012). Other mechanisms for delivery of AH care and advice include telephone consultations, the NHS websites (NHS Direct and NHS Choices) and Walk-in centres. A systematic review of these and other innovations in service provision to improve access, found that while the evidence was insufficient to make clear recommendations, walk-in centres tended to improve access for young and middle-aged men who generally access PC less than other population groups but that they may be duplicating existing service provision and creating new demand (Chapman et al., 2004).

For most of the 12 countries covered in *Appendix 9*, GPs retain a **gatekeeping** role. In **England** where GPs have an enrolled population and a gatekeeping role, the speed of access to specialists has improved in recent years, with 80% of patients now getting to see a specialist within 4 weeks compared with 88% in the US (Roland et al., 2012). Gatekeeping and patient registration has also been important for reducing costs of more expensive treatment, although it may increase waiting times to see a specialist. Access to a GP is in **New Zealand** is through enrolment with a PHO and referral is required to see a specialist (Goodyear-Smith et al., 2012). Except for physiotherapists and remedial therapists a referral is needed for visits to hospitals and specialists in the Netherlands (van Weel et al., 2012). A comparative country study on strengthening PC found that in terms of coordination problems with medical tests or records in the past 2 years for adults with chronic conditions, **Australia, the Netherlands** and **England** were likely to have fewer coordination problems than the US, and that there were also lower rates of reported coordination problems when fewer doctors were seen (1-2 doctors compared to 4+) (Schoen et al, 2008 in Willcox et al, 2011), and is considered to be the result of gatekeeping by PC practices in these countries (Willcox et al., 2011).

In **Switzerland** people have free access to a specialist unless they are enrolled in a gatekeeping managed care plan. Enrolment has been increasing, as it reduces the level of copayments and /or deductibles (Camenzind, 2013). Both types of health maintenance organisations (1. where the physicians are employed by the insurance company owning the HMO and 2. where physicians own the HMO) use a gatekeeping approach (via a physician network, HMO or medical call centre reached by telephone). Exceptions to the use of the gatekeeper are emergencies and visits to gynaecologists and paediatricians which are handled differently (Berchtold and Peytremann-Bridevaux, 2011). In **France**, national incentives to ensure use of PC as first point of contact include higher cost-sharing for visits and prescriptions without referral from the gatekeeper (Thomson et al., 2013). **Denmark** has the option of clients paying additional contributions to obtain direct access to secondary care, but <5 per cent of patients choose to do so (Health Council of the Netherlands, 2004). (see *Appendix 12*). **Brazil** does not have a gatekeeping mechanism even though the PC strategy is supposed to play that role (Couttolenc and Dmytraczenko, 2013).

Practice lists/enrolment are a key service element for continuity. The Dutch report on European PC, recommended that PC teams should work with well-defined populations (panels) or communities where possible recommending a registered population of 10-15,000, with scope for variation in line with population density and local problems (Health Council of the Netherlands, 2004). Lists are applied for example in the **UK,** in **New Zealand** (where nearly 100% of the population are enrolled), in the **Netherlands** (where the average list or panel size is 2250-2500 patients for a full time equivalent FP, and registering with a PC practice is required(van Weel et al., 2012); and in **Denmark** (where 98% are enrolled with a GP and a GP can close their list at 1600 people) (Pedersen et al., 2012) and France (where 95% are enrolled) (Durand-Zaleski, 2013). In many countries, as for Denmark, the list is a requirement for capitation payment, there are upper thresholds for GPs to close lists and for patients not enrolled, there is a small copayment (Pedersen et al., 2012). Other countries (Spain, Brazil) provide population based coverage. Health Areas, the meso level form of PC organisations in **Spain** are responsible for management of facilities, health services and benefits within a geographical region, usually covering 200-250,000 people, and within this the basic Health Zones, which are usually organised around a single PHC team, cover 5,000-25,000 people. They coordinate prevention, promotion, treatment and community care activities (Borkan et al., 2010).

Greater continuity (particularly informational), effective collaboration and coordination of care are supported by effective information collection and transfer across those involved, increasingly through **electronic medical records** (EMR). In **Australia**, funding for the Divisions of GP for IT began with the Practice Incentives Payments in 1998,and by 2012 96% of general practices were computerised. Australia has one of the highest rates of computerised GP globally. A key function of PC is to support the government's electronic health record in effect since 2012 and seeks to enable individuals and health care providers to securely access their health care information (Nicholson et al., 2012). Through PHOs in **New Zealand** the networks support practices through provision of funding, shared management services supporting patient enrolment and health information technology. This has improved provider access to records and will be available to patients in the longer term after its current trial. In New Zealand a unique identifier – the National Health Index which together with other systems can support screening, recall and cardiovascular risk assessment (Goodyear-Smith et al., 2012).

The **UK** introduced cervical cytology and immunization targets in 1990, providing funding for GPs to establish the necessary IT recall mechanisms. Many responded by buying computer systems, where 50% of the costs were covered by the NHS if the systems met government-defined standards (Roland et al., 2012). There has been limited utilisation and functionality of EMRs in most provinces in **Canada**: Alberta has the highest implementation at 66% and a reporting system that can be used at the practice level to measure improvements in access and clinical indicators over time (Strumpf et al. 2012). In the **Netherlands**, experiments are underway to link EMRs of PC directly with community pharmacists and hospitals, and all FP practices use an EMR with information exchanges between practices and hospitals taking place electronically. The Dutch have argued that the health informatics system should be based on PC informatics, including diagnosis information and symptom and episode information provided by the International Classification of PC (van Weel et al., 2012).

Service features

Issues of gatekeeping and enrolment, which impact on service features have been covered previously. Thompson et al (2013) explored a range of indicators of service coverage, access, equity, quality, efficiency and effectiveness for 11 high-income countries including the US and measures such as mislaid test results and test result access, shown in further detail for 9 of these countries (including the US) in *Appendix 13.* In this review the **UK** scored well on several indicators, while **Australia** scored badly in the public view, with 55% saying fundamental changes are needed to the health system.

GPs were found to be unevenly geographically distributed within 31 **European** countries limiting *access (*Kringos et al 2013a*)*. This was measured using 12 indicators for density of PC workforce, geographic availability, access to practice level, affordability of services, and patient satisfaction. Countries that were rated as strong for accessibility included **Czech Republic, Denmark, Hungary, Lithuania,** the **Netherlands, Poland, Portugal, Slovenia, Spain** and the **UK.** In nearly 50% of countries, there were financial obstacles to seeing a GP with patients needing to pay part of costs of a visit were identified. Organisational arrangements to facilitate access were also identified to have shortfalls in terms of telephone and email consults and appointment systems. Receiving a home visit differs strongly across Europe and after hours care is organised in different ways, as discussed earlier (Kringos et al., 2013a).

Regarding *access and coverage*, nearly 100% of the population in the **Netherlands** are within 15 minutes of GP from their homes (National Institute for Public Health and Environment, 2009b) in (Schäfer et al., 2010). The proportion of patients/problems managed within general practice (without referral to specialists or hospitals) in 2009-2010 was 88% for Australia, 90% for England

and 98% for the Netherlands (Willcox et al., 2011). In **England** the average length of GP consultation has increased from 8.4 minutes in 1992 to 11.7 minutes in 2006 and only 33% of people say they had difficulty getting after hours care (Roland et al., 2012). A comprehensive scheduling system for each Autonomous Region in **Spain** allows patients to schedule appointments to meet health care needs for themselves and their families (Borkan et al., 2010).

Quality of care has had some focus across most PC systems. Ten European countries (Belgium, Denmark, Germany, Ireland, the Netherlands, Austria, the UK, Sweden and Switzerland) have quality circles and peer review groups (QCs/PRGs). These quality circles are 6-12 groups of care providers from one or more disciplines who regularly meet on a voluntary basis to review and seek ways of improving the quality of care. They: collect and discuss data on the care provided; consider new guidelines; use such guidelines for the development of local consensus; and produce quality improvement plans and expertise promotion plans. Exchange can include visiting one another's practices and provide each other with feedback (Health Council of the Netherlands, 2004). Quality of care is covered by minimum standards in most countries in **Europe**, including professional education, clinical guidelines, and patient rights, access to information etc. Rules for continuing medical education are often absent, and clinical guidelines for use in PC are often made by medical specialists or ministries of health (Kringos et al., 2013a).

Improving quality of care has been a major policy focus in the **UK** for **England, Scotland** and **Wales**, including: development of national service frameworks in a number of areas which set minimum standards for the delivery of health services (McDonald et al., 2008); development of national clinical guidelines and national service frameworks to guide implementation of improvement activity; the establishment of NICE to make recommendations about cost-effective treatments in the **UK** (see *Appendix 8*); the introduction of annual appraisal for all NHS doctors; district-wide audits of clinical care, with identifiable data being shared with practices and sometimes with patients; and a range of local financial incentives schemes for quality improvement. These have been associated with significant improvements in quality of care (Roland, 2012). A new and much more ambitious P4P scheme was introduced in 2004, with 20-25% of GPs' income dependent on a complex set of 75 indicators relating to clinical care and 75 relating to practice organization and patient experience (the QOF). Since 2004, new clinical topics have been introduced and payment thresholds have been raised gradually. GPs can exclude patients if they judge that incentivized care would be inappropriate for particular individuals (Gillam et al., 2012; Roland et al., 2012). A 'side-effect' of the QOF has been 100% of PC practices investing in the information and practice systems required to record necessary activity for tracking of care, health outcomes such as the Scottish multimorbidity study (see *Section 3.2)* (Health and Social Care Information Centre, 2013; National Statistics, 2013). The outcomes of the P4P are further discussed *in Section 3.5* and *Appendix 13* contains details of people's satisfaction with the system in 9 countries. More information about quality improvement is included in *Section 3.5* and *Appendix 15*.

CHWs including Aboriginal Health Workers in **Australia**, and or peer mediators in Roma communities have been found to play an important function in improving the effectiveness and appropriateness of health care services, particularly at the PC level. For example, a community campaign for control and improved management of TB among the Roma in **Romania**, based on the use of qualified peer health educators from within the Roma community sought to reduce the stigma associated with TB and improve detection rates and adherence to treatment. All the health services promoted during the project were offered within the Romanian public health system, through the national TB control programme, so the intention was to facilitate improved use of the available services. The project resulted in improved case detection and referral to medical services (see *Section 3.5*) (Berger et al., 2010; Harrington and Simpson, 2010b).

Trust, as measured by relations between and within workforce, management and leadership of the system, beliefs about the organisation and outcomes of the PC systems and recognition and support for the administrative burdens and or challenges of PC providers work, is not explicitly documented or discussed in the studies identified or reviewed. However, in **Denmark, New Zealand** and **Switzerland** the issue of giving priority to professional judgement and scope is raised (see *Section 3.6*). Team building through all partners working from shared principles including patient-centeredness, equity, evidence-based medicine and cost-effectiveness was identified as key, as is also using (funding) incentives that are stimulate professionals to exert their passion and expertise rather than to control their performance (van Weel et al., 2012). Another issue argued to potentially affect trust is the number and pace of changes, particularly where reorganisations are seen as politically driven, referred to as *re-disorganisation* (Smith et al, 2001; Oxman et al, 2005) in (Roland et al., 2012). *General Practitioners at the Deep End*, is based on the 100 most socio-economically deprived general practice populations in Scotland and sought to capture the views and experience of Deep End GPs, as a resource for addressing the health and social problems of people in very deprived areas, improving their health and narrowing health inequalities. It refers to the common experience of practitioners serving deprived areas in having insufficient time and other resources to address the volume of need and demand, and is primarily an exercise in GP engagement (Watt, 2012).

3.3 Domain 3: Public/Social roles

Processes for engagement

A **Belgian** study on possible models for public and patient involvement in health care decision making identified citizen and patient involvement: as a means to achieve policy goals such as efficiency, accessibility and quality of care: as an end in itself in terms of the empowerment, emancipating or democratic perspective, i.e. the basic right of citizens to participate in decision-making processes; and as a means to give the population the opportunity to take responsibility for its own choices (Christiaens et al., 2013). They distinguish between people as representatives (potential patient or health care client) and people as patient-experts by experience and argue for different levels of decision-making where citizen or patient involvement might be considered: in resource allocation decisions in decisions on the reimbursement levels for specific services, diseases or treatment; and in decisions on the reimbursement level for an individual patient (Christiaens et al., 2013). This study underlines how health system goals for people’s involvement can focus on people’s role as clients/users or consumers or ‘choosers’ of services, and less so than as citizens/taxpayers shaping the decisions that might affect them and others as patients or clients. For example, the health systems in transition (HiT) reports for **Canada,** the **Netherlands** and **England** reflect this as a feature within more market-oriented systems (Boyle, 2011; Marchildon, 2013; Schäfer et al., 2010; Cornwall and Shankland, 2008). In the **Netherlands**, there has been a shift from a focus on democratisation and emancipation of patients in the 1970s and 1980s to patients influencing insurance policies, medical guidelines and scientific research, to participation at the micro and individual level with the patient participating in the health insurance and health care provision markets (Trappenburg 2008) Schäfer et al (2010). The terms used and roles given are important because they indicate the goals a health system is trying to achieve, by referencing people as consumers, patients, citizens or people (Matheson and Neuwelt, 2012). The WHO WHR approach to PC emphasises people-not patient-centred PC, to highlight the wider population health and social dimensions of PC (WHO, 2008).

In **Spain**, public forums initiated as part of the PC reforms are still used to get public input into health system innovations at the local and regional levels. This provides both a forum for input and managing expectations about the time and resource constraints in the health system by increasing patients’ awareness about the challenges and costs of health care (Borkan et al., 2010; Cornwall and Shankland, 2008; Christiaens et al., 2013). In **Brazil,** the Constitution, and subsequent amendments, municipalized health services, established social control through community participation, and codified financial contributions for health at each level of government (Cornwall and Shankland, 2008) (see *Appendix 14)*.

In **Western Australia**, the Medical Council trialled two citizens’ juries in 2001. The first was held in tandem with conference on health and economics, and the second jury focused on equity and deliberated about 3 scenarios for using a nominal sum of funds equitably: Aboriginal versus non-Aboriginal healthcare; rural and remote healthcare versus urban healthcare; and aged versus other healthcare. A clear learning from both was that citizen’s rather than patient values are more likely to embrace the interests than others in society, particularly with regard to equity. Also that this process is useful for providing meaningful advice on health resource allocation at the macro level and that such juries can handle big conceptual issues. One of the Divisions of General Practice in Western Australia subsequently used a similar process to get community views (Mooney and Blackwell, 2004). A "live" citizen's jury was held in Queensland, Australia about public preferences around the provision of emergency services and deliberating on the question of 'Should the Emergency Department' treat everyone who presents for treatment?'(The Australian Collaboration, 2013; Whitty, 2012).

In **Sweden** 'Futures dialogues' involved a stakeholders conference at two county councils in 1997 where local level communities and politicians met with lay participants to discuss the Swedish health system; and study circles were used by authorities with responsibility for health care services to debate health matters using existing adult education networks (North and Werkö, 2002). The wider concept of involvement is linked to the policy of a 'mutual NHS' in **Scotland** where the people and NHS staff are identified as partners, or co-owners in the NHS, and the government published guidance on informing, engaging and consulting people in developing health and community care services. This guidance is supplemented by guidance by the Scottish Health Council (SHC), which has a key role in providing advice, and support to boards and in quality assurance, to ensure that the process(es) they follow complies with the guidance. In addition, the NHS Reform (Scotland) Act 2004, requires established Community Health Partnerships, to develop a Public Partnership Forum as one means to maintain an effective and formal dialogue with their local community (Steel and Cylus, 2012).

In **England**, the NHS Charter, 2009 sets out a range of legal rights which, in the case of the *public and patients*, address seven areas: access to health services; quality of care and environment; nationally approved treatments, drugs and programmes; respect, consent and confidentiality; informed choice; *involvement in one's health care and in the NHS*; and complaint and redress. These are set out in *The Handbook to the NHS Constitution* for England (Department of Health, 2013). NICE has a Citizen's Council for community, patient, or consumer engagement (see *Appendix 8*). Co-creation of a personalised self-management plan has been recommended as part of transforming the patient caregiver relationship into a collaborative partnership (Naylor et al., 2013). While public and patient influence on health system decisions is usually exercised via the ballot box at election time (Boyle, 2011) this is changing (see *Section 3.6*) in England.

Matheson and Neuwalt (2013) document New Zealand's journey towards people-centred care focusing on 4 recent health reforms, the most recent of which is "Whanau Ora", an intersectoral strategy, developed by Maori for Maori and using a strengths-based approach. It is about Maori families being supported to achieve their maximum health and wellbeing and extended families (*whanau*) are at the centre of care. It seeks to empower family-centred provision of services and have families own solutions including: self-managing, living healthy lifestyles, full participation in society, confidently participating in the Maori world and full economic and social engagement. Furthermore it shifts the focus from individuals, families and communities as outcomes to the *whanau* as a system in its own right, and the authors note that Maori families and communities have been taking care of their own health for generations yet this is not often recognised in a system where professionals/providers teach self-management (Matheson and Neuwelt, 2012).

Health information and health literacy

Community health literacy and patient/consumer information is an important component of social roles. A seminar on tackling PHC workforce issues in **Australia** identified that there is a gap in deliberations around the role of community and consumer participation in PHC workforce policy development and planning, as well as links to the formal or employed workforce. The discussion identified a need for a review of community health literacy about the PHC workforce and new roles as well as the role of 'formal' workforce in supporting self-care and home care of expert patients and clients was identified (Naccarella et al., 2010).

The quantity of information available has increased significantly in the past 10-20 years in countries such as **England** and the **Netherlands** (Boyle, 2011; Schäfer et al., 2010), although this may not always be supported by active health literacy. In the **Netherlands** the Dutch Health Care Authority developed guidelines for health insurers on how to inform patients, however not all insurers information comply with the guidelines. Also, while information on premiums and complementary coverage was widely available in 2008, information on authorisations and cost sharing appeared to be less available and information on quality (of the insurers) was hard to find. Important information about quality and health care is published on the National Institute for Public Health and the Environment (RIVM) website (Schäfer et al., 2010). A 2007 survey found that approximately 60% of Canadians lack the capacity to obtain, understand and act on health information and services to make appropriate health decisions. While accessible information on the quality of health services is available the Health Council of Canada has tended to focus on information on patient and citizen engagement, including a survey of the engagement of Canadians in their own primary health care (Canadian Council on Learning 2007, in Marchildon, 2013). In **Europe**, more recent evidence from the European Health Literacy Survey with 8 EU countries and drawn from other sources identifies the need for a wider and relational whole-of-society approach to health literacy that considers both an individual's level of health literacy and the complexities of the contexts within which people act. The Survey showed that nearly half the Europeans surveyed have inadequate or problematic health literacy, considering weak health literacy skills are associated with riskier behaviour, poorer health, less self-management and more hospitalization and costs (WHO Regional Office for Europe, 2013).

In **England**, the range of information available for patients to consult about their own health and health care has developed substantially in recent years, with much available online. The NHS Choices web site (2007) is a key source, providing a wide range of information about health and health services in general, from the structure and organization of the NHS to information on costs and exemptions of services, performance indicators, waiting times, complaints procedures, access to medical advice and initial assessments from NHS Direct and contact details of local providers. Consumers can check and compare hospitals (public and private-sector), doctor profiles and performance online (Boyle, 2011). In **Scotland,** the government worked with the voluntary sector to establish a national health information and support service to provide in 2010 a single online health information resource – *NHSinform* - with a national health information helpline and a network of branded health information support centres in local communities (Steel and Cylus, 2012).

Particular measures have also been taken to strengthen roles of specific vulnerable groups. The Roma project for control of TB in **Romania**, for example, focused on participation and engagement by the Roma community beginning with a the survey of knowledge, attitude and practices and later through the appointment of peer health educators from within the community and the media education/information campaign. It contributed to a reduction in barriers to access, particularly lack of knowledge about TB, its treatment and stigma. The peer health educators also provided treatment support to patients, such as going with them to the doctor's surgery or encouraging family members to do so and training for health service providers, including how to work with vulnerable communities, will have contributed to improved engagement of the Roma community (Berger et al., 2010; Harrington and Simpson, 2010b).

3.4 Domain 4: Health and health care outcomes

Generally PC has been associated with improved health outcomes, as noted in the document on the conceptual framework for the work (Loewenson and Simpson 2014) and by Kringos et al, (2013c: 690-691): *Both the structure of primary care and the coordination and comprehensiveness of primary care had a positive relationship with the health of people with ischemic heart disease; cerebrovascular disease; and asthma, bronchitis, and emphysema. People suffering from these conditions had better prospects in terms of fewer lost years in health care systems with a strong primary care structure, good coordination of primary care, and comprehensive services delivery. Only for people with diabetes was such an association not evident*.

This section draws on both specific studies of PC in relation to health outcomes and distribution of health outcomes (equity), and more general studies of amenable mortality/morbidity, avoidable mortality/morbidity and ambulatory sensitive hospitalisations. Improving effective coverage is also key to improving health outcomes for evidence-informed programs, treatments and services

(Tanahashi, 1978) including tackling barriers to availability, access and appropriateness of services so as to ensure GPs as a usual source of care. Despite debate about the extent to which health care and within this PC, contributes to improved health outcomes, there is a significant body of work on amenable mortality and morbidity highlighting the contribution that such care makes. Tobias and Yeh (2009) for example assessed amenable and all-cause mortality rates by ethnicity and household income from 1981-84 to 2001-04 using linked census-mortality datasets for New Zealand and found that trends in amenable causes of death accounted for approximately one-third of the decrease in mortality over 25 years, for the population as a whole and for all income and ethnic groups except Pacific peoples, for whom there was no reduction in amenable mortality. Wherever possible the findings are presented in terms of the specific features/determinants identified in the prior domains/sections so as to highlight the connection to PC.

Improving coverage and access to PC to enable earlier intervention

An approach to PHC that includes tackling the wider determinants of health, and ensuring the promotion of health and healthy development from the very beginning such *Chile Crece Contigo* can mean decreased risk factors and development of chronic conditions throughout the life course and in the wider population e.g. a cohort effect. Within this approach (see *Section 3.2*) action to regulate and reduce exposure to other determinants such as exposure to second hand tobacco smoke, obesogenic environments etc can reduce exposure and levels of risk, meaning that people of all life stages are less exposed and present to PC with lower levels of risk and at an earlier stage. However, if barriers exist to accessing PC such as out of pocket expenditure, this will impact on the effectiveness of PC.

Chile and Thailand, have both assessed the impact of health system changes, particularly with regard to PC, using ambulatory sensitive conditions as a marker as well as looking at issues of equity in coverage and access (Bitrán et al., 2010; Yiengprugsawan et al., 2011; Frenz et al., 2013). In **Thailand**, a study found that after implementation of the UCS, the rate of uninsured people decreased from 24% in 2001 to 3% in 2005 and patterns of health service use changed, with increasing use of the PHC among poor people. While overall coverage and service use improved, people who were not in the workforce due to serious ill health or disability but uninsured required treatment beyond the PHC and so were not necessarily benefiting from the changes (Yiengprugsawan et al., 2011). Both Frenz (2013) and Yiengprugsawan (2011) also assessed unmet need for a recent health problem. In **Chile**, they found a decrease in both unmet need overall and between the lowest and highest social groups between 2000-2009 but the age group differences between those aged 15 and 64 years had not improved and may have widened. Frenz et al (2013) note this most likely reflects a social policy focus that prioritises children and older people. Another evaluation of the healthcare reform in **Chile** focused on the strengthened the PC system management of NCDs, and found that for hypertension, both types of diabetes, and depression the reform was linked to growing access to services and increased coverage (Bitrán et al., 2010). Also, people are more likely to seek treatment if there are no out-of-pocket costs. The study on multimorbidity from Scotland (Barnett et al., 2012) underlines however the need to review broader health outcomes.

Countries generally have mixed pictures on health outcomes, highlighting the need for more in depth understanding of the causes of health outcomes. The **Netherlands** has, for example, reported good health care outcomes on prevention as measured by high rates of participation for breast and cervical cancer screening, and a 95% vaccination level and good early child health care between 0-4 years (WHO 2007). However, GPs in the Netherlands perform less well on prevention and promotion, compared to those in Australia, Canada and the US (Schäfer et al., 2010).

Outcomes from PC service delivery

While the evidence demonstrating outcomes attributable to PC and or specific programs does however have several limitations, including those of attributing specific interventions or features to outcomes, the models and knowledge for assessing health impact and outcomes attributable to PC is improving. Examples include the QUALICOPC study, which aims to evaluate the performance of primary care systems in **Europe** in terms of quality, equity and costs making use of some new datasets and being able to link GPs with patients (Schafer et al., 2011). The **Canadian** Health Services Research Foundation, assessed 4 approaches to evaluate the potential economic impact of improvements to the PHC system including a results-based logic model, highlighting the contribution of PC and key gaps in current approaches such as a lack of reporting information on the costs of interventions, economic evaluations that are too narrow in scope, poorly reported and with too short time horizons, recommending the use of modelling (Canadian Health Services Research Foundation, 2012).

In terms of *immediate health outcomes*, a comparative assessment of all of the **Ontario** PC practice models (CHCs, family health groups, family health networks, Family Health Organisations, and family health teams) measuring ED visits over 2008/9-2009/10, found that patients enrolled in CHCs and family health groups had fewer emergency department visits compared to those enrolled in the other models (Marchildon, 2013). Others have found that the model of PC in Ontario affected referrals to specialists with FFS practices having far lower referrals to specialists than capitation funded solo practices (Liddy et al., 2014). In **Finland**, a comparison of two models of GP care of diabetes (1 and 2) found that the model where patients with type 1 diabetes and patients with complicated type 2 diabetes were assigned to a GP specialised in diabetes care was more effective as measured by fewer specialist consultations and patients with type 1 diabetes were more satisfied, but quality and costs were similar in both models (Honkasalo et al., 2014).

In **Brazil**, Macinko et al (2010) were able to describe national changes in patterns of potentially avoidable hospitalisations for chronic conditions and to determine to what extent the changes could be reasonably attributed to expansion of the Brazilian FHP in the past decade using available data. They found that for ACS hospitalisations related to chronic illnesses:

- A decline between 1999 and 2007 among females aged 20-59 by 29%, and among males in ages 0-19 and 20-59 they declined by approximately 20%. The decline in all hospitalisations for all males was 14% and for all females 7%.
- Hospitalisation declines were statistically significant for all conditions except diabetes.
- Reductions in hospitalisation for hypertension were only statistically significant for men.
- Higher levels of population enrolment in the FPH were linked with lower rates of hospitalisation for chronic diseases e.g. 23% lower hospitalisation rates for asthma, with smaller but significant reductions for stroke and other CVDs.
- Most hospitalisations occurred among under 5s and those 60+ years.

At the same time, the study also found that most living conditions except for income showed statistically significant improvements (Macinko et al., 2010). An assessment of the effectiveness of a national diabetes program in the **German** Statutory health insurance system (*Section 3.3*) compared to routine care over 4 years, found that: overall mortality declined and drug and hospital costs were significantly lower for patients enrolled in the program (intervention) compared to those receiving routine care; and the occurrence of major complications, such as amputation of lower leg or foot or myocardial infarction, were also lower for the intervention group. This was attributed to lower hospital costs but slightly higher medicine costs in the intervention group. The overall approach has been better adapted to feedback from providers, including through electronic reporting; quality measurement routines and feedback systems for physicians, improved quality management and process organisation and delegation of disease management tasks to other staff in PC practices (Stock et al., 2010). These findings in relation to cost have also been found in other studies (Kringos et al., 2013c).

A focus on equity of outcomes

Regarding inequalities in access and outcomes particularly for remedying existing disadvantage, employing CHWs has played a role, such as in reducing inpatient hospital stays and thus hospital costs, and improving coverage and outcomes in vulnerable groups (DePasse, 2013) (Onie et al., 2012). As indicated, since implementation of the 'health guarantees' approach in Chile, there has been ongoing monitoring for its equity impact (Frenz et al., 2013) and a specific study of 6 national programmes (see Appendix 6). The Roma TB control campaign in **Romania** improved TB treatment coverage through peer health educators, education sessions, identifying people with symptoms of TB. New TB cases and referrals for assessment were made and people accompanied to see a medical professional (Harrington and Simpson, 2010b). An evaluation of the **Spanish** Health Promotion Among the Navarre Ethnic Minorities programme covering 20 years found positive results in PC, women's health, health education and school attendance including: in children vaccination coverage; adolescents vaccination against Hepatitis B; and child coverage in a dental prevention programme (Perez Jarauta et al, 2010; Harrington and Simpson, 2010 in (WHO, 2010). Audit **Scotland** (2011) found that the Keep Well programme and NHS providing health checks in certain areas of high deprivation were associated with reduced premature mortality in the 15% most deprived areas, and a slight narrowing of the gap compared to other areas (Steel and Cylus, 2012).

Quality improvement and improved care

Measurement of quality has been an increasing focus in many PC systems. The experience of UK is one of the most well documented approaches. A systematic review of the **UK** Pay-for-Performance (P4P) scheme for achieving standards set out under the Quality and Outcomes Framework (QOF) found that there were modest cost-effective reductions in mortality and hospital admissions in domains such as epilepsy care (with fewer epilepsy-related admissions). However the initial increased rate of improvement in quality of care was largely in the first year of implementation and declining after this. The implementation of the QOF helped practice working but there was a decline in personal continuity of care between doctors and patients, and some concerns about unequal distribution from payments under the scheme, as well as encouragement of a culture of performance management through a tick the box approach. In areas that did not have incentives, such as prescribing and pharmaceuticals, there was limited or negative impact, with increased prescription rates for anti-depressants, statins and other drugs. While inequalities in care by age for CVD and diabetes narrowed after the introduction, as those patients receiving worse care began to receive improved care, inequalities between men and women for CVD and diabetes continued or increased, with men often receiving better care. There was also concern about the practitioner's option to exclude those patients who were hard to reach to 'boost' performance targets. It was also noted that it is difficult to assess the costs of the scheme in relation to health and other gains. The overall advice in terms of policy and practice implications was to "exercise caution about implementing a similar scheme" including monitoring and balancing of costs against benefits, that P4P should be seen as one option among other quality improvement methods and that schemes need to be designed in collaboration with health system researchers. In terms of future research, a key areas for focus is improving assessment of the patient-user experience and linking it more directly to payment of financial incentives (Gillam et al., 2012). *Appendix 15* provides an overview of the Australian indigenous approach to continuous quality improvement with a focus on multi-morbidity and person-centred approaches overall.

The joint unit for quality development between the Organization of **Danish** GPs and the Danish Regions is known as DAK-E (Danish Quality Unit of General Practice). They are responsible for development and implementation of an advanced software module in all GPs' electronic record systems, that collects patient care data from the physician's computer, including prescriptions, laboratory tests, and information from hospitals. The data is also forwarded to a central database and used for quality improvement and research. All GPs have online access to detailed information about to what extent their treatments are in accordance with the clinical guidelines. DAK-E also runs DANPEP (Danish Patients Evaluate Practice), where patients evaluate their doctors and general practices through the use of questionnaires. A personalised report with the results of the evaluation is provided to the GP and includes aggregated data for the other participating doctors in the region so that the doctor has the opportunity to compare and provide perspective to her own results. The results of the survey are used to focus on the quality experienced by the patient and to create changes in practice. The Audit Project Odense is another quality improvement assessment that allows GPs to input data about their practice patterns, receive feedback, develop quality improvement interventions, and evaluate them (Pedersen et al., 2012).

Finally the King's Fund review on models for PC identified 12 design principles (7 relating to clinical care and 5 organisational principles) to be used in primary care provision that are also found in this project's conceptual framework, that is: use of EMRs, proactive and population based care and PC organisations making information about the quality and outcomes available in real-time (Smith et al., 2013).

3.5 Domain 5: Managing and sustaining change

Health systems are complex adaptive systems (Best et al., 2012). The way that the system adapts and its capacity for change is thus important, while noting that continual structural change or change for changes sake can be counterproductive (Boyle, 2011): 422) Much of the literature reviewed on change management, levers for change etc, particularly in relation to PC, is focused on describing change at a meso-level in specific PC practice settings. One review of wider system wide change identified five "simple rules" that are likely to enhance the success of the large scale transformative initiatives:

i. blend designated leadership with distributed leadership[3];
ii. establish feedback loops;
iii. attend to history;
iv. engage physicians; and
v. include patients and families (Best et al., 2012)

The rules are unsurprising and consistent with much of what is written in the literature about learning organizations, enabling effective and continuous quality improvement (Gardner et al., 2011; Kates et al., 2012; Rushmer et al., 2004a; 2004b; 2004c). Rather than describing "what works", the intention of this approach is to be able to better describe "what works, for whom and in what circumstances." (Best et al., 2012). *Appendix 16* presents more detail on such factors in change management at meso and wider system level and using information from the countries reviewed particularly the 6 that participated in the JABFM exchange.

In nearly all the countries reviewed, the changes were initiated at national level e.g. the Netherlands, Thailand, Brazil, Chile, New Zealand, the UK and now England, pointing to the need to examine the supports and mechanisms for change at both national and practice level, and the links between them. Kates et al (2012) describe wider system enablers of local PC transformation as:

i. The creation and ongoing support of organisations or governance mechanisms at the local and regional/ provincial levels that give PC providers a collective voice, such as the former Divisions of General Practice in Australia (McDonald et al., 2006).
ii. Well-defined measurable goals for the system e.g. Chile
iii. Patient enrolment with PC providers and organisations e.g. UK and New Zealand
iv. A system of PC measurement that meets the information needs of the public, governments, ministries of health and other stakeholders e.g. DAK-E and DANPEP
v. Policy and funding support for inter-professional teams e.g. Canadian PC transition fund
vi. Funding and provider payment arrangements that are aligned with quality goals e.g. UK QOF
vii. Health IT that effectively supports patients and providers e.g. Spain
viii. Mechanisms to support coordination and integration
ix. Systematic evaluation of PC services and policy innovation, and
x. Adequate funding of PC research and research training (Kates et al., 2012)

In addition, the 2008 World Health Report on PHC emphasises the role of governments as 'brokers' for PHC reform and the importance of effective policy dialogue – this includes transforming information systems into instruments for PHC reform, systematically making use of innovation and sharing lessons on what works (WHO, 2008).

---

[3] Distributed leadership "…means focusing on the practices and relationships involved in leadership as well as developing shared and evolving leadership through purposeful mentoring strategies. In the health care sector in particular, the complex layering of both the system and the multiple levels of professionalized autonomous practice means that distributed leadership is not only optimal but also necessary for large-scale transformative change to take place." (Best et al., 2012): 433)

The 2006 changes to the **Dutch** system built on incremental change and reforms in the preceding years (and learning from history re what the population would accept) and has subsequently been accompanied by learning and feedback loops. For example, reversal of the 'no claim' system from the 2006 reforms because it was identified as discriminating against people with chronic illness (Schäfer et al., 2010) (see *Appendix 4).* In **Brazil**, the health system reforms built on learning from alternative 'community health' approaches developed by public health practitioners and in response to existing health system problems, particularly in Sao Paulo. Shankland and Cornwall (2007 in Cornwall and Shankland, 2008) argue that the SUS obtained much of its legitimacy from a powerful "epistemic community" (Cornwall and Shankland, 2008) as well as the national conferences and assemblies with elected representation (described in *Section 3.2* and *Appendix 14)*.

In **Chile** and **Thailand**, the government and or public health advocates used studies to better understand people's opinions to policy reforms (e.g. exploring people's attitudes to early child development in Chile as part of the development of Chile Crece Contigo, see *Appendix 6*) and presenting information about the need for reform (e.g. the yellow book developed for politicians of all parties in Thailand outlining evidence about universal health coverage in plain language, see *Appendix 5*). This underlines the need for not only actual funding but structural support for different and wider approaches to research and evidence-generation about health systems reforms and approaches. For example, the evidence was generated by the Health Systems Research Institute in Thailand, which is not a traditional university institution but located within government and at the research/action interface (Jongudomsuk, 2010a). Goodyear-Smith et al (2012) noted that if the patient PHO enrolment process included consent to use unidentifiable data constructively, all practice data could be made available for analysis and developing a more systematic picture of patient/people's experience of primary care (Goodyear-Smith et al., 2012).

While there was already an agreement between the First Ministers in **Canada** to fund PC transition fund beginning in 2000, the nature and shape of change was driven by both PC practitioner experience, and citizen and politician concerns, that were both expressed and fuelled by the media. Although PC practitioners were concerned about what Hutchison et al (2011) describe as the stagnation of PC in Canada compared to other countries, this climate of citizen discontent seems to have initiated a stronger push for change shifting organised medicine from a "cautious/hostile" attitude towards one of increased negotiation (Hutchison et al., 2011): 262). They also note that while the incremental, pluralistic and voluntary approach to PC reform in Canada can lead to a lack of overall policy coherence, it is a realistic approach when the policy (politics and governance) context is not open to 'sweeping' overall change (Hutchison et al., 2011),

Boyle (2011) argues that many of the current reforms to the NHS in England build on previous policy changes such as decentralisation, developing a market in health care and giving clinicians, particularly GPs a greater role in managing the NHS (Boyle, 2011). However the level of concern is such among academics, health professionals and the public to change the nature of dissent from beyond expressing dissatisfaction at election time (see (Boyle, 2011): 62) to more active mobilisation and advocacy. For example, campaigns such as the *Keep our NHS Public* (KONP) campaign, which provides information about the changes, key publications, templates and materials for campaigning. In addition, exercises such as the People's Health Inquiry for London NHS gather evidence to be used to develop a report and recommendations, and to open debate and discussion as part of the process of policy development in the run-up to the next General Election. Key groups have also participated in the more traditional forms of dialogue and exchange such as the NHS Future Forum (the Government's 'listening exercise') on proposed reforms to the NHS, designed to inform the Government's decision making through engagement with NHS staff, patients and wider stakeholders. This included public 'listening events' or hearings, feedback to the website, emails to FF Members and a questionnaire. Submissions were received from key public health groups such as the King's Fund, the royal colleges of GPs, psychiatrists, nursing, physicians and the NHS confederation. The exercise highlighted the lack of detail in the draft Health and Social Care Bill and about the reforms e.g. insufficient safeguards against cherry-picking and too much focus on the parts of the system rather than how the system works to deliver integrated care (Fieldman, 2011).

Reverse innovation is one principle supporting change, exploring the flow of ideas from low to higher income countries. For example, the Partners In Health (PIH) CHW and wraparound service delivery model,[4] was first applied to people living with HIV in rural Haiti and in a range of other low-income countries. CHWs visit people living with HIV at home and work with them to overcome barriers to care, and provide psychosocial support. The PPIH program has been adapted to working with poor urban US populations through the Prevention and Access to Care and Treatment (PACT) program (DePasse, 2013; Onie et al., 2012). CHWs in the US have been part of PC programs to support the community – health service interface on chronic diseases such as diabetes and asthma and, risk factors such as hypertension (Singh and Sachs, 2013; Clark et al., 2010; Cherrington et al., 2008; Brownstein et al., 2007).

In relation to specific PC reforms, the literature emphasises the importance of **engagement of practitioners**, colleges of general practice and professional associations, including through networks of support for change (van Weel et al., 2012) (Goodyear-Smith et al., 2012; Nicholson et al., 2012; Pedersen et al., 2012; Roland et al., 2012; Strumpf et al., 2012; van Weel et al., 2012). While Goodyear-Smith et al (2012), suggest that in New Zealand, the introduction of the PHOs was initially less than positive because doctors felt the previous model for GP collaboration was more consistent with the predominantly private sector and business oriented GP model in place, surveys of GPs following the introduction of these measures indicate that NZ GPs had high levels of satisfaction with their work, and in a more recent survey, 82% of PC physicians from New Zealand said they were satisfied/very satisfied with practicing medicine (Schoen et al., 2012). In a survey of doctors in the canton of Geneva, doctors expressed predominantly negative opinions about the impact of managed care tools including guidelines, gatekeeping, managed care networks, pay for performance perceiving the tools as positive but the impact on their professional autonomy as predominantly negative (Berchtold and Peytremann-Bridevaux, 2011): 5). All 6 JABFM countries (Australia, Canada, Denmark, the Netherlands, New Zealand and the UK) indicated that physician engagement, usually through colleges and professional associations, had been a critical and important lever in achieving reform, even when that reform was contested (Goodyear-Smith et al., 2012; Nicholson et al., 2012; Pedersen et al., 2012; Roland et al., 2012; Strumpf et al., 2012; van Weel et al., 2012). Finally all of the approaches and principles outlined in this section are consistent with the findings of the King's Fund review of PC models and what needs to happen to secure the future of GP in England (Smith et al., 2013). While, the engagement of physicians is more commonly noted than the engagement with the wider public in reforms, measures for this are reported in **Brazil, Spain, Thailand** and **Scotland**, as identified earlier and or in *Section 3.4* and *Appendix 14*. However the gap points to need for greater attention to exploring the role of people as citizens and PC reforms being carried out in *partnership* and *collaboration* with communities, to provide input to and support for reforms.

4. Discussion

There has been strong investment in a range of measures and in a range of health systems contexts, including: incentives (e.g. P4P), payment/financing approaches (increase of blended/mixed payment models, from FFS to capitation and some FFS); development of new models for PC, at the meso e.g. networks/associations/divisions for several general practices and at the micro level, e.g. models for reorienting from solo practices to group/family/community practices; getting GP buy-in and involvement; workforce development, training, and quality improvement – quality improvement frameworks, evidence based guidance, coverage lists based on assessed treatments and health technologies; movement to population based and multi-disciplinary approaches, widening workforce options including community health workers, and or lay workers, patient experts etc; use of information technology and reporting and EMRs.

---

[4] A wraparound approach refers to "an intensive, individualized care planning and management process. Wraparound is not a treatment per se. The wraparound process aims to achieve positive outcomes by providing a structured, creative and individualized team planning process that, compared to traditional treatment planning, results in plans that are more effective and more relevant to" the people concerned e.g. people living with HIV and their family, community etc (see http://nwi.pdx.edu/wraparoundbasics.shtml, accessed 19 February 2014).

4.1 Features and determinants of promising practice

While this section raises common features it is also important to note the limitations in drawing general conclusions. There are similarities between countries with promising PC practices from wider contextual factors to specific PC practices, such as in workforce arrangements or prioritisation of prevention. Simultaneously there are many differences between countries, with different approaches leading to similar outcomes. Judgements on what is promising depends on the outcomes aimed for, whether in health, in improved heath in particular sub-groups in the population, in improved quality or experience of health care for both providers and clients, and or in efficiency and management terms. There are different interests around these outcomes, and different time frames for achieving them. Several of the countries reviewed are in transition in terms of the reform process e.g. the Netherlands, Chile. Making direct links between resources, expenditure and costs and health outcomes depends on what information is collected and how this is made available, and the range of determinants that influence the links between resources and outcomes. This is further discussed in a separate report in the programme. Finally attention needs to be drawn again to the limitations of using published literature to understand complex systems, where not all factors are documented. Notwithstanding these limitations, this section makes some general observations. Simultaneously this does not draw attention away from the specific examples documented in the paper, as the primary issue in identifying countries where there can be learning from promising PC practice. *Table 2* provides an overview of 12 key features of promising practice in relation to the countries reviewed, found at the macro or meso levels or both. These features link back to and are consistent with the conceptual framework for the project (Loewenson and Simpson 2014).

Improved health at lower cost

The contribution that a well functioning and effective primary health care system can make to improving the health of the population and reducing health inequalities is supported by international evidence. Primary care has been shown to have an independent effect on improving health status and reducing health inequalities (Starfield B, 1994, Macinko et al. 2003). Other research shows that primary care may mitigate the adverse effect of income inequality on health status (Bunker et al., 1994, Shi et al., 1999, Macinko et al., 2003). Furthermore, countries with strong primary care infrastructure have lower costs and generally healthier populations (Shi et al., 1999, Bunker et al., 1994). (McDonald et al., 2006): 7)

This quote neatly summarises all the reasons for investing in PC and PHC, with lower cost being only one reason. While in the context of increasing health expenditure, increasing but expensive health technology and pharmaceutical solutions, ageing populations and an increasing proportion of the population with one or more risk factors for chronic conditions, lowering health expenditure might seem a driver, it does not appear to be so. Country examples highlighted that increasing health expenditure is important but often improved care and outcomes are considered equally important, and cost is considered more in relation to effectiveness (including outcomes and equity in outcomes). For example, the study of cost-containment by four countries involved a range of options for cost containment that were more sophisticated than passing the cost onto households or individuals by reducing coverage or introducing copayments (Stabile et al., 2012). Also in countries such as Thailand, increasing inequities in coverage, particularly in terms of catastrophic expenditure were a key driver for policy change and reform (Jongudomsuk, 2010a). Providing the evidence about the impact of PC/PHC has proven challenging and was presented largely in *Section 3.5*, but this is changing, particularly with improved use of population information about amenable and avoidable mortality and morbidity, which in turn is often aided by the consistent application and use of health information technology. Also a specific study on the PC and population health outcomes together with costs shows that comprehensive PC calls for investment, and potentially increased spending to improve systems, but it also slows down the rate of increase in health care spending (Kringos et al., 2013c). Additionally as noted, improved population health is not achieved solely by improved investment in PC and or the health system but as part of a wider approach that involves *action on the social determinants to create conditions for healthier populations* (particularly with regard to the risk factors for chronic disease) and policies that actively protect people from harmful exposure such as second hand tobacco smoke and environmental toxins.

Table 2. Summary of features of promising practice across countries reviewed

Countries	**Context**	**Health system context**			**PC services**						**Social roles**	**Change management**
	Policy orientation to PC, public participation, state intervention to support goals	**Universal coverage of pre-payment and financial protecttion**	**Purchasing arrangements that support cost control and PC**	**Value for money and benefit sharing in new technology**	**Workforce development for PC**	**Comprehensive, person centred care, management of multimorbidity**	**First access, enrolment with measures to address equity, longitudinal continuity**	**Integration of prevention, public health, SDH, co-ordination across services, agencies**	**Relational continuity, gate-keeping, co-ordination across referral levels**	**Informational continuity, EMRs, IT, Support for innovation**	**Involvement of patients, family, communities in services**	**Measures for leading, organising, supporting system reforms**
Australia	√		√	√	√	√		√	√	√		√
Brazil	√	√	√		√	√	√	√			√	√
Canada	√	√	√	√	√		√	√	√			√
Chile	√	√	√	√	√	√	√	√	√	√	√	√
Cuba	√	√			√	√	√	√			√	√
Denmark		√	√	√	√	√	√		√	√		√
France		√		√					√			
Germany		√		√		√	√	√	√			√
Netherlands	√	√	√	√	√	√	√	√		√		√
New Zealand	√		√	√	√	√	√		√	√	√	√
Singapore									√			
Spain	√	√	√			√	√	√	√	√	√	√
Switzerland			√		√							
Thailand	√	√	√	√		√	√	√	√		√	√
United Kingdom *	√	√	√	√	√	√	√	√	√	√	√	√

* The absence of a tick does not mean that the country is not taking action in this area, and should not be read as a negative. Neither does a tick indicate that the practice is necessarily of high quality. A tick indicates that documentation of one or all of the feature(s) listed in the above 12 categories, was identified from the literature reviewed and included.

Hence public policy reforms to promote and protect the health of communities is 1 of 4 PHC reforms recommended to reorient health systems towards health for all (WHO, 2008). A well functioning health system that is oriented towards people-centred primary care is another of the 4 PHC reforms critical to this. For example, the decrease in deaths from potentially avoidable causes in England and Wales over 10 years and specifically in the death rate from CVD has been attributed to a combination of factors including medicine, health promotion and wider policy initiatives, such as smoke free legislation and a ban on tobacco advertising from (Office of National Statistics, 2013). Therefore understanding of the wider social and economic environment together with the health system needs to be considered in the development of approaches to strengthen PC for better health outcomes. This includes how action *by and with* other sectors plus other parts of the health system can contribute to realising better health outcomes and enhance the contribution of PC. Understanding this wider context will assist in identifying levers for action.

Also the evidence about the cost-effectiveness of wider preventive efforts is improving. For example, a recent review of the international evidence assessing the economic case for promoting health and preventing disease, found that the most effective means of decreasing youth smoking is to decrease adult smoking using price increases, smoke-free policies and strong, well-targeted campaigns (Merkur et al., 2013). Follow up country case studies would need to explore further how wider social and economic and systems context affect PC models including population based policies, wider regulations, sustainable environments for prevention and policy and intersectoral service orientation towards prevention. Within the context of PC, important determinants (largely at the meso and micro levels) identified in the report include:

i. improved **access** through expansion of the PC services as first point of access;
ii. patient registration or enrolment with PC providers, for **continuity** of a usual source of care and regular follow up visits;
iii. changes and or improvements in PC service inputs and processes contributing to **improved clinical practice**, including through development of guidelines, financial incentives to implement the programs, availability of free services etc;
iv. enhanced PC capacity for early detection and effective management reducing the need for acute hospitalisation;
v. workforce development of physicians and all PC providers/workforce through use of quality improvement circles; and
vi. improved referral processes and ambulatory care.

The study by Macinko et al (2011) (*Section 3.4*) identified the above as potential determinant contributing to a reduction in the number of people with ACS conditions being hospitalised and a result of expansion of the PC program in Brazil (Macinko et al., 2011). The follow up country case studies would need to explore these in detail and in relation to more evidence of how these determinants are functioning within the country.

The prevention and management of chronic conditions

Much of the drive for overall and PC reform has come from the need to address the burden of disease from NCDs and related risk factors, together with an ageing population. This is reflected in the development of a range of policy, financing, infrastructure and workforce initiatives across the countries reviewed. Key examples include:

- **Changed funding arrangements linked to quality improvement initiatives** with a focus on capitation in countries with largely FFS payment, and a move towards blended models. Use of P4P through the Quality Outcomes Framework in the UK provides financial incentives for quality improvement, although with some reservations about wider system impacts noted. Also identified was IT to support structured and team-based care to achieve a set of evidence based targets (clinical, organizational, patient based and additional services). The clinical targets included conditions such as CVD primary prevention, risk factors, smoking and obesity. A systematic review found that the improvements in quality of care for chronic diseases were modest and information about the costs, affect on professional behaviour and patient experience remains uncertain. In the Netherlands, practice overheads of special arrangements with insurers provide funds to engage PNs to design health programs based on the needs of their practice population.

- **Changes to benefits or packages of coverage to include** specific payments, such as 'Care Plus' in New Zealand, payment for chronic disease management within Medicare in Australia, and inclusion of chronic conditions and related evidence-based treatments in the statutory or agreed lists of items to be covered in countries through an SHI, for example the AUGE in Chile. Or development and inclusion of physician managed diabetes program by insurers in Germany with a view to improving the health of their population. New areas of coverage and or treatment are often assessed through an agreed process before being included and considering issues such as quality, difference to current treatment (where it exists) etc and cost-effectiveness. However this is not the case in all countries e.g. Brazil.
- **Supported by evidenced-informed approaches** such as clinical practice guidelines for the NCDs and developed in some countries by agencies such as NICE to improve clinical and PC practice overall, and incorporating non-clinical and or social care measures as well. CPGs are an area in PC that requires strengthening as in several countries in Europe where the Ministry of Health may develop the CPGs.
- **Multidisciplinary, group practices** – funding arrangements have been used to encourage and enable group or family based practices, that because of their size can include more diagnostic and surgical procedures and delivery of more care for chronic conditions through PC. Another development has been collaboration of (large) groups of family practices in cooperatives to contract support facilities jointly, for example, laboratory facilities to measure pulmonary function in combination with expert advice on diagnosis and management and support for the management of diabetes mellitus (van Weel et al., 2012).
- **Advances in the use of EMRs and health information technology software** to have better recall and follow systems enabling more effective monitoring and care of people with a chronic condition. Early adopters and with 90+% coverage are Spain, Australia and New Zealand.

There is variation between countries in application of these areas, with specific interesting practices in some areas in some countries. The level of funding at national levels going to public health and PC vis a vis acute and other levels of care speaks to policy coherence and consistency or conflicting goals to assist PC in delivering on better management of chronic diseases for improved health outcomes. Secondly, the commitment in the wider policy environment for regulation to reduce risk factors and exposures in the population such as taxation on tobacco products, minimum price of alcohol, and better urban design for physical activity also supports policy coherence with the overall approach to PC. Third how countries have engaged all stakeholders/wider constituency in any reform process or reorientation towards PC/PHC – the concept of mutuality.

Finally, a focus on strengthening capacity for a generalist or a general preventive approach and PC as the most appropriate level of entry into the health system as also identified in the countries reviewed. For example, in Chile and Thailand who have invested in strengthening coverage and mechanisms for ensuring the PC is the first point of entry into the system, as well as the Netherlands, where less than 5% of patients are referred on to other levels of care (van Weel et al., 2012). Strengthening overall access for primary care not only increases the opportunities for better detection and management of conditions, but also for earlier prevention of development of conditions as well as the overall primary prevention and protection functions of GP such as immunisation, ensuring appropriate growth and development. It also requires the alignment of goals, resources and incentives. Here a generalist perspective is important and ensured when the system is accessible to all and the PC system is designed to be the first and usual point of contact. As indicated by Starfield and reinforced by the findings from the Scottish study on multimorbidity and the WHO Europe meeting (Starfield, 2011; Barnett et al., 2012; WHO, 2012), strengthening the generalist approach in PC is becoming increasingly important.

4.2 Innovation and management of change

Changes in health systems and PC policy reforms, includes getting 'buy-in' from a wide range of stakeholders, this is highlighted in some of the examples from Thailand, Brazil, the Netherlands and Chile. Such change might be introduced gradually in anticipation of electoral dissatisfaction come election time or by seeking more active buy-in across the political spectrum (e.g. Chile. Thailand and Scotland) and among the public, viewing the changes to any system as a shared responsibility. Implementation of positive PC reforms appears, from the evidence in the report to call for a clear policy vision and strategy. This is particularly important for consistency of reforms in decentralised systems (Kringos et al 2013a), such as Brazil, with the inclusion of the right to health in the Constitution (Couttolenc and Dmytraczenko, 2013). It also points to the importance of policy coherence across health and social systems, within the health system and across all levels. Change in many of the countries also appears to have been incremental (see for example, the Netherlands) or Brazil where introduction of the SUS was quite a significant reform but expansion has taken place over more than 20 years. This illustrates the need for 'roadmap' or implementation plan for change – ideally a shared roadmap to ensure the space for gradual implementation and longer-term sustainability.

Enablers for uptake and implementation innovation for change management or transforming PC systems seem to include two categories – the functional or mechanistic enablers such as providing resources for training, reorienting funding to support new ways of work and second, the issue of how change is proposed, designed and undertaken. For example, in Canada one of the reasons for success was allowing flexibility and adaptation of the basic PC models (Strumpf et al., 2012). A fundamental element of successful and sustained change management revolves around trust between those in the system. Related to this is the need to engage GPs, other PC providers and people in the design or redesign of the system from the beginning and as collaborators. Most commentators to the JABFM exchange on lessons for the US from PC reforms in other countries stressed the need to ensure physician engagement in any process (Kates et al., 2012; Nicholson et al., 2012; Roland et al., 2012; Strumpf et al., 2012; van Weel et al., 2012).

Nicholson and colleagues (2012) noted how important the PC structures at the meso level (e.g. the former Divisions of GP) had been in facilitating change in the face of federal/state divides in Australia. It provided capacity to impact PHC transformation by initiatives and reforms that focused GPs on working together on population health, multi-disciplinary team-based education and implementation of quality improvement strategies. No PHOs exist in the US, (Nicholson et al., 2012) and this may be an important entry point given PHOs can be voluntary professional affiliations and used to appeal to the professional rather than the performance management side of PC physicians (van Weel et al., 2012), and so incentivise them to use innovative ways of working and get involved. Kates et al (2012) identified 10 system enablers for PCT transformation (*Section 3.6*). These enablers are echoed in the work of Rushmer et al around characteristics of Learning Organisations (Rushmer et al., 2004c). A gap however (and perhaps it is in the literature reviewed) is the limited commentary on citizen involvement in processes for innovation, implementation and change management as part of PC transformation (WHO, 2008).

4.3 Concluding comments

This report is not intended to provide a set of answers for promising practice in PC but to provide input to the synthesis with the three other background papers to identify experiences described in the paper that have relevance to US PC practice and where deeper learning and exchange can be built. Much of the drive for overall health and PC reform has come from the need to address the burden of disease from NCDs and related risk factors, together with an ageing population in most countries. It is underpinned by commitments to improving quality of care, outcomes, effective practice and attention to health expenditure.   Significant information was available about the area of PC service delivery. The limited information available about mechanisms and enablers for change and reform highlights the need for more in depth case studies. However from the information available, it appears that incremental change, piloting/testing of new approaches, getting cross-party and constituents 'buy-in' together with making evidence about options for change available in a range of formats, all appear to be important features for making and sustaining change. Finally the paper indicates practice in countries that will be triangulated with evidence from other work to identify those countries that have the most relevance for the challenges in the US.

5. References

1. Abelson J, Mendelsohn M, Lavis JN, Morgan SG, Forest PG, Swinton M (2004) ‘Trends: Canadians confront health care reform’ *Health Affairs* 23(3):186-193.
2. Allen and Clarke (2013) *Evaluation of the Northern Territory Continuous Quality Improvement (CQI) Investment Strategy: Summary report.* Canberra: Department of Health Available at: http://agencysearch.australia.gov.au/search/search.cgi?query=quality+improvement+northern+territory&collection=agencies&client=445556fb&cool0=41&cool1=15&cool2=5&cool3=0&stem=2&scope_disable=off&num_ranks=20&profile=health&Submit= (*accessed 13 February 2014*).
3. Allin S, Rudoler D (2013) 'The Canadian Health Care System, 2013', in Thomson S, Osborn R, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C: 19–27. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).
4. Araya R, Alvarado R, Sepulveda R, Rojas G (2012) 'Lessons from scaling up a depression treatment program in primary care in Chile' *Rev Panam Salud Publica* 32(3): 234–240.
5. Australian Medical Association (2011) *Best Practice In Primary Health Care For Aboriginal Peoples And Torres Strait Islanders*. AMA: ACT. Available at: https://ama.com.au/2010-11-ama-indigenous-health-report-card-summary-best-practice-primary-health-care-aboriginal (accessed 18/02/14).
6. Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B (2012) 'Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study' *The Lancet* 380:37–43.
7. Bastias G, Pantoja T, Leisewitz T, Zarate V (2008) 'Health care reform in Chile' *Canadian Medical Association Journal* 179(12):1289–1292.
8. Bates C, Annear P (2013) *Lessons learned from Thailand’s universal health care scheme: Institutional and organisational arrangements.* Health Policy & Health Finance Knowledge Hub, University of Melbourne: Melbourne. Available at: http://ni.unimelb.edu.au/__data/assets/pdf_file/0010/778726/IB_11.pdf (accessed 24/02/14).
9. Berchtold P, Peytremann-Bridevaux I (2011) 'Integrated care organisations in Switzerland',' *International Journal of Integrated care* 11:14 March 2011.
10. Berger D, Butu C, Dev A, Olsavszky V, Pana A, Tripathi V (2010) 'Romania: controlling TB among the Roma - a community approach' in Koller T (ed) *Poverty and social exclusion in the WHO European Region: health systems respond*. WHO Regional Office for Europe: Copenhagen: 147–155.
11. Best A, Greenhalgh T, Lewis S, Saul JE, Carroll S, Bitz J (2012) 'Large-system transformation in health care: a realist review,' *The Milbank quarterly* 90(3):421–456.
12. Bitrán R, Escobar L, Gassibe P (2010) 'After Chile’s Health Reform: Increase In Coverage And Access, Decline In Hospitalization And Death Rates,' *Health Affairs* 29(12): 2161–70.
13. Blumel M (2013) 'The German Health Care System, 2013' in Thomson S, Osborn R, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C: 57-83. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).
14. Borkan J, Eaton CB, Novillo-Ortiz D, Corte PR, Jadad AR (2010) 'Renewing Primary Care: Lessons Learned From The Spanish Health Care System,' *Health Affairs* 29(8):1432–41.
15. Boyle S (2011) 'United Kingdom (England): health system review,' *Health systems in transition* 13(1):1–486.
16. Brownstein JN, Chowdhury FM, Norris SL, Horsley T, Jack L, Zhang X, Satterfield D (2007) 'Effectiveness of Community Health Workers in the Care of People with Hypertension' *American Journal of Preventive Medicine* 32(5):435–447.
17. Camenzind P (2013) 'The Swiss Health Care System, 2013' in Thomson S, Osborn R, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C:119–126. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).
18. Campion EW, Morrissey S (2013) 'A different model--medical care in Cuba,' *The New England Journal of Medicine* 368:(4):297–299.
19. Canadian Health Council (2011) 'How Engaged are Canadians in their Primary Care? Results from the 2010 Commonwealth Fund International Health Policy Survey,' *Canadian Health Care Matters* 5. Available at: http://www.healthcouncilcanada.ca/rpt_det_gen.php?id=148 (accessed 03/02/14).

20. Canadian Health Services Research Foundation (2012) *The Economic Impact of Improvements in Primary Healthcare Performance*. Canadian Health Services Research Foundation: Ontario.
21. Carin G, Mathauer I, Xu K, Evans D (2008) 'Universal coverage of health services: tailoring its implementation,' *Bulletin of the World Health Organization* 86(11):857–862.
22. Centre for Health Services Research and Policy (2004) 'Care Plus: Primary care for high needs patients,' *Health Policy Monitor*. Available at: http://www.hpm.org/survey/nz/a4/3 (*accessed 17 February 2014*.
23. Chapman JL, Zechel A, Carter YH, Abbott S (2004) 'Systematic review of recent innovations in service provision to improve access to primary care,' *The British journal of general practice: the journal of the Royal College of General Practitioners* 54(502):374–381.
24. Cherrington A, Ayala GX, Amick H, Allison J, Corbie-Smith G, Scarinci I (2008) 'Implementing the Community Health Worker Model Within Diabetes Management: Challenges and Lessons Learned From Programs Across the United States,' *The Diabetes Educator* 34(5).824–833.
25. Christiaens W, Kohn L, Léonard C, Denis A, Daue F, Cleemput I (2013) *Models for Citizen and Patient Involvement in Health Care Policy. Part I: Exploration of their feasability and acceptability.* Belgian Health Care Knowledge Centre: Belgium.
26. Christie B (2013) 'Minimum alcohol price is compatible with EU law, says Scottish court,' *BMJ* 346.
27. Clark NM, Lachance L, Doctor LJ, Gilmore L, Kelly C, Krieger J, Lara M, Meurer J, Friedman Milanovich A, Nicholas E, Rosenthal M, Stoll SC, Wilkin M (2010) 'Policy and System Change and Community Coalitions: Outcomes From Allies Against Asthma,' *American Journal of Public Health* 100(5):904–912.
28. Cornwall A and Shankland A (2008) 'Engaging citizens: Lessons from building Brazil's national health system,' *Social Science & Medicine* 66(10):2173 – 2184.
29. Couttolenc B and Dmytraczenko T (2013) *Brazil's Primary Care Strategy*. The World Bank: Washington D.C.
30. Crampton P (2005) 'The ownership elephant: ownership and community-governance in primary care,' *The New Zealand medical journal* 118(1222): 1-11.
31. Department of Health (2005) *Delivering Choosing Health: making healthier choices easier.* Department of Health: London.
32. Department of Health (2010) *Equity and excellence: Liberating the NHS*. UK Stationary Office: London.
33. Department of Health (2009) *Tackling Health Inequalities: 10 Years On. A review of developments in tackling health inequalities in England over the last 10 years.* Department of Health: London.
34. Department of Health (2013) *The Handbook to The NHS Constitution.* NHS: London.
35. Department of Health and Ageing (2009a) *Australia: The Healthiest Country by 2020 – National Preventative Health Strategy – the roadmap for action*. Commonwealth of Australia: Canberra. Available at: http://www.preventativehealth.org.au/internet/preventativehealth/publishing.nsf/Content/nphs-roadmap/$File/nphs-roadmap.pdf (*accessed 18 February 2014*).
36. Department of Health and Ageing (2010) *Building a 21st Century Primary Health Care System. Australia's First National Primary Health Care Strategy.* Commonwealth of Australia: Canberra.
37. Department of Health and Ageing (2011a) *Delivering National Health Reform*. Commonwealth of Australia: Canberra. Available at: http://www.health.gov.au/internet/yourhealth/publishing.nsf/Content/nhra-agreement-fs#.UuYh-P2CroB (*accessed 27 January 2014*).
38. Department of Health and Ageing (2011b) *National Health Reform Progress and Delivery. September 2011*. Commonwealth of Australia: Canberra.
39. Department of Health and Ageing (2009b) *Primary Health Care Reform in Australia. Report to Support Australia's First National Primary Health Care Strategy*. Commonwealth of Australia: Canberra.
40. Department of Health Victoria (2014) *Incorporating self-management support into primary care. A fact sheet for Primary Care Partnerships*. Department of Health Victoria: Victoria. Available at: http://www.health.vic.gov.au/pch/downloads/factsheet09.pdf (*25 February 2014*).
41. DePasse JW (2013) 'A model for 'reverse innovation' in health care,' *Globalization and Health* 9(40): .
42. Devi S (2014) 'Cuba's economic reforms prompt debate about health' *The Lancet* 383: 294–295.
43. Drennan V, Goodman C, Manthorpe J, Davies S, Scott C, Gage H, Iliffe S (2011) 'Establishing new nursing roles: a case study of the English community matron initiative,' *Journal of clinical nursing* 20(19-20):2948–2957.
44. Dresang LT, Brebrick L, Murray D, Shallue A, Sullivan-Vedder L (2005) 'Family medicine in Cuba: community-oriented primary care and complementary and alternative medicine' *The Journal of the American Board of Family Practice / American Board of Family Practice* 18(4): 297–303.
45. Durand-Zaleski I (2013) 'The French Health Care System, 2013' in Thomson S, Osborn R, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden,*

Switzerland, and the United States. The Commonwealth Fund: Washington D.C:45-56. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).

46. Fieldman S (2011) *NHS Future Forum. Summary report on proposed changes to the NHS*. NHS: London.
47. Franx G, Meeuwissen JA, Sinnema H, Spijker J, Huyser J, Wensing M (2009) 'Quality improvement in depression care in the Netherlands: the Depression Breakthrough Collaborative. A quality improvement report,' *International Journal of Integrated Care* 9(June):e1-11.
48. Frenz P, Delgado I, Kaufman JS, Harper S (2013) 'Achieving effective universal health coverage with equity: evidence from Chile' *Health Policy and Planning* August:e1-15.
49. García-Armesto S, Abadía-Taira M, Durán A, Hernández-Quevedo C, Bernal-Delgado E (2010) 'Spain: Health system review' *Health Systems in Transition* 12(4):1–295.
50. Gardner K, Bailie R, Si D, O'Donoghue L, Kennedy C, Liddle H, Cox R, Kwedza R, Fittock M, Hains J, Dowden M, Connors C, Burke H, Beaver C (2011) 'Reorienting primary health care for addressing chronic conditions in remote Australia and the South Pacific: review of evidence and lessons from an innovative quality improvement process,' *The Australian journal of rural health* 19(3):111–117.
51. Gauld R, Blank R, Burgers J, Cohen AB, Dobrow M, Ikegami N, Kwon S, Luxford K, Millett C, Wendt C (2012) 'The World Health Report 2008 - Primary Healthcare: How wide is the gap between its agenda and implementation in 12 high-income health systems?' *Healthcare Policy* 7(3):38–58.
52. Gillam SJ, Siriwardena AN, Steel N (2012) 'Pay-for-performance in the United Kingdom: impact of the quality and outcomes framework: a systematic review,' *Annals of family medicine* 10(5):461–468.
53. Gomez D and Ashton T (2007) 'Evaluation of Care Plus Programme,' *Health Policy Monitor*. Available at: http://www.hpm.org/survey/nz/a9/5 (*accessed 17 February 2014*.
54. Goodyear-Smith F, Gauld R, Cumming J, O'Keefe B, Pert H, McCormack P (2012) 'International Learning on Increasing the Value and Effectiveness of Primary Care (I LIVE PC) New Zealand,' *The Journal of the American Board of Family Medicine* 25(Suppl 1: S39–S44.
55. Grange M (2011) 'How community matrons perceive their effectiveness in case management' *Nursing older people* 23(5):24–29.
56. Grey P, Lucy J, Whitehead M and Hull A (2010) *What can the health system do to address the social determinants of inequalities in health? The case of the Liverpool Healthy Homes Initiative.* WHO Regional Office for Europe: Copenhagen. Available at: http://data.euro.who.int/Equity/hidb/Resources/Details.aspx?id=12 (*accessed 9 July 2014*).
57. Harrington P and Simpson S (2010a) *neunerHAUSARZT. Demand-oriented health care services for the homeless*. WHO Regional Office for Europe: Copenhagen. Available at: http://data.euro.who.int/Equity/hidb/Resources/Details.aspx?id=1 (*accessed 1 December 2013*).
58. Harrington P and Simpson S (2010b) *Controlling TB among the Roma - a community approach.* WHO Regional Office for Europe: Copenhagen. Available at: http://data.euro.who.int/Equity/hidb/Resources/Details.aspx?id=8 (*accessed 1 December 2013).*
59. Hays RB, Morgan S (2011) 'Australian and overseas models of general practice training,' *The Medical journal of Australia* 194(11):S63–64.
60. Health and Social Care Information Centre (2013) *Investment in General Practice 2008/09 to 2012/13 England, Wales, Northern Ireland and Scotland*. Workforce and Facilities team, Health and Social Care Information Centre: Scotland.
61. Health Council of the Netherlands (2004) *European Primary Care*. The Hague: The Hague
62. Healy J, Sharman E, Lokuge B (2006) 'Australia: Health system review,' *Health Systems in Transition* 8(5):1–158.
63. Honkasalo MT, Linna M, Sane T, Honkasalo A, Elonheimo O (2014) 'A comparative study of two various models of organising diabetes follow-up in public primary health care - the model influences the use of services, their quality and costs' *BMC Health Services Research* 14:26.
64. Horder J and Swift G (1979) 'The history of vocational training for general practice,' *Journal of the Royal College of General Practitioners* 29:24–32.
65. Hutchison B and Glazier R (2013) 'Ontario's Primary Care Reforms Have Transformed the Local Care Landscape, But A Plan Is Needed for Ongoing Improvement,' *Health Affairs* 32(4):695–703.
66. Hutchison B, Levesque J-F, Strumpf E, Coyle N (2011) 'Primary Health Care in Canada: Systems in Motion' *Milbank Quarterly* 89(2):256–288.
67. Jongudomsuk P (2010a) 'Box A3: A long march to universal healthcare coverage in Thailand,' in Loewenson R *Connecting the streams: Using health systems research knowledge in low- and middle-income countries*. WHO: Montreux: 50–51.
68. Jongudomsuk P (2010b) 'Box A7: Financing renal replacement therapy (RRT) for end-stage renal disease (ESRD) within the framework of Universal Health Coverage (UHC) in Thailand,' in Loewenson *Connecting the streams: Using health systems research knowledge in low- and middle-income countries*. WHO: Montreux, Switzerland:55.
69. Kates N, Hutchison B, O'Brien P, Fraser B, Wheeler S, Chapman C (2012) 'Framework for advancing improvement in primary care' *Healthcare Papers* 12(2):8–21.

70. Khangura JK, Flodgren G, Perera R, Rowe BH, Shepperd S (2012) 'Primary care professionals providing non-urgent care in hospital emergency departments' *The Cochrane database of systematic reviews* 11:CD002097.
71. Koller T (ed) (2010) *Poverty and social exclusion in the WHO European Region: health systems respond*. Copenhagen: World Health Organization Regional Office for Europe Available at: http://www.euro.who.int/__data/assets/pdf_file/0006/115485/E94018.pdf (*accessed 1 December 2011*).
72. Kringos D, Boerma W, Bourgueil Y, Cartier T, Dedeu T, Hasvold T, Hutchinson A, Lember M, Oleszczyk M, Rotar Pavlic D, Svab I, Tedeschi P, Wilm S, Wilson A, Windak A, Van der Zee J, Groenewegen P (2013a) 'The strength of primary care in Europe: an international comparative study,' *The British journal of general practice: the journal of the Royal College of General Practitioners* 63(616):e742–750.
73. Kringos DS, Boerma WGW, van der Zee J, Groenewegen P (2013b) 'Political, cultural and economic foundations of primary care in Europe,' *Social Science & Medicine* 99(0):9–17.
74. Kringos DS, Boerma W, van der Zee J, Groenewegen P (2013c) 'Europe's Strong Primary Care
75. Systems Are Linked To Better Population Health But Also To Higher Health Spending,' *Health Affairs* 32(4):686–94.
76. Kutzin J (2013) 'Health financing for universal coverage and health system performance: concepts and implications for policy,' *Bulletin of the World Health Organization* 91:602–611.
77. Liddy C, Singh J, Kelly R, Dahrouge S, Taljaard M, Younger J (2014) 'What is the impact of primary care model type on specialist referral rates? A cross-sectional study,' *BMC Family Practice* 15:22. Available at: http://www.biomedcentral.com/1471-2296/15/22 *(accessed 10 February 2014)*.
78. Loewenson R (2010) *Connecting the streams: Using health systems research knowledge in low- and middle-income countries*. WHO: Montreux, Switzerland.
79. Loewenson R, Whitehead M (2012) *Robust and Equity Oriented Health Systems.* WHO European Office for Investment for Health and Development: Venice.
80. Lopert R, Elshaug AG (2013) 'Australia's 'Fourth Hurdle' Drug Review Comparing Costs and Benefits Holds Lessons For The United States,' *Health Affairs* 32(4):778–787.
81. Macinko J, Dourado I, Aquino R, Bonolo P de F, Lima-Costa MF, Medina MG, Mota E, de Oliveira VB, Turci MA (2010) 'Major expansion of primary care in Brazil linked to decline in unnecessary hospitalization' *Health affairs* 29(12):2149–2160.
82. Macinko J, de Oliveira VB, Turci MA, Guanais FC, Bonolo PF, Lima-Costa MF (2011) 'The influence of primary care and hospital supply on ambulatory care-sensitive hospitalizations among adults in Brazil, 1999-2007,' *American journal of public health* 101(10):1963–1970.
83. Mackenbach JP (2011) 'The English strategy to reduce health inequalities,' *The Lancet* 377:1986–1987.
84. Maeseneer JD, Roberts RJ, Demarzo M, Heath I, Sewankambo N, Kidd MR, van Weel C, Egilman D, Boelen C, Willems S (2012) 'Tackling NCDs: a different approach is needed,' *The Lancet* 379:1860–1861.
85. Marchildon GP (2013) 'Canada: Health system review,' *Health Systems in Transition* World Health Organization: Copenhagen.
86. Matheson D, Neuwelt P (2012) 'New Zealand's Journey towards people-centredness,' *The International Journal of Person Centred Medicine* 2(1):73–79.
87. Mayo-Bruinsma L, Hogg W, Taljaard M, Dahrouge S (2013) 'Family-centred care delivery: comparing models of primary care service delivery in Ontario,' *Canadian family physician Médecin de famille canadien* 59(11):1202–1210.
88. McDonald J, Cumming J, Harris M, Powell Davies G, Burns P (2006) *Systematic Review of Comprehensive Primary Health Care Models*. Australian Primary Health Care Research Institute, Australian National University and RESEARCH Centre for Primary Health Care and Equity, University of New South Wales: Canberra.
89. McDonald J, Harris MF, Cumming J, Powell Davies G, Burns P (2008) 'The implementation and impact of different funding initiatives on access to multidisciplinary primary health care and policy implications,' *The Medical journal of Australia* 188(8 Suppl):S69–72.
90. Menzies School of Health Research *ABCD National Research Partnership*. Available at: http://www.menzies.edu.au/page/Research/Centres_initiatives_and_projects/ABCD_National_Research_Partnership_Project/About/ (*accessed 25 February 2014*).
91. Mercer R, Hertzman C, Molina H, Vaghri Z (2013) 'Promoting equity from the start through early child development (ECD-HiAP)' in Leppo K, Ollila E, Pena S, Wismar M, Cook S (eds) *Health in All Policies. Seizing opportunities, implementing policies.* Ministry of Social Affairs and Health: Helsinki:105–124.
92. Merkur S, Sassi F, McDaid D (2013) *Promoting health, preventing disease: is there an economic case?* WHO Regional Office for Europe: Copenhagen.
93. Meyers D (2012) 'Introduction from the Agency for Healthcare Research and Quality,' *Journal of the American Board of Family Medicine* 25(Supplement 1):S1.

94. Ministry of Health (2011a) *Better, Sooner, More Convenient Health Care in the Community*. Ministry of Health: Wellington
95. Ministry of Health (2011b) *Care Plus*. Available at: http://www.health.govt.nz/our-work/primary-health-care/primary-health-care-services-and-projects/care-plus (*accessed 17 February 2014*).
96. Ministry of Health New Zealand (2013)Health Survey Annual update, key findings 2012-2013. Available at www.health.govt.nz/publication/new-zealand-health-survey-annual-update-key-findings-2012-13.
97. Ministry of Health New Zealand (nd) About Primary Health Organisations. Available at http://www.health.govt.nz/our-work/primary-health-care/about-primary-health-organisations).
98. Mooney GH, Blackwell SH (2004) 'Whose health service is it anyway? Community values in healthcare,' *Medical Journal of Australia* 180:76–78.
99. Morales IDR, Fernández JA, Durán F (2008) 'Cuban medical education: aiming for the six-star doctor,' *MEDICC review* 10 (4):5–9.
100. Naccarella L, Buchan J, Brooks P (2010) 'Evidence-informed primary health care workforce policy: are we asking the right questions?' *Australian journal of primary health* 16(1):25–28.
101. Naccarella L, Southern D, Furler J, Scott A, Prosser L, Young D, Swerissen H, Waters E (2008) 'Primary care funding and organisational policy options and implications: a narrative review of evidence from five comparator countries,' *The Medical journal of Australia* 188(8 Suppl):S73–76.
102. National Statistics (2013) *Quality and Outcomes Framework Prevalence, achievement, payment and exceptions data for Scotland, 2012/2013*. National Statistics: Scotland.
103. Naylor C, Imison C, Addicott R, Buck D, Goodwin N, Harrison T, Ross S, Sonola L, Tian Y, Curry N (2013) *Transforming our health care system. Ten priorities for commissioners.* The Kings Fund: London.
104. NHS (2013) *The NHS Outcomes Framework 2013/2014*. NHS: London.
105. NICE (2010) *Alcohol use disorders. Diagnosis, assessment and management of harmful drinking and alcohol dependence. Full guidelines final draft*. NHS National Institute for Health and Clinical Excellence: London
106. NICE (2013) *How we work*. Available at: http://www.nice.org.uk/aboutnice/howwework/how_we_work.jsp (*accessed 29 January 2014*).
107. Nicholson C, Jackson CL, Marley JE, Wells R (2012) 'The Australian experiment: how primary health care organizations supported the evolution of a primary health care system,' *Journal of the American Board of Family Medicine: JABFM* 25(Suppl 1):S18–26.
108. North N, Werkö S (2002) 'Widening the debate? Consultation and participation in local health care planning in the English and Swedish health services,' *International journal of health services: planning, administration, evaluation* 32(4):781–798.
109. Office of National Statistics (2013) *Avoidable deaths from cardiovascular disease fell sharply between 2001 and 2011 in England and Wales*. Office of National Statistics: London. Available at: http://www.ons.gov.uk/ons/rel/subnational-health4/avoidable-mortality-in-england-and-wales/2011/sty-avoidable-mortality.html (*accessed 2 February 2014*).
110. Okma KG (2009) *Recent Changes in Dutch Health Insurance: Individual Mandate or Social Insurance?* New York University: New York.
111. Olejaz M, Juul Nielsen A, Rudkjøbing A, Okkels Birk H, Krasnik A, Hernández-Quevedo C (2012) 'Denmark: Health system review' *Health Systems in Transition* 14 (2):1–92.
112. Onie R, Farmer P, Behforouz H (2012) 'Realigning Health with Care,' *Stanford Social Innvoation Review* 13:(Summer 2012).
113. Pedersen KM, Andersen JS, Søndergaard J (2012) 'General Practice and Primary Health Care in Denmark,' *The Journal of the American Board of Family Medicine* 25(Suppl 1):S34–S38.
114. Pongpirul K, Starfield B, Srivanichakorn S, Pannarunothai S (2009) 'Policy characteristics facilitating primary health care in Thailand: A pilot study in transitional country' *International journal for equity in health* 8(8):e1-8.
115. Primary Care Trust Network (undated) *The legacy of primary care trusts*. NHS Confederation: London. Available at: http://www.nhsconfed.org/Publications/Documents/The_legacy_of_PCTs.pdf (*accessed 18 February 2014*.
116. Pruessmann J, Simpson S (2010) *Social determinants of health and socially conditioned health inequalities: activities of the statutory health insurance sector in Germany*. WHO Regional Office for Europe: Copenhagen. Available at: http://data.euro.who.int/Equity/hidb/Resources/Details.aspx?id=15 (*accessed 9 July 2014*).
117. Quin P (2009) *New Zealand Health System Reforms*. NZ Parliamentary Library: Wellington.
118. Rechel B, Thomson S, van Ginneken E (2010) *Health Systems in Transition Template for authors*. World Health Organization: England.
119. Reed G (2008) 'Cuba's primary health care revolution: 30 years on,' *Bulletin of the World Health Organization* 86(5):327–329.
120. Robert Wood Johnson Foundation (2012) *Advancing Primary Care Opportunities to Support Care Delivery Redesign in Practices Serving Medicaid and Racially and Ethnically Diverse Patients*.

Robert Wood Johnson Foundation: New York. Available at: http://www.rwjf.org/en/research-publications/find-rwjf-research/2012/08/advancing-primary-care.html (*accessed 10 December 2013)*.

121. Roberts RG, Hunt VR, Kulie TI, Schmidt W, Schirmer JM, Villaneuva T, Wilson CR (2011) 'Family medicine training - the international experience,' *Medical Journal of Australia* 194(11):S84–S87.
122. Roland M, Guthrie B, Thomé DC (2012) 'Primary Medical Care in the United Kingdom,' *The Journal of the American Board of Family Medicine* 25(Suppl 1):S6–S11.
123. Rushmer R, Kelly D, Lough M, Wilkinson JE, Davies HTO (2004a) 'Introducing the Learning Practice--II. Becoming a Learning Practice' *Journal of evaluation in clinical practice* 10(3):387–398.
124. Rushmer R, Kelly D, Lough M, Wilkinson JE, Davies HTO (2004b) 'Introducing the Learning Practice--III. Leadership, empowerment, protected time and reflective practice as core contextual conditions,' *Journal of evaluation in clinical practice* 10(3):399–405.
125. Rushmer R, Kelly D, Lough M, Wilkinson JE, Davies HTO (2004c) 'Introducing the Learning Practice-I. The characteristics of Learning Organisations in Primary Care', *Journal of evaluation in clinical practice* 10(3):375–386.
126. Schafer W, Boerma W, Kringos D, De Maeseneer J, Greß S, Heinemann S, Rotar-Pavlic D, Seghieri C, Svab I, Van den Berg M, Vainieri M, Westert G, Willems S, Groenewegen P (2011) 'QUALICOPC, a multi-country study evaluating quality, costs and equity in primary care,' *BMC Family Practice* 12(1):115.
127. Schäfer W, Kroneman M, Boerma W, van den Berg M, Westert G, Devillé W, van Ginneken E (2010) 'The Netherlands: health system review,' *Health systems in transition* 12(1):1–229.
128. Schoen C, Osborn C, Squires D, Doty M, Rasmussen P, Pierson R, Applebaum S (2012) 'A Survey Of Primary Care Doctors In Ten Countries Shows Progress In Use Of Health Information Technology, Less In Other Areas,' *Health Affairs* 31(12):2805–2815.
129. Sibbald B, Laurant MG, Reeves D (2006) 'Advanced nurse roles in UK primary care,' *The Medical journal of Australia* 185(1):10–12.
130. Sibbald B, Shen J, McBride A (2004) 'Changing the skill-mix of the health care workforce,' *Journal of health services research & policy* 9(Suppl 1):28–38.
131. Silva V V (undated) *Chile Crece Contigo (Chile grows with you): National Policy on Early Childhood Development. Lessons for ECD public policies* [presentation].
132. Singh P, Sachs JD (2013) '1 million community health workers in sub-Saharan Africa by 2015,' *The Lancet* 382(9889):363–365.
133. Smith J, Holder H, Edwards N, Maybin J, Parker H, Rosen R, Walsh N (2013) *Securing the future of general practice. New models of primary care. Summary report*. The King’s Fund: London.
134. Squires D (2011) *The U.S. Health System in Perspective: A Comparison of Twelve Industrialized Nations*. The Commonwealth Fund: Washington DC.
135. Tantivess S, Werayingyong P, Chuengsaman P, Teerawattananon Y (2013) 'Universal coverage of renal dialysis in Thailand: promise, progress, and prospects,' *BMJ* 346.
136. Stabile M, Thomson S, Allin S, Boyle S, Reinhard B, Chevreul K, Marchildon G, Mossialos E (2012) 'Health Care Cost Containment Strategies Used in Four Other High-Income Countries Hold Lessons For The United States,' *Health Affairs* 32(4):643–652.
137. Starfield B (2011) 'Point: The Changing Nature of Disease: Implications for Health Services,' *Medical Care* 49(11):971-972.
138. Steel D, Cylus J (2012) 'United Kingdom (Scotland): Health system review,' *Health Systems in Transition* 14(9):1–150.
139. Stock S, Drabik A, Büscher G, Graf C, Ullrich W, Gerber A, Lauterbach KW, Lüngen M (2010) 'German Diabetes Management Programs Improve Quality Of Care And Curb Costs,' *Health Affairs* 29(12):2197–205.
140. Strumpf E, Levesque J-F, Coyle N, Hutchison B, Barnes M, Wedel RJ (2012) 'Innovative and Diverse Strategies Toward Primary Health Care Reform: Lessons Learned from the Canadian Experience,' *The Journal of the American Board of Family Medicine* 25(Suppl 1):S27–S33.
141. Tanahashi T (1978) 'Health service coverage and its evaluation,' *Bulletin of the World Health Organization* 56(2):295–303.
142. The Australian Collaboration (2013) *Democracy in Australia - Citizen participation in Democracy*. The Australian Collaboration: Australia. Available at: www.australiancollaboration.com.au (*accessed 1 February 2014)*.
143. The Lowitja Institute (undated) *ABCD (Audit and Best Practice for Chronic Disease)*. Available at: http://www.lowitja.org.au/abcd (*accessed 25 February 2014*).
144. Thomson S, Osborn R, Squires D, Jun M (eds) (2013) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C: 57-83. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).

145. Timmins N (2013) *The four UK health systems. Learning from each other.* The Kings Fund: London. Available at: http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_summary/four-uk-health-systems-jun13.pdf (*accessed 24 January 2014*).
146. Tobias M, Yeh L-C (2009) 'How much does health care contribute to health gain and to health inequality? Trends in amenable mortality in New Zealand 1981–2004,' *Australian and New Zealand Journal of Public Health* 33(1):70–78.
147. Tudor Hart J (1971) 'The Inverse Care Law,' *The Lancet* 297(7696): 405–412.
148. UCL Institute of Health Equity (2013) *Review of social determinants and the health divide in the WHO European Region: final report.* World Health Organization: Copenhagen.
149. Varona P, Bonet M, García R, Chang M, Ramon S, National Provincial Coordinating Group (2014) 'Implementation of Chronic Disease Risk Factor Surveillance in 12 Cuban Municipalities,' *MEDICC review* 16(1):43–47.
150. Vega J (2011) *Steps towards the health equity agenda in Chile*. Report No WCSDH/BCKGRT/25/2011. WHO: Geneva.
151. Vrangbaek K (2013) 'The Danish Health Care System, 2013,' in Thomson S, Schoen C, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C: 28-36. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).
152. Watt GO on behalf of the DESG (2012) *General Practitioners at the Deep End. The experience and views of general practitioners working in the most severely deprived areas of Scotland*. The Royal College of General Practitioners: Scotland.
153. Van Weel C, Schers H, Timmermans A (2012) 'Health Care in The Netherlands,' *The Journal of the American Board of Family Medicine* 25(Suppl 1):S12–S17.
154. Westert G, Wammes J (2013) 'The Dutch Health Care System, 2013,' in Thomson S, Osborn R, Squires D, Jun M (eds) *International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. The Commonwealth Fund: Washington D.C: 84-93. Available at: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf (*accessed 17 December 2013*).
155. Whiting D, Unwin N, Roglic G (2010) 'Diabetes: equity and social determinants' in Blas E, Sivansankara Kurup A (eds) *Equity, social determinants and public health programmes*. WHO: Geneva:77–94.
156. Whitty J (2012) *Should the Emergency Department Treat Everyone who Presents for Treatment? Citizen's Jury on Emergency Care Services. Executive Summary.* Griffith University: Australia. Available at: http://www.griffith.edu.au/__data/assets/pdf_file/0005/551336/CJED-Executive-Summary.pdf *(accessed 31 January 2014).*
157. WHO (2013) *Primary Health Care, Including Health System Strengthening. Report by the Secretariat to the Sixty-Second WHA A62/8*. WHO: Geneva.
158. WHO (2010) *Putting our own house in order: examples of health-system action on socially determined health inequalities.* WHO Regional Office for Europe: Copenhagen.
159. WHO (2008) *The world health report 2008 : primary health care now more than ever.* WHO: Geneva.
160. WHO (2012) *WHO Regional Office for Europe meeting on strengthening primary care contribution to the prevention and control of non-communicable diseases*. WHO Regional Office for Europe: Copenhagen.
161. WHO Regional Office for Europe (2013) *Health literacy. The solid facts*. WHO Regional Office for Europe: Copenhagen. Available at: http://www.euro.who.int/__data/assets/pdf_file/0008/190655/e96854.pdf (*accessed 25 February 2014*).
162. Willcox S, Lewis G, Burgers J (2011) *Strengthening Primary Care: Recent Reforms and Achievements in Australia, England, and the Netherlands*. The Commonwealth Fund: Washington DC.
163. Yiengprugsawan V, Carmichael G, Lim L-Y, Seubsman S, Sleigh A (2011) 'Explanation of inequality in utilization of ambulatory care before and after universal health insurance in Thailand,' *Health policy and planning* 26(2):105–114.
164. Yiengprugsawan V, Kelly M, Seubsman SA, Sleigh AC (2010) 'The first 10 years of the Universal Coverage Scheme in Thailand: review of its impact on health inequalities and lessons learnt for middle-income countries' *Australasian epidemiologist / Australasian Epidemiological Association* 17(3):24–26.

6. Acronyms

AHW	Aboriginal Health Worker (Australia)
CCG	Clinical Commissioning Group (England)
CCC	Chile Crece Contigo (Chile)
CHW	Community Health Worker
EMRs	Electronic Medical Records
FFS	Fee-for-service
FM	Family medicine
FP	Family physician
FHP/FHS	Family Health Program/Family Health Strategy (Brazil)
GP	General Practitioner or General Practice
HMIC	High and middle-income countries
MM	Multi-morbidity
NHS	National Health Service
NICE	National Institute for public health Clinical Excellence
PC	Primary care
PHC	Primary health care
PHI	Private Health Insurance
PHO	Primary Health Organisations (New Zealand)
SDH	Social Determinants of Health
SHI	Social health insurance (In Switzerland = Statutory Health Insurance)
SNS	Spanish National Health System
SUS	Sistema Único de Saúde (National health system)
UCS	Universal Coverage System (Thailand)
UHC	Universal Health Coverage
VHI	Voluntary Health Insurance

Appendices: Further information on key areas and models

Appendix 1: Mapping the impact of experience on the focus of the PHC movement

EARLY ATTEMPTS AT IMPLEMENTING PHC	CURRENT CONCERNS OF PHC REFORMS
Extended access to a basic package of health interventions and essential drugs for the rural poor	Transformation and regulation of existing health systems, aiming for universal access and social health protection
Concentration on mother and child health	Dealing with the health of everyone in the community
Focus on a small number of selected diseases, primarily infectious and acute	A comprehensive response to people's expectations and needs, spanning the range of risks and illnesses
Improvement of hygiene, water, sanitation and health education at village level	Promotion of healthier lifestyles and mitigation of the health effects of social and environmental hazards
Simple technology for volunteer, non-professional community health workers	Teams of health workers facilitating access to and appropriate use of technology and medicines
Participation as the mobilization of local resources and health-centre management through local health committees	Institutionalized participation of civil society in policy dialogue and accountability mechanisms
Government-funded and delivered services with a centralized top-down management	Pluralistic health systems operating in a globalized context
Management of growing scarcity or downsizing	Guiding the growth of resources for health towards universal coverage
Bilateral aid and technical assistance	Global solidarity and joint learning
Primary care as the antithesis of the hospital	Primary care as coordinator of a comprehensive response at all levels
PHC is cheap and requires only a modest investment	PHC is not cheap: it requires considerable investment, but is provides better value for money than its alternatives

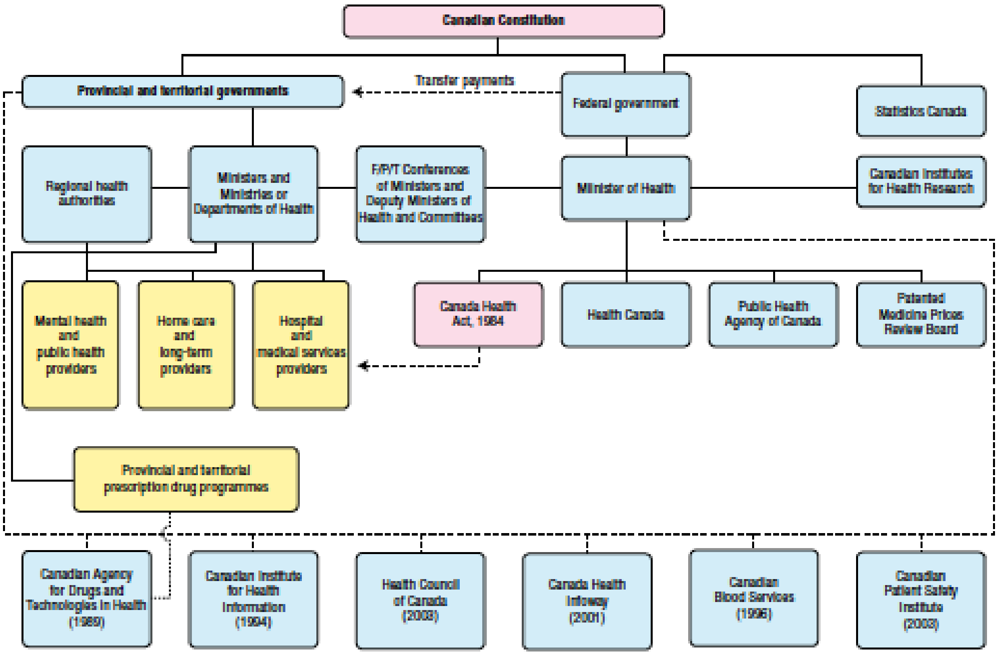
Source: Reproduced, with the permission of the publisher, from the World Health Report: Primary Health Care. Now More Than Ever, Geneva, World Health Organization, 2008 (Table 1, Page xv) *available at* http://www.who.int/whr/2008/whr08_en.pdf (*accessed 30 January 2014*)

Appendix 2: Major policy statements and reforms in Scotland, 1997-2011

	NHS reforms	**Related developments**
1997	Publication of *Designed to care: renewing the NHS in Scotland*	Election of United Kingdom Labour government
1998	Publication of report of Acute Services Review	
1999	Health Act	Election of first Scottish Parliament leading to the formation of Labour/Liberal Democrat coalition
2000	Publication of *Our national health plan: a plan for action, a plan for change* and *Community care: a joint future*	
2001	Publication of *Patient focus and public involvement*	
2002		Community Care and Health (Scotland) Act
2003	Publication of *Partnership for care: Scotland's health White paper*	Re-election of Labour/Liberal Democrat coalition
2004	NHS Reform (Scotland) Act	
2005	Publication of *Delivering for health* in response to *A national framework for service change in the NHS in Scotland: building a health service fit for the future*	
2006		
2007	Publication of *Better health, better care action plan* Launch of Scottish Patient Safety Programme	Election of minority SNP government
2008	Launch of *Better Together* (patient experience programme)	
2009	Health Boards Direct Elections (Scotland) Act	
2010	Publication of *The healthcare quality strategy for NHSScotland*	
2011	Patient Rights (Scotland Act)	Election of majority SNP government. Publication of report of (Christie) Commission on the Future Delivery of Public Services

Source: Reproduced with permission from WHO Regional Office for Europe from Box 6.1 (Steel & Cylus, 2012): 110) © World Health Organization 2012 (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies) *accessed 5 February 2014 at* http://www.euro.who.int/__data/assets/pdf_file/0008/177137/E96722-v2.pdf,

Appendix 3: Organisation of the health system in Canada



Note: Solid lines represent direct relationships of accountability while dotted lines indicate more indirect or arm's length relationships.

Source: Reproduced with permission from WHO Regional Office for Europe from (Marchildon, 2013): 22) © World Health Organization 2013 (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies) *available at* http://www.euro.who.int/__data/assets/pdf_file/0011/181955/e96759.pdf (*accessed 5 February 2014*).

Appendix 4: The Netherlands: managing public regulation in health markets

The Sick Fund Law has been in place since 1941, with the purpose of improving the health of the Dutch population and is informed by the principles of evidence informed care, universal coverage, equity of access and cost effectiveness (van Weel et al., 2012). It provided for a 3-market structure of compulsory social schemes, voluntary social schemes and private health insurance. The 2006 reform introduced a single compulsory SHI scheme, where multiple private health insurers compete for insured persons. Everybody must have insurance, and insurers must provide coverage irrespective of existing health status and for a statutory set of services (see Section 3.2) (Schäfer et al., 2010). The contributions for insurance are pooled centrally and distributed to insurers based on a risk-adjusted capitation formula using age, sex, labour force status, region, and health risk (based on previous drug and hospital utilisation) and as a way of compensating insurers for high risk people (Westert & Wammes, 2013; Schäfer et al., 2010). Key changes (see Section 3.2) are underpinned by adoption of the new Health Insurance Act (Zvw) which operates under private law (Schäfer et al., 2010). One aim of the reform was to ensure that 100% of the population were covered, however the uninsurance rate has traditionally been very low (around 1%) (Okma, 2009). Also, the second market - the health care purchasing market – is deliberately regulated to ensure that the (longstanding) public goals of quality, availability/accessibility and affordability in the health system are respected and assured (Schäfer et al., 2010; van Weel et al., 2012). The changes in 2006 were first proposed in the 1970s in response to increasing health care expenditure, leading the government to take a more active role in health policy development and develop a plan for health care, and "… can be seen as the realisation of a long-standing political wish to unite the old sickness fund scheme and the voluntary private health insurance scheme; …" traced back to 1974 and beyond (Schäfer et al., 2010): 167). In 1974 a single national health insurance scheme for all Dutch citizens was proposed and same in 1987 but based on market principles. Later plans also failed, due to employer, labour union and health insurer concerns. Government(s) became reticent to effect large scale change. A range of incremental measures were introduced prior to 2006 including allowing sickness funds to operate nationwide, the possibility to change insurance funds and emergence of specialised independent treatment centres in the late 1990s which showed that some types of hospital care could be done for less and maybe more efficiently. These were initially considered reversible but paved the way for structural change together with ongoing increasing health expenditure. In 2001 another plan outlining many of the previous plans plus new elements (Schäfer et al., 2010) was presented, and emphasised that supply of health services did not meet patient demand as reflected in limited choice for patients, insufficient care and long waiting times. Other reforms since 2006 include bundled payments (a single fee to cover a full range of care services for a fixed period, including GPs fees plus hospital costs) piloted using diabetes in 2007 and introduced on a permanent basis in 2010 for diabetes, vascular risk management and COPD. The bundled payment approach divides the market into 1 part where health insurers contract care from care groups and a second where the care groups contract services from individual providers such as GPs (WHO, 2012; Westert & Wammes, 2013). An evaluation of this system demonstrated that it improved the organization and coordination of care but no improvements of care were reported (de Bakker, 2012 in (Westert & Wammes, 2013). Other changes have included removal of the "no claim" system that was introduced with the initial reforms in 2006 on the basis that it discriminated against those who were chronically ill. This has been replaced with a compulsory annual deductible (€155 in 2009) for persons over the age of 18 years and excluding GP care, obstetric care, maternity care assistance and dental care for people under the age of 22 years (Schäfer et al., 2010). Schäfer and colleagues (2010) describe the system as one in transition, where it is not yet clear if managed competition is the right way to achieve the overall goals of quality, affordability, and accessibility of care. They note a range of important challenges such as making quality needing to be made more visible and measurable and a more transparent pricing systems for GPs, but also comment that current developments highlight that new measures are adjusted if in practice problems arise with implementation (Schäfer et al., 2010).

Appendix 5: Thailand: strategies for harmonising health financing in universal coverage

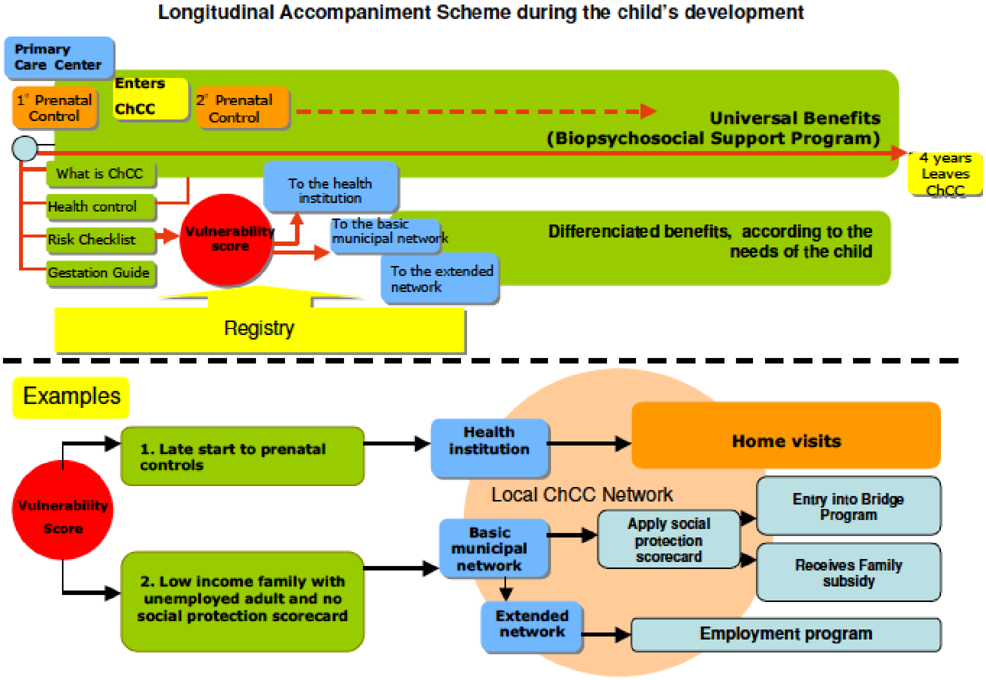
An emerging theme for sustained health system reform particularly for reorientation to primary care and universal health coverage is that the transition takes place over a long time period e.g. in Europe over decades and more recently in countries like Thailand over 20-30 years – an evolutionary process (Carin et al., 2008). The introduction of a policy for UHC – the "30 Baht policy" - in Thailand in 2001 following the general election in January 2001 has been described as a "long march" (Jongudomsuk, 2010a). Achievement of UHC often involves a transition period, and the institutional and organisational arrangements for (1) revenue generation and collection, (2) pooling and (3) purchasing to provide services more significantly influence UHC than whether the system is taxation or social health insurance based (Carin et al., 2008). Jongudomsuk (2010a) identifies that 4 groups of actors played critical roles in moving Thailand towards UHC: the politicians, the researchers (not purely academic but also institutionally based), the politicians and constituencies and civil society organisations, and the personnel in state institutions. Also, the reforms built on the existing policy structures and processes, and were an extension of existing public health insurance provisions expanded to cover uninsured individuals, replacing 2 previous public health insurance schemes (Yiengprugsawan et al., 2010). Furthermore the stage of evolution towards UHC for Thailand when the 2001 reform was introduced was mid-stage as there was not an absence of financial protection but mixes of financing and growing inequities between different population groups (Carin et al., 2008) that the policy sought to redress through improved rules and implementation by organisations particularly for pooling of funding and purchasing of services. The UCS harmonised diverse funding flows through a sequence of measures from 2001, supported by budget measures and investment in primary health care centres (Pongpirul et al., 2009; Yiengprugsawan et al., 2010). All the organisational arrangements of the UCS are managed by the National Health Security Office (NHSO) which receives government funds for the UCS, based on the estimated costs of service provision and the number of beneficiaries covered. The estimated budget is developed by the NHSO working group on budgeting in cooperation with the health financing sub-committee of the National Health Service Board, and the Ministry of Finance is represented on both the NHS Board and the sub-committee. Once agreed, the estimated budget is presented to Cabinet for final approval. The NHSO has 13 regional offices and the budget is distributed via these offices to the 76 provinces. Funding for outpatient care is pooled by the contracted unit for primary care (CUP), which includes a district hospital and health centres covering a population of about 50,000 people. Funds for health promotion and disease prevention activities are directed to the four different levels of government and pooled for area-based activities at the Provincial Health Office. Providers of outpatient treatment are commonly paid using capitation. While there is a global budget, the contract between each facility network and the NHSO includes room for local priorities so that the Board of the network can decide to use funds for a specific health intervention at particular health centres determined by the local health needs

(Bates & Annear, 2013). The story of the ‘long march’ towards UHC does not end with the introduction of the policy in 2001. The initial UCS policy allowed for 2 types of universal coverage (1) the UCS with fee exemption and (2) the UCS with 30 Baht copayment. Since this time, there has been active monitoring of its implementation and subsequent revisions including, abolition of the copayment in 2006 and reintroduction in 2012 for patients who receive prescriptions and are willing to pay (Bates & Annear, 2013). Also as with other countries health technology and care assessment has been used to inform capitation payments for purchasing ambulatory care, Diagnosis Related Groups are used as a healthcare finance mechanism for inpatients and a National List of Essential Drugs was adopted to inform the basis of pharmaceutical benefits. Antiretroviral treatment for HIV/AIDS and renal dialysis therapy were both added to the UCS benefits package in 2003 and 2008 respectively in response to strong advocacy for their inclusion (see (Jongudomsuk, 2010b; Sripen Tantivess et al., 2013) in relation to renal dialysis therapy) (Yiengprugsawan et al., 2010).

Appendix 6: Chile’s health and social policy initiatives

Broader public health and social policy is an important component of achieving better health outcomes at relatively lower cost and that are sustained over the life-course. Two key examples from Chile are consistent with its wider health systems approach and reorientation to primary care. The first **Chile Crece Contigo** (CCC) (Chile Grows With You) is an intersectoral social protection system for early childhood designed to reach all children using a universal and targeted approach, proportionate universalism. The Ministry of Planning and Cooperation coordinates all the ministries involved (health, education, finance, culture, justice, labour, housing and women). Each local health service Director is a territorial manager to coordinate and support the Local Intervention Network for CCC, and PH centres are the primary entry point when a woman starts prenatal care and is in place until the child reaches 4 years of age (Vega, 2011; Mercer et al., 2013). Upon entry into pre-natal care, the monitoring and information system established to support CCC (Sistema de Derivación y Monitoreo SDRM) enable PHC workers check the information on the mother’s entitlements to social subsidies in order to have her access to the benefits immediately. The on-line monitoring is shared by all participants of the local network and enables monitoring of the child from prenatal until 4 years of age, incorporating all relevant information. Figure 6.1 shows the longer term view and key pathways for how CCC works in terms of entry points, and its relationship to health and other sectors (Vega, 2011).

Figure 6.1: An overview of Chile Crece Contigo



Source: Reproduced, with the permission of the publisher, from Vega J. Steps towards the health equity agenda in Chile. Geneva: WHO; 2011. Report No.: WCSDH/BCKGRT/25/2011, (Figure "Longitudinal Accompaniment Scheme during the child's development", page 8, *available at* http://www.who.int/sdhconference/resources/draft_background_paper25_chile.pdf, *accessed 30 January 2014*)

Introduced in 2006, CCC is the result of bi-partisan (political) support by experts from both right and left, and was preceded by a series of pre-implementation studies including a set of studies to understand the views and attitudes of Chileans towards early childhood, providing comprehensive data for planning. Implementation began in 100 municipalities in 2007 and expanded to 345 municipalities in 2008 (Silva V, Undated; Vega, 2011; Mercer et al., 2013). The universal system includes strengthened legislative provisions for maternity and paternity leave, improved quality of pre-natal care etc. Additional/differential support and services proportional to greater need (an equity focus) include free nursery and preschool access with children in homes of lesser income or special situation of vulnerability, and increased support and guarantees for boys and girls from the 60% of homes with lesser income or in special situations of vulnerability (Vega, 2011; Mercer et al., 2013). Outcomes from 2007-2011 include: 600,000+ pregnant women in the program; 75% of eligible births (non-emergency had a father present); and 90,000 home visits to households of pregnant women with social risk. Since 2009, a basic infant kit has been provided to every child born including a cradle, a baby carrier, massage oil, nappies, and information on the first care needed by babies and infants (Vega, 2011). The second example focuses more on improving the responsiveness of the existing health and primary care and prevention systems to inequities in health outcomes, measured by higher rates of disease and risk factors among more disadvantaged groups in the population and or poorer health and social outcomes from health care and treatment. Chile reviewed 6 national healthcare programs to quantify the gaps in access to primary prevention, case detection and treatment as one of the specific objectives and with a focus on social determinants and equity. For cardiovascular health, men aged less than 55 years of age were identified as the main excluded group with barriers including: unemployment and temporary employment, geographical factors (remote locations), and non flexible working hours at the health care centres. A competition held to identify ideas for good practices in cardiovascular health, resulted in 67 projects entered and 18 selected for implementation as pilots. These were used as input for the redesign of the Cardiovascular Program. This type of review aims to improve and extend coverage, thereby improving the effectiveness of health care, treatment and system actions (Vega, 2011), based on a model by Tanahashi et al (1978) that assesses programs in terms of availability, access and acceptability and responds in part to the problems of inequities in health outcomes and health care coverage that reflect the inverse care law (Tudor Hart, 1971).

Appendix 7: Health Care System Financing in 10 Countries.

See Table overleaf

Appendix 8: NICE UK: evidence-informed approaches to quality improvement

As indicated in Section 3.1. NICE has a remit that goes beyond assessment of health technology and pharmaceuticals to also developing guidance on promoting health and preventing illness. Topics are referred to NICE by the Department of Health and selected on the basis of a number of factors, including the burden of disease, the impact on resources, and whether there is inappropriate variation in practice across the country. After the topics are referred to NICE, potential stakeholders are asked to register an interest. Stakeholders may include national organisations representing professionals, research and academic institutions, industry and special interest groups from the general public and are consulted throughout the guidance development process. The guidance is then created by independent and unbiased advisory committees, and includes public consultation processes (outlined below). A range of guidance is produced from clinical practice guidelines to diagnostic technologies guidance to public health guidance. The process for developing **clinical guidelines** involves other centres such as the National Clinical Guidance Centre, National Collaborating Centre for Cancer, National Collaborating Centre for Women’s and Children’s Health and the National Collaborating Centre for Mental Health.

One of the collaborating centres is commissioned to develop the guidelines and prepares the scope. NICE, registered stakeholders and an independent guideline review panel all contribute to the development of the scope. The national collaborating centres include other professional bodies such as the Royal College of General Practitioners, Royal College of Nursing, Royal College of Physicians and the Royal College of Midwives. The process for developing **public health guidance** does not necessarily involve the national collaborating centres per se and topics are referred after a public health topic advisory workshop. The process is supported by Public health advisory committees (PHACs), standing committees.

Appendix 7: Health Care System Financing in 10 Countries.

	HEALTH SYSTEM AND PUBLIC/PRIVATE INSURANCE ROLE			BENEFIT DESIGN		SPENDING		
	Government Role	**Public System Financing**	**Private Insurance Role[*]**	**Caps on Cost-Sharing**	**Exemptions and Low-Income Protection**	**Percentage of GDP spent on Health Care**	**Out-of-pocket Health Care Spending per Capita**	**Spending on Pharmaceuticals per Capita[#]**
Australia	Regionally administered, joint (national & state) public hospital funding; universal public medical insurance program (Medicare)	General tax revenue; earmarked income tax	~50% buy coverage for private hospital costs & noncovered benefits	No. Safety nets include 80% OOP rebate if physician costs exceed AUS$1,222 [US$1,160]	Low-income and older people: Lower cost-sharing; lower OOP maximum before 80% subsidy	8.9%	$733 (2010 figure)	$587
Canada	Regionally administered universal public insurance program (Medicare)	Provincial/federal tax revenue	~67% buy coverage for noncovered benefits	No	No cost-sharing for Medicare services. Some cost-sharing exemptions for non-Medicare services, e.g., drugs outside hospital; varies by province	11.2%	$666	$752
Denmark	National health service	Earmarked income tax	~55% buy coverage for cost-sharing, noncovered benefits, or access to private facilities	No. Decreasing copayments with higher drug OOP spending	Drug OOP cap for chronically ill (DKK 3,410 [US$617]); financial assistance for low-income and terminally ill people	11.1%	$593	$300
England[α]	National health service	General tax revenue (includes employment-related insurance contributions)	~11% buy for private facilities mainly for elective surgery and consultations with specialists	No general cap for OOP. Prepayment certificate with £2 [US$3.20] per week ceiling for those needing a large number of prescription drugs.	Drug cost-sharing exemption for low-income, older people, children, pregnant women and new mothers, and some disabled/chronically ill. Financial assistance with transport costs available to people on low incomes.	9.4%[α]	$338[α]	NA
France	Statutory health insurance system, with all SHI insurers incorporated into single national exchange	Employer/employee earmarked income and payroll tax; general tax revenue, earmarked taxes	~90% buy or receive government vouchers for cost-sharing; some noncovered benefits	No. €50 [US$67] cap on deductibles for consultations and services	Exemption for low-income, chronically ill and disabled, and children	11.6%	$307	$641
Germany	Statutory health insurance system, with 134 competing SHI	Employer/employee earmarked payroll tax; general tax	Cost-sharing + amenities (~20%); Substitute: 10% opt-	Yes. 2% income; 1% income for chronically ill + low-	Children exempt	11.3%	$593	$633

---

[*] Core Benefits; Cost-Sharing; Noncovered Benefits; Private Facilities or Amenities; Substitute for Public Insurance

[#] Adjusted for differences in the cost of living (PPP; purchasing power parity adjustment)

[α] Information for England except for information on costs/expenditure which is for United Kingdom as indicated by symbol α

	HEALTH SYSTEM AND PUBLIC/PRIVATE INSURANCE ROLE			BENEFIT DESIGN		SPENDING		
	Government Role	**Public System Financing**	**Private Insurance Role***	**Caps on Cost-Sharing**	**Exemptions and Low-Income Protection**	**Percentage of GDP spent on Health Care**	**Out-of-pocket Health Care Spending per Capita**	**Spending on Pharmaceuticals per Capita#**
	insurers ("sickness funds" in a national exchange); high income can opt out for private coverage	revenue	out of SHI system for private coverage only	income people				
Netherlands	Statutory health insurance system, with universally mandated private insurance (national exchange)	Earmarked payroll tax; community-rated insurance premiums; general tax revenue	Private plans provide universal core benefits; 90% buy for noncovered benefits	No. But annual deductible of €350 [US$472] covers most cost-sharing	Children exempt from cost-sharing; premium subsidies for low-income	11.9%	NA	$479
New Zealand	National health service	General tax revenue	~33% buy for cost-sharing, access to specialists, and elective surgery in private hospitals	No. Subsidies after 12 doctor visits/20 prescriptions in past year	Lower cost-sharing for low-income, some chronic conditions, Maori and Pacific Islanders; young children mostly exempt	10.3%	$348	$298
Switzerland	Statutory health insurance system, with universally mandated private insurance (regional exchanges)	Community-rated insurance premiums; general tax revenue	Private plans provide universal core benefits; majority buy private plans for noncovered benefits and amenities	Yes. 700 CHF [US$768] max after deductible	Income-related premium assistance (30% receive); some assistance for low-income; some exemptions for children, pregnant women	11.0%	$1455	$531
United States* (Prior to 1 January 2014)	Medicare: age 65+, some disabled; Medicaid: some low-income (most under age 65 covered by private insurance; 16% of population uninsured)	Medicare: payroll tax, premiums, federal tax revenue; Medicaid: federal, state tax revenue	Primary private insurance covers 56% of population (employer-based and individual); supplementary for Medicare	No	Low-income: Medicaid; older people and some disabled on Medicare	17.7%	$987	$995

Source: Reproduced with permission from the Commonwealth Fund from *Table 1. Health Care System Financing and Coverage in Fourteen Countries* and some of *Table 2. Selected Health Care System Indicators for Fourteen Countries* in (Thomson et al., 2013): 6-7) © The Commonwealth Fund, 2013 *available at* http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf *(accessed 30 December 2013)*.

Appendix 8 continued:

Each PHAC consists of a Chair, core and topic expert members. NICE has multiple PHACs in operation at any one time and members are drawn from the NHS, local government, healthcare professions, academia and the wider public health community. For clinical guidance, NICE established a Citizens' Council, which has produced a range of reports on challenging issues facing NICE, including the use of incentives to encourage people to live a healthy lifestyle. The Council's recommendations and conclusions have been incorporated into a document called Social Value Judgements which describes the principles that NICE and its advisory bodies should use when making decisions about the clinical and cost effectiveness of interventions. Beyond this, NICE have a range of other mechanisms for community, patient, caregiver and or consumer engagement outlined on their website including making drafts of NICE guidance available for consumer comment or consumers participating as a member of a committee or working group that is developing the guidance. Handbooks and factsheets area available for public participation/involvement in the development of both clinical guidelines and public health guidance. Also the Public Involvement Programme (PIP) (formerly the Patient and Public Involvement Programme (PPIP)) is a team at NICE that develops and supports patient, carer and public involvement. The PIP has evaluated the experiences of patient and carer members involved in Guideline Development Groups on 3 occasions (2004, 2008 & 2009). The name of the programme was changed in April 2013 to reflect the changes as part of the Health and Social Care Act 2012, which broadens the scope of NICE to also include social care with the development of social care guidance and quality standards. This reflects the need to move beyond 'patients' to other groups using social services and who may not identify with the term 'patient' (NICE, 2013).

Appendix 9: PC organization, payment and training in 12 countries

	Provider Ownership/ employment status[*]	**Payment (including incentives)***	**Primary care role***		**Provision of after-hours care**	**Training**
			Registration/ Enrolment*	**Gate-keeping***		
Austra-lia	Private	FFS	No	Yes	Deputising services (53%); by each practice (29%); or cooperative arrangements between practices (18%) (Willcox et al., 2011): 3, Exhibit 1)	Mandatory GP training, of 3 years duration with a defined curriculum, formal assessment & entry is Postgraduate year (PGY) 2. (Hays & Morgan, 2011): S64)
Canada	Private	Mostly FFS, but some alternatives (e.g. capitation)	Not generally, but yes for some capitation models.	Incentives, varying across provinces (e.g. in Ontario, specialist physicians have higher fees for patients who have been referred by their GP)	Mainly physician-led (& privately owned) walk-in clinics & hospital emergency rooms. Most provinces & regions free telephone service ("telehealth") available 24 hours per day for health advice from a RN. Previously not required but PC reforms requirements/ financial incentives for providing AH care to patients registered with the practice e.g. Ontario Thomson et al, 2013: 21	Mandatory GP training, of 3 years duration with a defined curriculum, formal assessment & entry is PGY 1. (Hays & Morgan, 2011): S64)
Cuba	Government	Government benefits such as housing & food subsidies & paid approximately US$20 per month	Population based system & no other system	Not available.	Family doctors live in the community they serve and are available to their patients 24 hours a day. Their work load and focus is determined by the needs of their population, not by schedules. (Dresang et al., 2005; Campion & Morrissey, 2013)	Specialisation in FM is requirement for 97%+ graduates, with 1 year internship & 2 years PG residency training. After this can apply for residency in second speciality.(Reed, 2008)

---

[*] Unless otherwise indicated, all data for these columns is taken from Thomson et al (2013)

	Provider Ownership/ employment status*	Payment (including incentives)*	Primary care role*		Provision of after-hours care	Training
			Registration/ Enrolment*	Gate-keeping*		
Denmark	Private	Mix capitation/FFS	Yes (for 98% of the population)	Yes (for 98% of the population)	GPs organise care coverage for weekends and out-of-hours services. Within a given geographical area – rotate staffing of regional out-of-hours service centres, usually located at but independent of local hospital emergency department (Pedersen et al., 2012); S35)	Mandatory training after medical school – 6 years (1 year basic, 5 years specialist) – receive title General Medicine. (Pedersen et al., 2012)
England[α]	Mainly private (most GPs are self-employed or partners in privately owned practices)	Mix capitation/ FFS/P4P; salary payments for a minority (the salaried GPs are employees of private group practices, not of the NHS)	Yes	Yes	Provided mostly by cooperatives, since 2004 (Willcox et al., 2011): 3, Exhibit 1). However these arrangements are changing with the Clinical Commissioning Groups.	Mandatory GP training, of 3-year duration with a defined curriculum, formal assessment & entry is PGY 3. (Hays & Morgan, 2011): S64).
France	Private	Mix FFS/P4P/flat 40€ bonus per year per patient with chronic disease and regional agreements for salaried GPs.	Yes (maybe with a specialist or GP; in practice over 95% are with GPs)	National incentives: higher cost-sharing for visits and prescriptions without referral from the gatekeeper	At the EDs of public hospitals, private hospitals (agreement with the Regional Health Agency), self-employed physicians in ES, and AH public facilities (maisons de garde) financed by SHI funds & staffed by health professionals on a voluntary basis. ES can be accessed via the national emergency phone number staffed with trained professionals who determine the type of response needed, from GP visit to resuscitation ambulance. Also testing feasibility of telephone or telemedicine advice. Publicly funded multidisciplinary health centres with self-employed health professionals; FFS payment is the rule for these centres (Thomson et al., 2013): 50).	Not available
Germany	Private	FFS	No	In some sickness fund programs.	AH care organized by the regional physician associations to ensure access to ambulatory care 24/7. Physicians are obliged to provide AH care, with differing regional regulations. In a few areas (e.g., Berlin), AH care has been delegated to hospitals & the patient is given an overview of the visit afterwards to hand to his or her GP. Also tight network of ES providers (municipalities). AH care assistance is also available via a nationwide telephone hotline. (Thomson et al., 2013): 61)	Not available

---

[α] Unless otherwise indicated, all data is for England not UK.

	Provider Ownership/ employment status*	**Payment (including incentives)***	**Primary care role***		**Provision of after-hours care**	**Training**
			Registration/ Enrolment*	**Gate-keeping***		
Netherlands	Private	Mix capitation/FFS	Yes	Yes	Organised through regional cooperatives. (Willcox et al., 2011): 3, Exhibit 1).	For Northern Europe – mandatory training of 3-5 years, beginning at PGY 2 and with defined curriculum & formal assessment. (Hays & Morgan, 2011): S64).
New Zealand	Private	Mix capitation/FFS	Yes (for 96% of the population)	Yes	GPs "… expected to provide or arrange for the provision of AH care, & they receive government subsidies. Rural areas & small towns, GPs work on call but different for cities where GPs roster to clinics. Patient charges higher than for services during the day (most children <6 years can access free GP AH services). ED services at PH no charge. Patient's usual GP routinely receives information on AH encounters. Also 24/7 phone-based Healthline, staffed by nurses who provide advice for general health questions. (Thomson et al., 2013):97).	Mandatory GP training, of 3 years duration with a defined curriculum, formal assessment & entry is PGY 2. (Hays & Morgan, 2011): S64).
Singapore	Private	FFS private/ govt-funded clinics	No	Yes	Not available	Non mandatory GP training, of 1-6 years duration with a defined curriculum, formal assessment & entry is PGY 2.(Hays & Morgan, 2011): S64)
Switzerland	Private	Most FFS, some capitation.	No	Free access (without referral) to specialists unless enrolled in a gatekeeping managed care plan.	Cantons responsible for after-hours care & delegate services to cantonal doctors' associations, which organise appropriate care networks in collaboration with their affiliated doctors. Can include public & private ambulance & rescue services, hospital emergency & walk-in clinics (Thomson et al., 2013): 122)	GPs, internists and paediatricians all have a specialists status, since in all three cases the length of the postgraduate training period is five years, following the medical studies (European Union of General Practitioners/Family Physicians, 2014).
United States	Private	Most FFS, some capitation with private plans	No	In some insurance programs.	Provisions vary widely, much provided by EDs. AH care arrangements are minimal—only 34 percent of U.S. primary care doctors in 2012 reported having arrangements for their patients to see a doctor or nurse after hours without going to the emergency room. Some insurance companies make after-hour telephone advice lines available (Thomson et al., 2013): 131).	Mandatory GP training, of 3 years duration with a defined curriculum, formal assessment & entry is PGY 1. (Hays & Morgan, 2011): S64)

Source: Reproduced and adapted with permission of the Commonwealth Fund from *Table 4. Provider Organization and Payment in Twelve Countries* in (Thomson et al., 2013): 9) © The Commonwealth Fund 2013 *available at* http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf *(accessed 30 December 2013)*. Sources for all other data indicated in table

Appendix 10: Interprofessional development for PC workforce in Canada

This builds on information provided in Sections 3.1 and 3.2 that outline different initiatives for interprofessional development in Canada. Investments made in Ontario have emphasised interprofessional PC teams through a network of 75 Community Health Centres (CHCs), 200 Family Health teams and 26-Nurse Practitioner led clinics. The CHCs deliver care to socially disadvantaged and hard-to-reach populations, and the Family Health Teams operate as patient-centred medical homes. Providers include nurses, NPs, dieticians, mental health workers, social workers, health educators and occupational therapists (Hutchison & Glazier, 2013). Exhibit 1 in Hutchison and Glazier (2013: 697) provides an overview of the diverse new PC organisational and funding models developed in Ontario between 2002-2007 to suit different provider and patient communities and enables comparison of their different characteristics in terms of: physician reimbursement; whether targeted financial incentives are provided; any formal patient enrolment requirements; the minimum group size as measured by number of physicians; governance arrangements e.g. community board or physician led; interprofessional team members; and the after-hours care arrangements. Models are presented chronologically and include: CHCs (1979); Family Health Network (2002); Family Health Group (2003); Rural and Northern Physician Group Agreement (2004); the Comprehensive Care Model (2005); Family Health Team (2005); and Family Health Organization (2007) (Hutchison & Glazier, 2013): 697).

In terms of impacts, in 2002 94% of family physicians were operating under a traditional fee-for-service model, with 2% having capitation-based blended payment, 2% capitation, 1% salary payment and 1% salary-based blended payment. By 2012 this had altered to be 53% FFS but with the following breakdowns – 12% traditional FFS comprehensive care, 12% traditional FFS focused practice and 29% FFS-based blended payment. The remainder were 39% capitation-based blended payment, salary 4%, salary-based blended payment 2% and 2% other (Hutchison and Glazier 2013: 698). Ontario's workforce measures to support an interprofessional and multidisciplinary approach to PC are briefly outlined in Section 3.2 but also include a university-based training program for Physicians' Assistants. Legislation for midwifery as a regulated profession applies in 8 provinces and 1 territory but Ontario was the first to recognise and fund midwifery services in 1994, and today midwives attend 10% of births in Ontario. To support interprofessional development, Ontario developed a Quality Improvement and Innovation Partnership (QIIP) and in 2010 established the 'Learning community'. The latter includes virtual and face-to-face learning to support acquisition and application of quality improvement methods in PC. The first round/'wave' of learning focused on 6 action areas – diabetes, hypertension, asthma, COPD, integrated cancer screening and office practice design – and 127 interdisciplinary teams participated. In 2011 the focus was on office practice redesign and included 92 teams (Hutchison et al, 2011).

Appendix 11: Securing the future of General Practice in England: 4 models and design principles

The review by the King's Fund on securing GP in England (Smith et al., 2013), identified 4 (out of 21) organisational types/models that showed greatest promise, including:

1. **Networks or federations** which are groups of general practices that come together (sometimes with other primary care and community health services) to share responsibility for functions that can include: ensuring continuous improvement of core GP; the provision of extended care for people with long-term conditions; the development of new forms of out-of-hours care; training and development; peer review and clinical governance; and sharing back-office support. Examples in the report are Midlands Health Network New Zealand; ZIO network, Maastricht, the Netherlands; Primary care networks in Alberta, Canada; and Tower Hamlets primary care network in England (Smith et al., 2013): 7-11, 21-23).
2. A **Super-partnership** is a large-scale single GP partnership structure created through formal partnership mergers to achieve a greater degree of scale for local general practice, offering a wider range of integrated primary and community health services, and using its scale to offer community-based diagnostic services and consultations with specialists. Its size means a wider range of career development opportunities for GPs and their teams. Super-partnerships seek to benefit from diversification of income streams, for example, they often bid to provide community and outpatient services previously delivered by NHS trusts or foundation trusts. Their organisational and legal form is a single large corporate-style GP partnership. Governance is typically provided by an executive group of partners who hold specific management roles within

the super-partnership, and who are accountable to a shareholder group of all GPs within the organization. Examples in the report are Whistable Medical Practice, UK; Dr HM Freeman & Partners, UK; and the Vitality Partnership, UK (Smith et al., 2013): 7-11, 23-25).

3. **Regional and national multi-practice organizations** aim to improve the quality and range of primary care provision through greater organisational scale, standardising clinical and managerial practices across all care settings (similar to some of the physician group models in the US). They usually are a single GP partnership or GP-led company with practices spread over a wider regional or national area, and centralised management and back-office functions provided by the partnership to the multiple practices. The ratio of partners to other employed clinicians is smaller than other models, employed clinicians are located in the multiple and dispersed practices and supported by a central leadership team of executive partners and management colleagues. Examples include the Hurley Group, UK and the Practice PLC, UK (Smith et al., 2013): 7-11, 25-27).
4. **Community health organizations** seek to develop an extended range of local health and social care services (including, for example, welfare rights advice, housing support, employment training and parenting support) based on analysis of local needs. They have a strong population health orientation with a commitment to meet the specific needs of disadvantaged communities and address health inequalities. These organisations – sometimes made up of multiple practices in a network and or collocated, combining patient-centeredness with a strong population orientation and generally have an ownership model with significant community or public involvement. Constituent GP practices often retain their partnership model of governance, within an overarching network that may take the form of a charitable organisation, community-interest company, or other such legal entity. Alternatively, the organisation may be comprised of all salaried doctors and staff, with a governance board including clinical staff and representatives of the local community. Examples include Bromley by Bow Centre, England and Community Health Centre Botermarkt, Belgium (Smith et al., 2013): 7-11, 27-29).

*Source***:** Smith et al (2013) *available at* http://www.nuffieldtrust.org.uk/sites/files/nuffield/130718_full_amended_report_securing_the_future_of_general_practice.pdf, (*accessed 27 February 2014).*

Appendix 12: Denmark: the patient list system and gatekeeper function

In Denmark coverage is universal including all primary, specialist and hospital services, preventive and mental health services plus long-term care. Access to publicly financed healthcare is largely free at point of access for all registered residents. Funding for healthcare is largely through a centrally collected “health tax” set at 8% of taxable income. Governance of the system is largely decentralised with the national government responsible for setting the regulatory framework for health services, general planning and oversight. The 5 regions own, manage, and finance hospitals plus the majority of services delivered by GPs, office-based medical specialists, physiotherapists, dentists and pharmacists. While there is no defined benefits package, decisions about service level and new treatments are made by regions based on national recommendations and guidelines, and most treatments that are evidence-based and clinically proven are included (Vrangbaek, 2013). At the individual level, people can chose the group 1 coverage option (98% of the population), which requires enrolment with a GP, and the GP acts as a gatekeeper for secondary care. Individuals register with the GP of their choice so long as the GP has not closed their list, maximum patient list is 1600 persons. There is a 3 month waiting period before selecting a new GP. Group 2 coverage allows free choice of GP and access to a specialist without a GP referral but requires a small co-payment. Group 2 coverage is on the decline, some suggest because of overall general satisfaction with the referral system (see (Olejaz et al., 2012).

The *list system* aims to support continuity of care through better knowledge of the individual patient, the family and whole population. The gatekeeping system aims to ensure appropriate treatment i.e. treatment at the lowest level of effective care (Pedersen et al., 2012; Vrangbaek, 2013). GPs are paid by the regions with a combination of capitation (30%) and FFS, the latter provides financial incentives and is used as a tool to prioritise services. For example, fees were introduced recently for email consultations and a bundled payment for providing and documenting services to diabetes patients using an evidence-based disease management program (Vrangbaek, 2013): 30). Key trends include movements from solo to group practices, increasing numbers of nurses employed in practices, and co-location. Many municipalities and regions have funded the establishment of multi-speciality facilities called ‘health houses’. These vary but generally include GPs, practising specialists, physiotherapists and other providers with GPs intended to be the coordinator of care (Vrangbaek, 2013). There is no cost-sharing for PC, however the Danish Welfare Commission and independent health economists proposed user charges (2005 and 2011) limited to 1% of income to increase the revenue without further taxation on income. These proposals met with limited political support, e.g. only the Conservative People's Party (Olejaz et al., 2012). Generic prescribing is one approach to cost control together with prescribing guidelines and assessments by the regions of deviations in physician prescribing behaviour. Patients must pay the price difference where they choose the more expensive drug. Private health expenditure in Denmark is largely for outpatient drugs, corrective lenses and hearing aids, doctors and dentists treatments. Approximately 1 million people had complementary Voluntary Health Insurance in 2008, provided exclusively through the not-for-profit organisation Danmark. The organisation purchases policies from among 7 for-profit insurers on a group basis and are provided by employers as a fringe benefit. There has been a rise in the number of people with VHI in the past decade (Vrangbaek, 2013).

Appendix 13: Health Care System Performance Indicators for 9 Countries

See Table overleaf

Appendix 14: Brazil and institutionalised participation in the SUS

As indicated in Section 3.1, Civil Society Organisations (CSOs) played a key role in reorienting and realising the rights-based health policy approach in **Brazil**, and ensuring that there were strong public accountability mechanisms. This CSO influence arose due to strong relationships with politicians in two forms: through interaction, collaboration and alliance with progressive policy-makers/elected politicians (Wampler & Avritzer) in Flores, 2010), and through activists from civil society taking key political posts within municipal, state and federal government (Costa 2007, Cornwall & Shankland 2008) in Flores, 2010). The Constitution, and subsequent amendments, established social control through community participation. A legal framework makes it mandatory for each municipality and state in Brazil to establish health councils (*Conselhos de Saude)* that have a parity of representation between users and service providers, with the former occupying 50% of seats, while 25% are for health workers and the other 25% for representatives of municipal and state secretariats of health and private sector providers contracted to deliver services by the State (Costa, 2007 in (Cornwall & Shankland, 2008). The system requires regular conferences at local, municipal, state and national levels to complement the regularised participation of the councils. Two processes inform the institutionalisation of participation: (1) popular health councils were established pre-1985 in the East Zone of Sao Paolo as part of a processes to develop greater health service accountability, thereby providing a model relevant to context; and (2) the 1986 national conference which for the first time brought together thousands of community activists and not just technocrats and or power-brokers. It includes huge and ambitious training programs for informing health counsellors about the system, budgeting processes and their rights (Cornwall & Shankland, 2008). The councils are not without their problems/challenges including autonomy, representation and embedded inequalities of knowledge and power between citizens, health workers and managers. The 4th national conference on indigenous health in 2006, is one mechanism to support the institutional framework of the "Indigenous Health Care Subsystem" of the SUS. The subsystem emphasises both indigenous participation and traditional medicine underpinned by the principle of *interculturalidade*. The 2006 conference, illustrated the mismatch between the rhetoric of cultural respect and democratic engagement and bureaucratic processes that require consultation and participation according to the rules of the ('white') state. Indigenous participants used the conference however as an opportunity to learn these rules and exchange experiences with indigenous representatives from other regions, generating information to feedback to their own communities. The conference advanced the process of a 'compact' between the SUS and indigenous groups, and enabled learning about engagement with the system. Despite explicit processes for citizen participation, the Cabo 2006 municipal conference highlighted the need to change underlying/implicit processes which keep power with the state. At the 2006 conference, citizens made such a point with a motion that was passed at the end of the conference about stopping the practice of having a separate lunch table for the Secretary of Health and his team during such events. The councils and processes in Brazil provide important insights into active citizen involvement level of involvement that holds key lessons for other countries. In addition Flores (2010) identifies that investment in research and the availability of scientific journals for dissemination have been key to supporting operational research within the system, backed by the production of professionals through post-graduate education. The examples highlights how CSOs and progressive politicians can play an active role as strategic allies in realising new and significant policy changes, and ensuring use of research to support implementation (Flores, 2010 in (Loewenson, 2010).

Appendix 13: Health Care System Performance Indicators for 9 Countries

		Australia	Canada	France	Germany	NET	NZ	Switz	UK	US
Adults' Access to Care, 2010	Able to Get Same/Next Day Appointment When Sick	65%	**45%**	62%	66%	72%	**78%**	n/a	70%	57%
	Very/Somewhat Difficult Getting Care After-Hours	59%	**65%**	63%	57%	**33%**	38%	43%	38%	63%
	Waited Two Months or More for Specialist Appointment[a]	28%	**41%**	28%	7%	16%	22%	**5%**	19%	9%
	Experienced Access Barrier Because of Cost in Past Year[c]	22%	15%	13%	**25%**	6%	14%	10%	**5%**	**33%**
Safety Probs Among Sicker Adults, 2011 Experienced Medical, Medication, or Lab Test Error in Past 2 Years		19%	21%	13%	16%	20%	**22%**	9%	**8%**	**22%**
Care Coordination and Transitions Among Sicker Adults, 2011	Experienced Coordination Problems with Medical Tests/Records in Past 2 Years[d]	19%	**25%**	20%	16%	18%	15%	**11%**	13%	**27%**
	Key Information Not Shared Among Providers in Past 2 Years	12%	14%	13%	**23%**	15%	12%	10%	**7%**	17%
	Experienced Gaps in Hospital Discharge Planning in Past 2 Years[e]	55%	50%	**73%**	61%	66%	51%	48%	**26%**	29%
Chronic Care Management, 2011	In Past Year, Health Care Professional Has Helped Make Treatment Plan You Could Carry Out in Your Daily Life	61%	63%	53%	**49%**	52%	58%	74%	**80%**	71%
	Between Visits, Has Health Care Professional It Is Easy to Call with Questions or to Get Advice	59%	62%	**54%**	55%	70%	71%	68%	**81%**	77%
Primary Care Practices Receive Performance Feedback, 2012	Routinely Receives and Reviews Clinical Outcomes Data	42%	23%	14%	54%	81%	64%	**12%**	**84%**	47%
	Routinely Receives and Reviews Patient Satisfaction and Experience Data	56%	15%	**1%**	35%	39%	51%	15%	**84%**	60%
	Routinely Receives Data Comparing Performance to Other Practices	25%	**15%**	45%	25%	32%	55%	35%	**78%**	34%
OECD HCQ Indicators[i]	Diabetes Lower Extremity Amputation Rates per 100,000 population, 2009	11.0	9.5	12.6	**33.7**	12.0	7.0	7.4	**4.8**	32.9
Avoid Deaths 2006-07	Mortality Amenable to Health Care[h] (Deaths per 100,000 Population)	57	n/a	**55**	76	66	79	n/a	**83**	**96**
Prevention, 2011i	Percentage of Children with Measles Immunization	94%	**98%**	**89%**	97%	96%	93%	92%	90%	92%
	Percentage of Population over Age 65 with Influenza Immunization	**75%**	64%	55%	56%	74%	66%	**46%**	74%	67%
Public Views of Health System, 2010	Works Well, Minor Changes Needed	**24%**	38%	42%	38%	51%	37%	46%	**62%**	29%
	Fundamental Changes Needed	**55%**	51%	47%	48%	41%	51%	44%	**34%**	41%
	Needs to be Completely Rebuilt	**20%**	10%	11%	14%	7%	11%	8%	**3%**	**27%**

Data sources for table (unless noted otherwise): 2010, 2011, and 2012 Commonwealth Fund International Health Policy Surveys.a Base: Needed to see a specialist in past two years.b Base: Needed elective surgery in past two years.c Did not fill/skipped prescription, did not visit doctor with medical problem, and/or did not get recommended care.d Test results/medical records not available at time of appointment and/or doctors ordered medical test that had already been done.e Last time hospitalized or had surgery, did NOT: 1) receive instructions about symptoms and when to seek further care; 2) know who to contact for questions about condition or treatment; 3) receive written plan for care after discharge; 4) have arrangements made for followup visits; and/or 5) receive very clear instructions about what medicines you should be taking. Base: hospitalized/had surgery in past two years.f Base: Has a regular doctor or place of care.g In-hospital case-fatality rates within 30 days of admission.h Source: Nolte E, McKee M. Variations in amenable mortality—Trends in 16 high-income nations. *Health Policy*. 2011 Sep 12.i Source: OECD Health Data 2013.j 2008.k 2007.

Source: Reproduced with permission from the Commonwealth Fund from *Table 3. Selected Health Care System Performance Indicators for Eleven Countries* in (Thomson et al., 2013): 8) © The Commonwealth Fund 2013 *available at* http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013_v2.pdf *(accessed 30 December 2013)*.

Appendix 15: An indigenous approach to continuous quality improvement in Australia: the ABCD approach

The Audit and Best Practice for Chronic Disease (ABCD) is a continuous quality improvement (CQI) project that aims to enhance health outcomes by assisting Indigenous primary health care centres to improve their systems for delivery of best practice care. The initial focus was on chronic disease and working with the 12 original participating health care centres in the Top End (Northern Territory of Australia), the ABCD achieved significant improvements in quality of care and diabetes outcomes for clients. One of the initial findings was that Aboriginal Health Workers (AHWs) should be more involved in chronic disease care and their career pathways need to be developed to include specific roles in chronic disease prevention, early identification and management. The current extension phase of the project is targeting a wider range of primary health care priorities and incorporating the ABCD approach into routine practice. Project staff work with health centre staff to identify strengths and weaknesses in their systems, set goals for improvement, develop strategies to achieve these goals, and then assess the effectiveness of PC (Menzies School of Health Research, n.d.; The Lowitja Institute, n.d.). The ABCD partnership uses participatory action research approaches and aims to:

- investigate the variation in quality of care in Indigenous primary health care (PHC) centres
- explore the underlying factors associated with variation at the health centre and regional level
- identify and examine specific strategies that have been effective in improving primary care clinical performance and
- work with health service staff, management and policy makers to enhance the effective implementation of successful strategies (Menzies School of Health Research, n.d.).

By the end of 2009 over 140 health centres around Australia were using ABCD tools and processes to improve their quality of care and following requests from users for continued use of the tools and processes, One21Seventy, the National Centre for Quality Improvement in Indigenous Health was established in November 2009. This organisation, based in the Menzies Centre, provides tools and processes, including training, to support primary health care providers to carry out Continuous Quality Improvement (CQI) using clinical audits, systems assessment, web-based data analysis and reporting to inform goal setting and action planning. As well as audit tools for specific life stages such as youth health, maternal health and or chronic diseases, a One21seventy Systems Assessment Tool enables providers of Indigenous PHC services to undertake a structured assessment of the strengths and weaknesses of the systems that support good clinical care. The process involves local health centre staff and managers discussing and reaching consensus about how well their systems are working (Menzies School of Health Research, n.d.). An evaluation of the CQI Investment Strategy (the CQI Strategy) developed over 2009-2013 in the Northern Territory (NT) Aboriginal primary health care (PHC) sector was undertaken in 2013. The CQI Strategy aims to support sustainable, long term service reform and improvement, and is part of a wider set of PHC reforms occurring in the sector aimed at improving the quality of health service delivery and health outcomes in the Aboriginal population (Allen and Clarke, 2013). The ABCD approach formed one of the case studies and the evaluation found that:

> *One21seventy is the most common CQI tool, used by all DoH health services and many ACCHOs. The tool has been specifically designed for use in Aboriginal PHC settings and provides a solid technical basis for CQI. Evaluation participants saw a number of benefits in One21seventy including the history of NT health involvement in ABCD, its compliance with Central Australian Rural Practitioners Association (CARPA) guidelines, its relevance to various clinical settings, and the regular updating and development of additional modules. One21seventy appears to be providing much of the technical rigour behind the CQI approach of many health services in the NT and, while it is not considered that its use should be mandated, we recommend that it continues to be supported as a key tool under the NT CQI Strategy.* (Allen and Clarke, 2013):14)

Appendix 16: Rules and mechanisms to enable change

Rules from Best et al (2012) and used to present relevant information from international review.

Rules	Examples of related findings – in relation to the rules, context or mechanisms
1. Blend designated leadership with distributed leadership	• Disjointed practice transformation - change in pieces with no overall vision does not facilitate nor enable sustained change (van Weel et al., 2012) • Having a roadmap – that is generic with minimum criteria but flexible enough to allow for local adaptation but still having all stakeholders aiming for the same goal and targets e.g. Canada flexibility and adaptability in proposed reform models enabled building on existing structures and relationships (Rushmer et al., 2004c; Strumpf et al., 2012) • Leadership reforms need to steer away from either "command and control" or "laissez-faire disengagement" towards a participatory style that promotes "policy dialogue with multiple stakeholders – because this is what people expect, and because this is what works best" in the complex context of contemporary health systems (Gauld et al., 2012). • Alliances could help "pool" funding from multiple sources, including Medicaid, to create more centralized training functions in many communities (Robert Wood Johnson Foundation, 2012). • Local, regional, and provincial physician-led governance bodies also have played an important role in primary care reform, e.g. British Columbia's Divisions of Family Practice and Quebec's Regional Departments of Family Medicine are 2 innovative examples. They can also be a barrier to change – therefore include in dialogue to design and implement successful reforms (Strumpf et al., 2012).
2. Establish feedback loops	• Health system performance assessments, including data from across the care continuum, are critical to aligning stakeholders and jointly holding them accountable (Nicholson et al., 2012) • Facilitating collection and use of data by incentives for IT including EMRs, funding for computerisation of practices, software that is compatible across systems, user-friendly as well as space for building capacity in use and application of IT, EMRs etc • That reflect that progress is iterative, rather than linear or steady and might happen in fits and starts over time, as well as for unanticipated events (e.g. staff turnover etc) that impact on progress, change and learning (Gardner et al., 2011). • That allow for learning from mistakes, supportive environments (Rushmer et al., 2004c). • Documenting change - consolidating and bringing knowledge together including funding PC research that is practice based and enables innovation (Strumpf et al., 2012). • Make use of working existing feedback loops e.g. Brazil health councils and assemblies – not perfect but an important feedback loop from people and practitioners alike (Cornwall & Shankland, 2008).
3. Attend to history	• Avoid or learn from continual structural change and how it impacts on the effectiveness of reforms.(Boyle, 2011; Goodyear-Smith et al., 2012; Roland et al., 2012) • Avoid reform fatigue and demoralising the workforce (van Eyk et al, 2001 in (Rushmer et al., 2004c) • Current structure and position of GPs in Denmark has developed over 100 years and this is important of its ability to adapt to changing circumstances and challenges; it is a flexible system that can adapt to new challenges (Pedersen et al., 2012). • Valuing what works now, understanding the strength and resources that current structures, relationships and processes offer. Important in Canada. In New Zealand the new PHOs met with resistance because GPs preferred the IAP networks and also thought that the policy was essentially anti-business and the self-employed/solo GP model (Goodyear-Smith et al., 2012; Rushmer et al., 2004c; Strumpf et al., 2012)
4. Engage physicians	• And all other practitioners involved in the process, in PC and or at other levels of the system to ensure consistency, shared vision and continuity (Best et al., 2012)and also other medical practitioners: "turning borders between professionals from segregation lines into meeting places should be a priority in finance and reimbursement." (van Weel et al., 2012): S16) • Professional Associations - the role of the Dutch College of GPs is critical to the advancement of quality and safety in primary care and for obtaining support from insurers for ongoing innovation and practice change; base funding on incentives that stimulate PC professionals to exert their passion and expertise rather than to control their performance. (van Weel et al., 2012) • Consistent funding for change processes. • Practices need ongoing training in managing both technical and cultural changes, as well as support to implement practice-based improvements (Robert Wood Johnson Foundation, 2012) • Understanding incentives for working in GP, reasons for remaining etc and reasons for leaving e.g. GMS contract and developing options for reform in conjunction with them with regard to improving their effectiveness, satisfaction with their working lives and their income (McDonald et al., 2008; Roland et al., 2012; Strumpf et al., 2012) • Solutions can be found to contentious issues e.g. 2011 agreement between the Org of GPs and Danish regions which allows for GP employment model rather than self employment (Pedersen et al., 2012)
5. Include patients and families.	• In the processes for what to do about workforce shortages, composition etc (Naccarella et al., 2010) • On how to improve engagement for better self-care and management of health and or health conditions (Canadian Health Council, 2011). • In development of a shared vision, the rationale for change and as part of the solution. (WHO, 2008)