



**PRIMARY CARE –
THE CENTRAL FUNCTION
AND MAIN FOCUS**

Sir John Oldham
with Ben Richardson,
Grail Dorling and
Peter Howitt



**The Global Health
Policy Summit**

A partnership between

**Imperial College
London**



القطرية
Qatar Foundation

Report Of The Primary Care
Working Group 2012

Primary Care – The Central Function and Main Focus

Report of the Primary Care Working Group 2012

Sir John Oldham with Ben Richardson, Grail Dorling and Peter Howitt

Contents

Foreword	3
Executive Summary	4
1. Introduction	5
2. Methodology	5
3. The Case for Primary Care	7
4. The Seven Primary Care Challenges	8
5. Finding Innovative Ways to Respond	10
6. Lessons From the Case Studies to Meet the Seven Challenges	19
7. Policy Actions	24
Conclusion and Next Steps	26
Appendix 1. Membership of the Working Group	27
Endnotes	28

Foreword



Sir John Oldham



Professor the Lord Darzi of Denham

The Declaration of Alma Ata – 1978

“Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

It forms an integral part both of the country’s health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.”

International Conference of Primary Health Care - adopted by the World Health Organization (WHO)

The Declaration of Alma Ata serves as an appropriate starting point for this discussion paper. It is a statement of the central role that primary care^a has in all countries and in all circumstances.

The evidence is overwhelming that primary care is a cost-effective means of delivering healthcare. Yet in low, middle and high-income countries alike, primary care struggles to get the emphasis that evidence demands. This discussion paper reviews the case for primary care, and the challenges that primary care faces in all countries. Drawing on case studies of existing innovations with proven results, it proposes some practical actions that could be taken at governmental level to address these challenges.

Current models of healthcare, especially those focused on hospitals as the main location for care giving, are unsustainable. We hope that this paper provides the impetus for policymakers to start thinking differently about how to meet the health needs of their populations. We would like to express our gratitude to the working group members, and to Ben Richardson and colleagues at McKinsey, for their contributions in creating this paper.

A handwritten signature in black ink, appearing to be 'John Oldham'.

Sir John Oldham
*Chair, Primary Care Health Working Group,
GP and National Clinical Lead Quality and
Productivity, Department of Health, England*

A handwritten signature in black ink, appearing to be 'A. V. Darzi'.

Professor the Lord Darzi of Denham
*Paul Hamlyn Chair of Surgery and Director
of the Institute of Global Health Innovation*

^a For brevity, we use the term “primary care” throughout this paper rather than “primary health care”.

Executive Summary

Primary care is a highly effective means of healthcare delivery in terms of cost and quality, but its potential is rarely realized.

The drivers of health care demand in all countries are principally people with multiple chronic diseases. Current, largely hospital-based, models of meeting that demand are unsustainable.

Primary care offers an alternative, but the seven challenges that must be addressed for primary care to realise its potential are:

1. Poor patient access and perception;
2. Insufficient Co-ordination and Integration;
3. Low professional prestige and workforce availability;
4. Lack of infrastructure investment;
5. Misaligned incentives;
6. Under-utilisation of information and technology and
7. Variable quality standards and regulation

Existing innovations provide some of the answers to meeting these challenges and are cited in a range of examples, including Family Health Programme in Brazil, Medcall in Mexico and Southcentral Foundation in Alaska

Governments can use these international lessons and mandate, fund or support changes to improve primary care. This paper considers three aspects in particular: action on incentives, information and technology, and quality standards/regulation. These are the areas that governments across the world can most consistently influence.

Among the recommendations put forward are these: the piloting of different incentive mechanisms to encourage greater use of primary care and to reduce hospital activity; funding to establish electronic health records accessible to all the clinicians involved in a patients care; and reduction of regulatory barriers to the greater use of technology for remote care.

The approaching tsunami of chronic disease in all countries places an imperative on strengthening primary care.

This discussion paper is just the beginning of our work and we want to join with interested partners to try out and evaluate the ideas contained in here on a large scale.

1. Introduction

The passionate champion of primary care, the late Barbara Starfield, defined primary care by enumerating its key functions:

“serving as the first point of contact for all new health needs and problems; delivering long-term, person-focused care; comprehensively meeting all health needs except those whose rarity renders it impossible for a generalist to maintain competence in them; and coordinating care that must be received elsewhere.”¹

In the 34 years since the Declaration of Alma Ata, the case for such primary care has only grown stronger – as recognised by the title of the 2008 World Health Report, *Primary Health Care: Now More than Ever*.²

This paper begins by briefly setting out the case for primary care, before moving on to examine the seven challenges that hold primary care back. It then considers nine examples of successful primary care that come from high, middle and low-income settings.

The lessons from these success stories are spelt out in some detail. We then go on to consider what action policymakers can take, with a particular focus on three of the seven challenges: incentives, information and technology, and quality standards/regulation.

2. Methodology

This paper has been developed from three main sources of knowledge:

1. an international working group of experts
2. a review of the literature
3. an analysis of innovative primary care case studies

The working group members consist of a mixture of distinguished academics and award-winning practitioners from a diverse range of countries (see Appendix 1). Their input was supplemented by that of others in their network, and by that of people involved in the case studies cited.

Primary care is a huge topic, and the working group took the decision to concentrate on aspects that would maximise the potential of primary care. Part of that was to identify the various challenges that hold primary care back from its rightful place – as the health system’s central function and main focus.

The challenges were then further analysed, in two ways: first, via a literature search to test the evidence base for each of the challenges; and second, by cross-mapping against the case studies we had identified.

We had selected those case studies on the basis of several criteria: clear evidence of impact, availability of data and material to support the claimed success, and relevance to a variety of the challenges. We also attempted to cover a range of different geographies and types of health systems. The selection was, inevitably, somewhat subjective, but at least the cases will jointly elucidate the range of possibilities for advancing primary care.

In analysing the case studies, we explicitly sought to answer the following questions:

- Why was the project introduced and who was involved?
- How has the innovation addressed the seven challenges?
- What was the impact of the initiative? Did access improve? Did clinical quality improve? What was the effect on costs?
- What were the lessons learned that might be applied elsewhere?

This final question is the most important. It informs the latter parts of this paper, where we offer solutions that policymakers can apply to strengthen the role of primary care in their own health systems.

Figure 1

The proportion of the population over 65 is increasing significantly in all countries, regardless of their GDP per capita

Proportion of population aged 65+ years, 2010-2030 %

Source: World Population Prospects 2010, United Nations

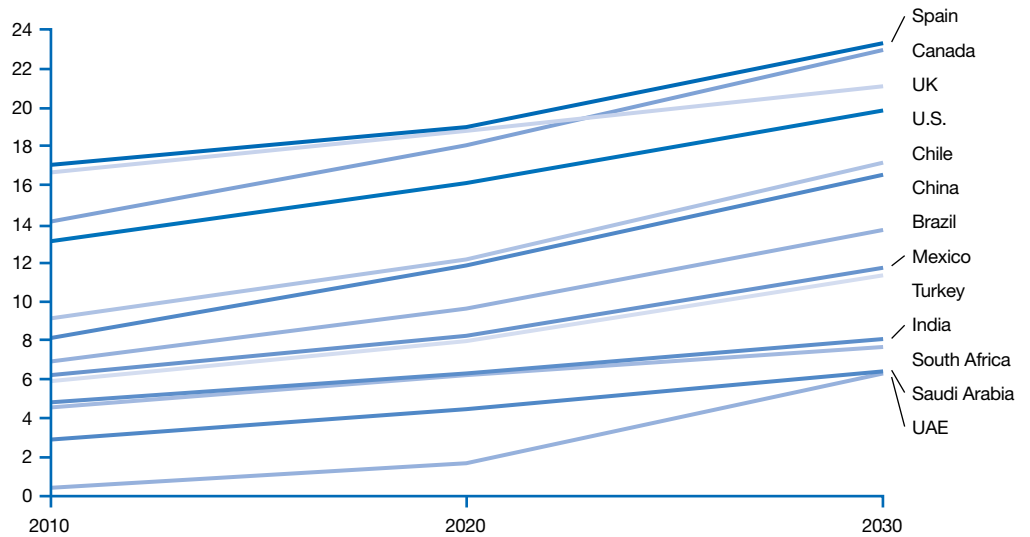


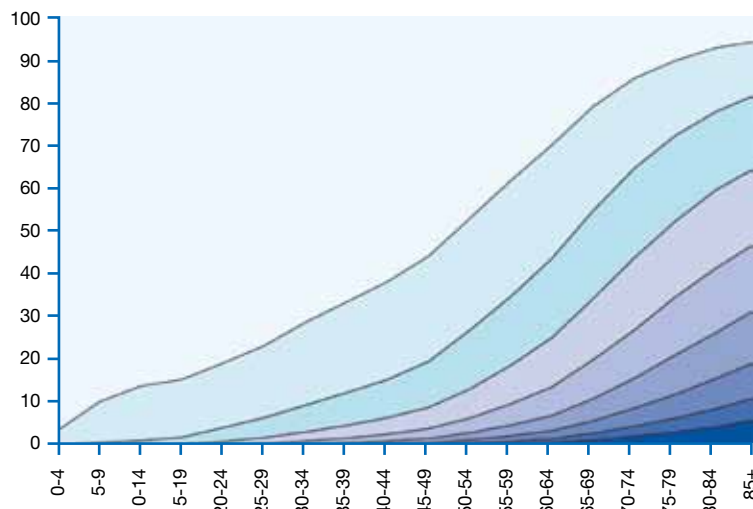
Figure 2

Multi-morbidity is emerging as a growing and complex challenge

- 0 disorders
- 1 disorder
- 2 disorders
- 3 disorders
- 4 disorders
- 5 disorders
- 6 disorders
- 7 disorders
- ±8 disorders

Note: Based on a cross-sectional study of 1.75m people registered with 314 medical practices in Scotland

Source: Barnett, Mercer, et al, 2012, Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study, The Lancet, DOI: 10.1016/S0140-6736(12) 60240-2



Multi-morbidity by age group

- >50% of 65+ age group have ≥2 chronic conditions
- >50% of 75+ age group have ≥3 chronic conditions
- More people have ≥ 2 chronic conditions than have 1

Multi-morbidity by disease area

- 86% of people with diabetes have other chronic conditions
- 82% of people with COPD have other chronic conditions
- 36% of multi-morbid people have both physical and mental health disorders

3. The Case for Primary Care

Primary care is not an idealistic philosophy; it is an evidence-based priority. Healthcare systems configured around primary care produce healthier populations at lower cost. Health services are more effective, equitable, and efficient. In the U.S., for example, overall health is better in regions with more primary care physicians and where primary care functions well.³ By contrast, overall health is worse where specialists predominate.⁴

In England, an increase of just one primary care doctor per 10,000 population is associated with a 6% decrease in mortality.⁵ And areas of Spain that were first to implement primary care reforms registered the largest reductions in mortality due to hypertension and stroke.⁶ But primary care does more than just give better health outcomes; it is more cost-effective, as proved by several studies in the U.S.⁷

The need for good primary care is rising rapidly in all countries. This is because the populations and diseases that can be most effectively managed by primary care are increasing worldwide. All countries are seeing significant increases in older age groups (see Figure 1), with the biggest proportional increases in poorer economies.

In high-income countries, there has been a steady increase in the older population, along with longer life expectancy. This is clearly a healthcare success story, but it does mean a growing number of people living with multiple, expensive chronic conditions – such as heart disease, chronic obstructive pulmonary disease (COPD) and diabetes – as shown by data from Scotland (see Figure 2).

Most low and middle-income countries are experiencing the combination of rapid population growth, urbanisation, success in tackling infectious disease, and growth in both income and consumption. And the effect is almost always a surge in chronic diseases. These illnesses are already the major cause of death among the world's population, and their impact is set to worsen in the years up to 2030 (see Figure 3).

Figure 3

Low- and middle-income countries will shift further towards a high-income pattern of chronic-disease burden over the next 20 years

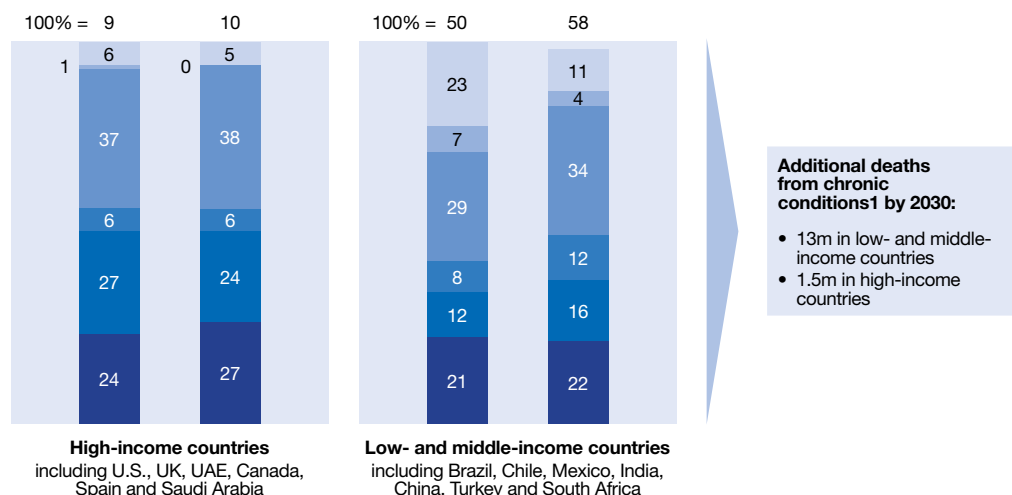
Projected mortality by cause and region, 2008 and 2030
% of all deaths (100% = millions of deaths)

- Infectious diseases
- Maternal/perinatal/malnutrition
- Cardiovascular
- Respiratory (non-infectious)
- Cancer
- Other non-infectious & injuries

1 Defined as mortality from all causes except infectious diseases, maternal, perinatal and malnutrition-related causes and injuries

Note:
Countries are listed to show where they fit within the scheme: regional data is for the full region (not just countries listed)

Source:
WHO Global Burden of Disease



People with chronic diseases are the main drivers of healthcare costs. For instance, in the Pennsylvanian population served by the U.S. healthcare provider Geisinger, people with chronic diseases account for 80% of all healthcare costs and hospitalisations, 76% of all physician visits, and 91% of all filled prescriptions.⁸

The issue of chronic diseases is one that often needs innovative responses. Many specific responses are outlined in the report *Countering non-communicable disease through innovation*. But at a more generalised level, it is worth saying that one key response for any country is simply to raise the level of primary care. An effective primary care system has these virtues:

- It can co-ordinate the care of the many people with multiple, complex health needs, in a way that individual specialists cannot.
- It can deliver care closer to people, increasing convenience, especially in areas remote from hospitals.
- As a first point of contact for patients it facilitates the early detection of illness, and thereby improves outcomes.
- It can take a long-term perspective to support prevention and healthy lifestyles.

In short, improved primary care is essential when it comes to stemming the “tsunami” of chronic disease that threatens to engulf almost all countries.

4. The Seven Primary Care Challenges

The potential of good primary care is not easy to realise. Before primary care can advance to being the central function and main focus of a health system, seven challenges will have to be overcome.

Challenge 1

Poor patient access and perceptions.

Many countries lack sufficient primary care, especially in rural and deprived areas. The reason might be “hospital-centrism”, with resources focused on secondary and tertiary care. For instance, Lebanon has a higher proportion of cardiac surgery units per capita than Germany, but lacks a programme in primary care to reduce cardiac risk factors.⁹

In countries where primary care is adequate, patients might choose not to access it because they harbour negative perceptions of it. For instance, patients might assume that a pressing health need is best resolved by a visit to the hospital Emergency Department. Or they might consider specialist care to be superior, and perceive primary care as little more than an obstacle to accessing a specialist.¹⁰

Challenge 2

Insufficient Coordination and Integration

How to integrate primary care better with the rest of the health system – that is a challenge for almost all countries.¹¹ Primary care physicians often find themselves responsible for coordinating with all the other care-providers of a given patient, whether or not they have a formal role as gatekeeper. ^b Few health systems, however, have developed communication systems that enable care to be coordinated effectively. Once patients are referred on to a specialist or sent to hospital, all too often the primary care physician is excluded from the picture, and does not receive any follow-up details.

In low and middle-income countries, prominence may be given to so-called “vertical” disease programmes – programmes designed to target problems such as malaria and HIV/AIDs. However effective they might be, they do have a tendency to hamper the development of holistic primary care.¹²

^b This term refers to a requirement, in many healthcare systems, that patients consult a primary care physician before being able to access a specialist. In the NHS in the UK, GPs have a gatekeeping function.

Challenge 3

Low professional prestige and limited availability of the workforce.

Many professionals consider that working as a specialist confers higher professional status than working in primary care. In many countries, moreover, hospital doctors are better paid and have a more structured career path than primary care practitioners. For instance, when a course was established in family medicine at the Tajik State Medical University, only 11 out of the 40 places were filled in the first year – the lack of interest being attributed to the fact that specialists earn substantially more than family doctors.¹³

Low prestige means that in high-income countries, primary care may fail to attract the ablest candidates. In low and middle-income countries, there is often a severe shortage of trained healthcare professionals of any kind, and primary care vacancies are inevitable. In India, for example, 10% of posts for doctors at the primary health centres and 25% of primary care nursing posts remain unfilled.¹⁴

Challenge 4

Lack of infrastructure investment

Many health systems concentrate their capital investment on hospitals. Primary care facilities are often under-equipped, therefore, especially for diagnostics, and they can be in poor condition as well.

This tendency means that patients might need to rely on hospitals anyway, even for basic diagnostics such as spirometry or electrocardiograms (ECGs). Professional bodies have argued that insufficient diagnostics (including imaging and physiological measurements) are holding primary care back from diagnosing and treating more people.¹⁵

Challenge 5

Misaligned incentives

Health systems often pay hospitals according to the level of activity recorded. So it is in the hospital's financial self-interest to admit more patients. Meanwhile, health systems tend to reimburse providers of primary care without reference to hospital-based care and tend not to give any special reward to primary care for successfully delivering proactive treatment that avoids hospital admission. So primary care providers have less incentive to reduce referrals, and patients – and resources – keep flowing to secondary care.

In some countries, moreover, there may be little incentive for patients to utilise primary care. In India, for example, most private health insurance does not cover primary care, so patients have an incentive to seek expensive specialist treatment when proper preventative primary care might be sufficient – and if sought earlier might even have stopped the problem from developing.¹⁰

Challenge 6

Under-utilisation of information and technology

The use of information and technology to improve care for patients also varies. In some places, IT is put to impressively wide use – a 2009 survey found that Australia, Italy, the Netherlands, New Zealand, Sweden, and the United Kingdom, have near universal usage of electronic health records with high functionality.¹⁶ By contrast, in that same year in the U.S., only 20% of doctor's surgeries were making comparable use of health IT.¹⁷

Even where patient-level information exists, its transparency might be limited. If patients cannot easily check on primary care performance, they cannot reliably identify high-quality providers and choose to consult them.

In addition to providing patient records and provider performance data, technology can also benefit healthcare by improving services and delivering care remotely. Up to now, however, the use of technology in healthcare delivery generally, and primary care in particular, has tended to centre on improving the existing model, rather than on transforming the model, as has happened in other sectors, such as consumer banking.

Challenge 7

Variable quality standards and regulation

When standards of quality vary, as they always do, the effect is to undermine the public's confidence in primary care and thereby reduce its efficacy. A lack of consistent quality standards has been identified as a problem for primary care in India, and contributes to the wide variations there in prescribing and intervention rates.¹⁸

Quality standards are necessary and must be applied consistently, though it can be difficult to find agreement on what the quality measures should be. And even when quality standards do exist, health systems often lack transparent processes for measuring performance against those standards.

Interconnections

The seven challenges have been singled out and discussed one by one, but do bear in mind how closely interconnected many of them are – even mutually reinforcing. Consider, for example, how patient perceptions of primary care might be further negatively influenced if primary care facilities are lacking in investment. Or consider how the challenge of insufficient co-ordination and integration is compounded by the inability to access patient data across providers.

5. Finding Innovative Ways to Respond

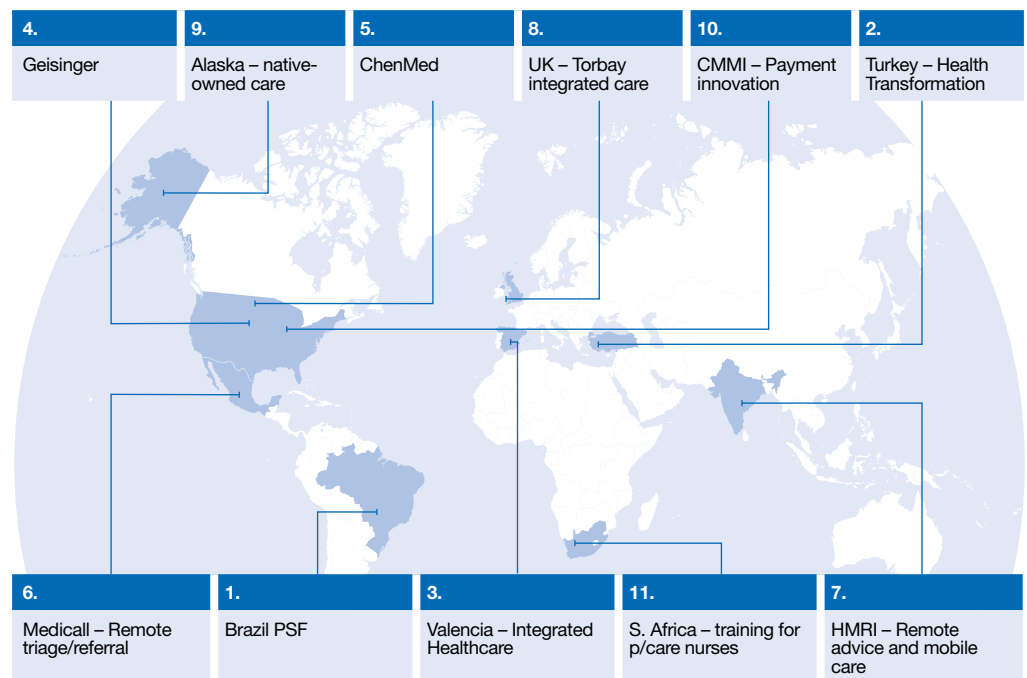
The seven challenges are not insurmountable. There are innovative examples from around the globe of how primary care can achieve the importance it deserves.

We scanned the world for compelling evidence of how different systems can respond to the primary care challenges. The innovations that we selected for discussion are identified in Figure 4.

This paper details nine of these examples: Brazil, Turkey, Valencia, Alaska, Geisinger and ChenMed in the U.S., Medcall in Mexico, HMRI in India, and Torbay in England. The other two examples – the Center for Medicare and Medicaid Innovation in the U.S. and Primary Care 101 in South Africa – are not discussed in detail at this point, but the key lessons from them are highlighted in the next chapter.

Figure 4

A scan of primary care innovation from around the world



5.1 Family Health Program, Brazil

At a Glance:

- Low-cost through standardisation
- Investment in electronic health records
- Widened skill mix to include community health workers
- Tracking of quality and incentivising of individual practitioners

In 1994, the Brazilian government introduced a national Family Health Program (PSF) to provide universal coverage of primary care, though with a particular emphasis on delivering care first to the most deprived and remote communities. The national programme was devolved to municipalities for funding and implementation.

The PSF is thought to be the catalyst for many successes in Brazilian health, especially maternal and infant health, through delivery of basic primary care direct to under-served communities.

The model is relatively low-cost, with standard facilities at community care centres, delivering basic healthcare free to patients. Family medical teams at the care centers consist of the following members: a lead primary care physician, a nurse, one or two nurse assistants, and six community health workers. Each community care centre is responsible for awareness, prevention, and primary treatment of 3000-4000 people.

Community outreach is at the heart of the methodology, which involves house calls and active identification of health needs and trends. The community health workers visit people in their homes to raise awareness, encourage uptake, and disseminate health-education messages. Information is stored in an electronic health records system, which prompts the team about tasks related to patient care and follow-up.

Incentives have driven a rapid and effective rollout for PSF. Central government provides each municipality with funding of about \$50,000-60,000 for each family medical team per year, with additional allowances if enhanced services are offered. For example, an extra \$15,000-20,000 is available if oral health professionals are added to the family medical team. This decentralised model allows programmes to develop to meet local needs. Staff are also incentivised with pay-for-performance and training credits.

In return, municipalities are required to commit funding – to pay for nurse supervisors, for example – before rollout may begin. In other words, both federal and municipal spheres are responsible for financing the programme. Central funding is tiered according to the size and wealth of the population, in order to incentivise healthcare workers to join family medical teams in poorer and smaller cities.

The proportion of the population covered by PSF has risen from 4% in 1995 to 54% in 2010,¹⁸ making PSF the main primary care system in Brazil. And impressively, considering the original emphasis of the programme, coverage is highest among the poorest.

The programme has had a quick and high impact on basic health indicators. Over the last 20 years, the infant mortality rate has declined by 60%,¹⁹ and the hospitalisation rate for ambulatory-care-sensitive conditions^c has declined by 5%.²⁰ In the last ten years, the pregnancy rate in girls aged 10-19 has fallen by 31%.²¹

Staffing is the biggest challenge for the PSF program, especially in rural areas. Brazil has a large pool of health professionals, but the proportional number of physicians varies widely from region to region, and offers of more lucrative employment in the private sector remain a worrying issue.

^c Ambulatory care-sensitive conditions are conditions for which effective management and treatment should limit emergency admission to hospital (e.g. diabetes, asthma and epilepsy).

Another concern is that the wide use of incentives to drive coverage may be affecting the quality of care. Some family medical teams are responsible for too many people. Indeed, care quality tends to stall, or even decline, as coverage increases, which means that the service is under-utilised by privately insured people.

Pressure for better outcomes is now a political matter. Results are published periodically, and can create problems for the current administration. Most municipalities have developed information systems that enable accountability to the population.

5.2 Health Transformation Program, Turkey

At a Glance:

- Government drive to get universal coverage
- Investment in infrastructure (clinics and IT)
- Changed financial incentives to enhance gatekeeper role for primary care and workforce recruitment
- Introduction of electronic health records

In 2003, the new Turkish government launched an ambitious initiative, called the Health Transformation Program, a national scale-up of primary care that has led to an increase in access from 67% to 95% (and a trebling of per-capita visits to primary care), while simultaneously elevating patient satisfaction from 40% to 73%.²²

Health goals include the following: universal health insurance, a community-based primary care system, and a national health-information system incorporating electronic health records.²³ The reforms' aims are: to deliver equity of access to healthcare, to improve stewardship of the health system, to focus on public health and quality, and to strengthen primary care.

Since 2005, the programme has established primary care centres across the whole country, aiming to serve a population of 75 million people. To encourage uptake, primary care is free at the point of care. Although the co-payment for specialist care is lower for patients if they are referred by a GP, Turkey has not yet formally established a gatekeeper role for primary care.

To accelerate the rollout of primary care, doctors without training in family practice have been employed and gradually trained in family practice. Physicians who switch to family practice are offered a salary increase. The government's target is for all physicians in the scheme to be fully qualified family practitioners by 2020.

Primary care practices are supported by family health centres, which provide diagnostic and broader community services. In addition, population health centres provide health protection and prevention. They also evaluate the effectiveness of services, and coordinate relations between health facilities and other institutions and services in their catchment area to improve public health.

The funding model is capitation-based. Turkey's budget for preventive and primary care increased from \$618 million in 2002 to \$ 2.8 billion in 2010.²⁴ Family practitioners are salaried and work for the state, which intends to introduce pay-for-performance based on quality of care.

There are strong incentives for patients to use the free-of-charge primary care service, with the waiving or reduction of co-payments for referred visits to secondary care. The government also intends to introduce compulsory gatekeeping by primary care doctors, as soon as there are enough doctors working in the scheme. The government's target is a ratio of 1 family physician for every 2,000 population – the current ratio is approximately 1 per 4,000.

5.3 Valencia, Spain

At a Glance:

- Vertical integration of healthcare delivery
- Higher quality at lower cost
- Alignment of financial incentives and clinical accountability
- Investment in diagnostics in primary care

In 1999, Valencia began to transform its healthcare system with the aim of improving quality, expanding patient choice, and lowering costs. Poor health-system performance prompted Valencia to involve the private sector. The principles of the new approach are to decentralise management, integrate different healthcare sectors, and encourage competition between health districts.

The programme covers primary, ambulatory, and acute-care services. In five of 21 regions, health-system management has been contracted out to the private sector. In order to create competition there, patients are allowed a free choice of provider, although at-risk patients are enrolled in compulsory prevention programmes. Care is decentralised from regions to sub-regions.

Private providers have adopted several ambitious strategies: use of technology, such as text-message communications with patients; clinical approaches to proactively managing whole-population health within finite resources; and vertical integration of health providers – primary and acute.

A consultant physician is assigned to each primary care centre to implement clinical guidelines with GPs and to reduce referrals to specialist care. Physicians are incentivised to manage patient costs, but they benefit in many different ways. The Valencia model offers them job security, an innovative salary system, opportunities for professional development and for teaching and research, and a commitment to technology.

Diagnostic and outpatient services have been expanded in primary care, and medical-care pathways have been integrated across the health system. Information systems have also been integrated, and electronic health records have been introduced.

The service is funded through capitation, which means that risk is transferred to providers, creating strong incentives to manage patients' conditions within primary care. Meanwhile, costs are fixed for the Valencia government.

The effect of these changes has been a 26% reduction in costs in districts with outsourced management, a 76% increase in hospital productivity (manifested in shorter average length of stay, and more efficient utilisation of facilities), and patient satisfaction rates running at 91%, compared to an 85% rate for the Spanish health service as a whole.²⁵

Waiting times have declined, and are now among the lowest in Spain. Spending on health per capita in Valencia is now 12% below the national average.²⁶ Independent audit and management tools, such as regular inspections and balanced scorecards, ensure high quality of care.

Among the key success factors have been these: managerial responsibility and empowerment of providers; performance-based incentives; partnering with an experienced private company familiar with financing and managing large-scale projects; and development of a central IT system that includes patient records.

The Valencia model has inspired new public-private collaboration models in other regions in Spain, such as Madrid and Galicia. However, public and political opposition have been strong, and has prevented rapid extension of the model to other areas. Nevertheless, the Valencia model does demonstrate the potential benefits of smart use of limited competition between regions and hospitals.

5.4 Geisinger, U.S.

At a Glance:

- Extensive use of non-traditional staff roles
- Wide use of remote technology
- Use of electronic records to performance-manage quality
- Lower costs than competitors

The Geisinger healthcare system serves a rural community that is poorer, older, and sicker than the national averages in the U.S. The community has a high prevalence of chronic conditions, and its hospitalisation rate for those conditions is three times above the national averages.

The service covers 2.6 million people in Pennsylvania. They have 24/7 access to care services, enhanced by the use of nurse care co-ordinators, case managers, and tele-health. Geisinger's service is described as an integrated medical-home model. The medical-home model is focused on improving outcomes and costs for patients with chronic conditions. Primary care is organised around the relationship between patient and personal clinician. The medical-home model can be broadly defined as primary care that is accessible, continuous, comprehensive, family-centred, coordinated, compassionate and culturally effective.

The system is supported by strong IT, including electronic health records and performance-management systems, and clinician leadership. Physicians and primary care practices are incentivised for better performance.

Technology is used to foster patient engagement. For example, patients can view their medical records and test results and make appointments from home. Home-based monitoring devices are used for patients with chronic conditions. Care co-ordinators send patients reminders and messages by text and email. And patients can communicate with their primary care team 24/7 by phone or email.

Funding for the service comes from Medicare, Medicare Advantage, and third party insurers. Compared with similar areas of the U.S., the Geisinger primary care approach has reduced hospitalisations by 20% and costs by 7%.²⁷ Key factors in this success include: financial incentives for primary care physicians; extensive use of technology; and widespread use of non-traditional staff roles, such as care coordinators.²⁸

5.5 ChenMed, U.S.

At a Glance:

- Prioritising of high-risk patients through risk-stratification IT
- Explicit link between financial incentives, clinical quality and hospital utilisation
- High-level clinical governance

ChenMed is a family-owned, private primary care-provider franchise based in Florida, U.S., consisting of 13 health centres. It was founded 25 years ago by a single physician. ChenMed targets low-to-middle-income Medicare Advantage^d patients with complex chronic disease – a group that is responsible for 40-50% of total healthcare spend and is often avoided by other providers. ChenMed aims to reduce hospitalisations through high-quality, high-intensity, easy-to-access primary care.

^d Medicare Advantage is a comprehensive Medicare plan available to over 65s and younger people with disabilities. See <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-c.aspx?AspxAutoDetectCookieSupport=1>

Patients are offered regular consultations (at least one a month), enhanced services and free transport – all in order to encourage adherence to care plans. These high-intensity care plans are based on risk stratification, and their implementation is supported by high doctor-to-patient ratios (typically 1 to 400) and staff-to-physician ratios (typically 6 to 1), and by the locating of primary care and high-demand ambulatory specialist care in one place. Mandatory case-review meetings take place three times each week to discuss any patient who has recently had an emergency-room attendance or unplanned hospital admission, both of which are seen as failures in care.

ChenMed grew with demand, attracting primary care physicians and specialists motivated by the company's operational and financial model. Physicians working in academia are actively targeted as recruits, and are offered higher earnings, a collaborative environment, and more time with patients. ChenMed strives to recruit physicians that share the company's values and its philosophy of avoiding hospitalisation through proactive management in primary care.

ChenMed is clinician-led, and uses IT extensively, including customised electronic health records, to stratify, track and analyse patients. An "air traffic control system" is used to ensure minimal waiting times. Transparent information enables rigorous performance management.

The service is funded by a full capitation model, with physicians taking on an increasing proportion of risk as they become more experienced with the service. Each physician manages about \$7 million of spend on average.

ChenMed facilities are set up to have the look and feel of a "calm ER" to encourage patients to use primary care rather than hospital emergency services. There is on-site access to radiology and laboratory testing.

Compared with national averages, ChenMed has 18% lower rates of hospitalisation, 17% lower rates of readmission, and 22% lower cholesterol levels for patients on statins²⁹. This suggests that its risk stratification and its focus on patient are highly effective.

5.6 Medcall, Mexico

At a Glance:

- Changed model for accessing primary care, with 62% of calls now dealt with over the phone
- Extensive use of mobile-phone technology
- Rigorous quality standards

Mexico has significant healthcare-access problems in rural areas, owing to low density of physicians and long distances to healthcare facilities. Quality of care is highly variable. But penetration of mobile phones is high among the Mexican population, and that has created an opportunity for Medcall^e, a private for-profit provider, to have a strong impact on healthcare delivery.

Medcall was established 14 years ago as a start-up venture, and it has now reached over a million households, including 5% of the nation's mobile-phone users. People can access medical advice by phone 24/7; the calls are paid for through the TelMex phone system via a monthly subscription of about \$7.

Telephone advisers, based at a single national call centre, use algorithms devised by the Cleveland Clinic (a respected US healthcare provider) and protocols to triage patients (using an escalation process) and ensure that the caller speaks to a specialist of the appropriate level.^e

^e For brevity we have referred to Medcall in this report, the full name is Medcall Home, see <http://www.medcallhome.com/sitiomh/Index.aspx>

About 38% of callers get referred to a network of pre-quality-checked physicians or Medical clinics, and receive a discount of at least 50% compared with the cost of accessing these services directly. The remaining 62% of calls are managed on the phone, without the need for medical attendance.

The service leverages a strong, extensive network (telecommunications) to supplement a weak network (healthcare), in order to improve access and quality in an environment where both factors are highly variable. The telephone service is delivered in partnership with TelMex, and the IT system includes electronic health records.

5.7 HMRI, India

At a Glance:

- Use of remote technology and mobile facilities
- Assurance of quality standards through business-improvement methodology
- Rise to 500,000 users per month in three years

HMRI is an integrated public-private service that exploits technology to provide quality access to healthcare. It operates in the state of Andhra Pradesh, which has a population of 80 million people. It offers its customers a comprehensive and integrated range of healthcare solutions, specifically free phone-based and mobile-clinic-based health services. The plan is to extend HMRI across India by 2015.

Two-thirds of rural households in Andhra Pradesh lack access to a healthcare facility within two kilometres. About 75% of the healthcare spend in India is out of pocket. Existing infrastructure is severely inadequate, and current health outcomes lag behind most other lower-middle-income countries.

HMRI operates as a public-private partnership, offering free services to customers – 95% of the cost is borne by the government and 5% by the private sector. The aim is to provide comprehensive primary care services at 10% of the cost of existing public systems.

Key solutions that HMRI offers include: an advice call centre, staffed by nurses and doctors, to provide remote diagnosis, advice, triage, and referred; a mobile medical unit that visits each village twice a month, focusing on pre- and post-natal health and chronic diseases; a diagnosis and treatment service, mainly for acute ailments, based on video-conferencing; and an integrated hospital management system to provide referred, and to manage inventory and resources efficiently.

By triaging via its call centre, which has a low cost per call of \$0.50, HMRI is able to manage a large number of cases at low cost. About 40% of calls do not lead to a further referral. In addition, HMRI uses robust quality control, such as Six Sigma and Lean, and operates strict customer-feedback processes.

Currently HMRI still handles only a small proportion, between 15% and 20%, of the 600,000 outpatient contacts required each day in Andhra Pradesh. However, it is growing rapidly: from servicing around 30,000 customers a month three years ago to servicing more than 500,000 customers a month now. The call centre receives seven million calls each year; and 475 vans travel about, visiting villages each month. For patients who have a phone consultation but don't then require a physician visit, the saving is about \$10 – the cost of treatment and daily wages lost. During its expansion, HMRI has maintained high levels of customer satisfaction, averaging 4 on a 5-point scale, and has standardised the majority of its processes.

5.8 Torbay, England

At a Glance:

- Horizontal integration of primary and social care
- Use of IT to risk stratify high-risk patients and target intervention
- Tracking of quality of care
- A 33% reduction in bed occupancy, and lower social care costs than neighbouring organisations

The population of Torbay, in the southwest of England, is predominantly elderly, and has a high prevalence of chronic conditions. A quarter of Torbay's population of 140,000 is aged over 65. Torbay is a popular retirement destination, with little local family support for the elderly.

The health services generally perform well, but ineffective delivery of social care exacerbates the population's health needs, and has led to higher-than-justified levels of hospitalisation. Communication between GPs and social care providers has been particularly weak.

A solution to the problem was initiated by the Torbay Primary Care Trust – the organisation with overall responsibility for the local population's health and also for providing community and primary care. The Trust decided to form a partnership with the agency responsible for social care, and thereby to integrate social services with healthcare services within a single leadership structure.

The goal is to reduce overall costs by preventing unnecessary hospitalisations and by reducing delays in discharge from hospital. Integrated care teams are organised around GP practices, and some GPs help manage the new form of service delivery. Teams deal with all cases, including chronic conditions, palliative care, and people with disabilities. GPs stratify the population according to risk; those at highest risk are assigned a "care coordinator", a newly created role, to ensure that service providers work together. Rapid-response teams provide a crisis-resolution service for those at imminent risk of hospitalisation.

Five zones were established in Torbay, each serving 20,000-40,000 people. Each zone has an integrated health and social care team led by a single manager, has a single point of contact (the care coordinator), and uses a single assessment process.

Community health and social care service providers were given greater opportunity to contribute ideas about patient care. Community hospitals were reviewed and organised into a more active intermediate-care service. Closer links were developed between nurses and therapists, and between the acute hospital and elderly-care specialists. An integrated IT system was created to facilitate information-sharing between providers. England-wide quality standards developed by the National Institute for Health and Clinical Excellence (NICE) are followed.

Integration of health and social care in Torbay has had a strong impact.³⁰ Daily bed occupancy has dropped by 33%, and emergency-bed use by people aged over 65 has fallen by 29%. In addition, there has been a 45% rise in care packages¹ being in place within 48 days of assessment. And Torbay's spend on social care has risen at only half the pace of that recorded by the rest of southwest England.

5.9 Alaska, U.S.

At a Glance:

- Improved access for a deprived community
- High integration of non-traditional workers used in team approach
- User-owned service
- A 71% reduction in bed days, and a 75% reduction in hospital admissions

The Southcentral Foundation (SCF) is a user-owned and managed health system for native Alaskans. It seeks to maximise user engagement, community outreach, and task-shifting within highly supervised primary care teams, in order to deliver high-intensity, high-quality primary care to a high-need population.

South-central Alaska is a territory of 100,000 square miles, with a population of 58,000 native Alaskan and American Indian people. About 80% of this population is urban and based in Anchorage; the remaining 20% live mainly in remote rural areas, accessible only by plane.

SCF was created with a mission to improve access and quality of primary care for native Alaskans, through a community-owned and managed service. It provides a broad range of primary care services to an under-served community; these services include chronic-disease management, dental services, and spiritual and complementary services.

Patients and families are assigned a community health worker, who visits and gets to know them within their home environment, and so provides a continuing first-point-of-access relationship. The community health workers focus on encouraging healthy behaviours.

Primary care is delivered by a multi-disciplinary team that aims to maximise access and offer a convenient service for patients. The aim is to enable same-day appointments at primary care level, and to provide immediate phone access to specialist opinion if needed. Each primary care team is relatively autonomous, and is allowed to make its own care-delivery arrangements. But all the teams are rigorously monitored for clinical outcomes and patient satisfaction. IT systems and performance management are used to drive up quality.

SCF has responded to workforce shortages by making concentrated recruitment efforts on the community it serves, and by providing extensive training and support for career progression, for clinical and non-clinical staff alike. Staff retention is monitored and managed as closely as clinical outcomes. All clinicians – GPs, nurse practitioners, and clinical medical assistants – are expected to deliver at the limits of their regulatory approval in small teams, and they are given strong support in that endeavour.

In a decade, emergency-room attendances have fallen by 19%, outpatient attendances by 36%, bed days by 71%, and hospital admissions by 75%.³¹ A further mark of SCF's success is that it is the only primary care organisation to achieve the Baldrige award for quality.³²

6. Lessons From the Case Studies to Meet the Seven Challenges

The nine case studies show how effective primary care can be developed regardless of the starting point. They each provide examples of innovations that have overcome some of the seven challenges (see Figure 5).

This chapter sets out some of the actions that can be taken in primary care systems to overcome each of the challenges. These actions are summarised in Figure 6. In the subsequent chapter, we will turn to look at what governments, in particular, should be doing to support primary care.

6.1 Improving patient access and perceptions

Patients need to be able to access affordable primary care, and to believe that it will meet their immediate needs more effectively than the other options available to them.

Lessons on patient access and perceptions from the case studies include these:

- Access to treatment is best offered in the most convenient and cost-effective setting (ChenMed, Alaska).
- Primary care can be scaled-up by investing in physical infrastructure in under-served communities (Brazil, Turkey).
- Access needn't be face-to-face; phone-based primary care services might provide the most cost-effective delivery model (Medicalll, HMRI, Geisinger).
- Access to specialist opinion without full referral can be effective and should be allowed (Alaska).
- In high-income countries, maximising opening hours and offering same-day appointments will make access easier and more convenient for patients (Alaska, ChenMed).

Figure 5

Main challenges addressed by primary care innovations

	Brazil	Turkey	Valencia	Geisinger	ChenMed	Medicalll	HMRI	Torbay	Alaska
Patient access and perceptions	✓	✓		✓	✓	✓	✓		✓
Coordination and integration			✓	✓	✓			✓	
Workforce prestige and availability	✓	✓	✓		✓				✓
Infrastructure investment	✓	✓	✓	✓	✓		✓		
Incentives	✓	✓	✓	✓	✓	✓		✓	✓
Information and technology			✓	✓	✓	✓	✓	✓	✓
Quality standards and regulation	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 6

Summary of actions to address key challenges

Patient access and perceptions	Allow patients to access clinicians by email, phone, Skype, to increase convenience and reach
	Use whole primary care team (include nurses and assistants) to deliver lower-skill healthcare tasks
	Use lay-community outreach workers to raise awareness and support change in behaviour
	Scale-up access to primary care where it is required in under-served areas
Coordination and integration	Focus on high-risk patient segments (e.g. elderly and those with chronic conditions)
	Apply evidence-based care protocols (e.g. prescriptive pathways for the most common conditions)
	Use multidisciplinary teams to coordinate care (e.g. a named care coordinator for each patient)
	Create information flows to support multidisciplinary care (e.g. Web-based tool showing all contacts)
	Use incentives to make clinicians accountable for cost (e.g. individual patient-budget tracking)
Workforce prestige and availability	Create new lower-skill generalist roles (e.g. health and social care coordinators)
	Expand training of primary care clinicians (doctors, nurses, care coordinators, assistants)
	Support current workforce in learning to work in multidisciplinary environment via CPD
	Match compensation level of primary care clinicians with that of hospital clinicians
Infrastructure investment	Create improved primary care centres that provide extended services and hours
	Invest in providing access to diagnostics in primary care setting (e.g. imaging and blood tests)
	Roll-out basic primary infrastructure in under-served areas
Incentives	Align individual clinician incentives to support quality and cost-effective usage of rest of system
	Change reimbursement model to share value from avoided hospital usage (e.g. capitation)
	Incentivise improved patient behaviour (e.g. cost-sharing on user fees when in compliance with plan)
Information and technology	Share information across all clinicians in contact with patient to support proactive care
	Create transparency into primary care quality to drive up performance of clinicians through peer pressure (e.g. through releasing balanced scorecard on the Web so patients can access it)
	Provide primary care clinicians with transparent information about cost and quality of specialist and facility referrals they make (e.g. a monthly report issued by payer that they can review)
	Address information-governance issues to ensure ability to share appropriately
Quality standards and regulation	Establish standards for primary care delivery (e.g. covering core quality measures for control of chronic conditions, patient satisfaction, access)
	Establish standards for workforce credentials

6.2 Better coordination and integration

When elements of the health system work in silos, delivery of healthcare is less efficient and more expensive. Patient care is less satisfactory, and quality is affected. Primary care has an important role to play in coordinating patient care, and such coordination is optimised by better cooperation between providers and closer integration between primary, secondary and social care services.

Lessons on coordination and integration from the case studies include these:

- It may be best to focus on patient groups with highest needs and costs, often those with complex co-morbidities, through proactive care planning and disease management (ChenMed, Geisinger, Valencia, Torbay).
- Multi-skilled primary teams, integrating health and social care, can reduce hospitalisations and increase discharge rates from hospital care (ChenMed, Geisinger, Valencia, Torbay).
- The flow of information to help clinicians deliver effective care is fundamental to enabling integration of services and cooperation between providers (ChenMed, Geisinger, Valencia, Torbay).
- Changing incentives to make clinicians accountable for patient costs encourages cooperation between service providers (Valencia).

6.3 Increasing professional prestige and workforce availability

In all the case studies, there was a deliberate reshaping of the workforce away from the traditional hierarchical medical model, and towards a wider skill-based team approach. This reshaping increased the capacity of the system to respond to demand, and enabled quality to be delivered at a lower cost.

Other lessons that the case studies offer on professional prestige and workforce availability are these:

- It is possible to create differential workforce remuneration and incentives that are sufficient to make a career in primary care attractive (Valencia, Brazil, Turkey).
- More patients can be seen in primary care if non-medical health professionals are trained to deliver at the limit of their regulatory approval, working in supportive, supervised, multi-disciplinary teams (Alaska, ChenMed).
- Lay outreach workers – if possible, hired from the local communities themselves – can usefully increase the primary care workforce. They can play a valuable role in raising awareness, creating engagement and delivering behavioural messages and health education, by visiting families in their own homes, workplaces, and social environments (Brazil, Alaska).
- A “train the trainers” approach can increase the capability of the available workforce. The South African Primary Care 101 course was developed to provide training for nurses, and enable them to take on the diagnosis and management of diseases including HIV/ AIDs and tuberculosis. Run by the University of Cape Town, the course adopts a “train the trainers” approach to have maximum reach; as of the end of May 2012, it had trained 1411 nurse trainers, who had in turn trained 17,318 nurses in 1880 clinics across nine provinces.³³ The programme has been shown to increase case detection in tuberculosis,³⁴ and is being expanded to cover chronic disease.

6.4 More infrastructural investment

The case studies of Brazil, Turkey and HMRI all suggest that, for progress to be made in middle-income countries, there needs to be planned national investment in primary care infrastructure. The investment can range from low-cost technology and mobile facilities to clinics that are fit-for-purpose, updated, and able to house a multi-skilled healthcare team.

The lessons on infrastructure from the case studies include these:

- High-quality facilities are needed, to show that primary care is not a poor relation of secondary care (ChenMed, Geisinger).
- Access to the right diagnostic equipment must be ensured – notably, timely and convenient access to imaging and laboratory diagnostics. Owing to scale and cost, these services cannot be installed everywhere, so the equipment needs to be located somewhere convenient – either in a specially created local diagnostic service (Turkey, Valencia) or in a hospital allowing use by primary care physicians (Alaska, ChenMed) – and it needs to be made accessible via practical management arrangements.
- Primary care in under-served communities, especially in rural and deprived regions can be rolled-out by building basic primary care facilities there (Brazil).
- Mobile primary care facilities are feasible, and can contribute to the rapid scaling-up of access (HMRI).

6.5 Aligning incentives

Primary care can potentially deliver more proactive care to manage population health, and also to reduce the use of more expensive care in hospitals. But policymakers need to create mechanisms and incentives to support and encourage this outcome.³⁵ Lessons on incentives from the case studies include these:

- Patients can be incentivised to use primary care services before accessing more intensive specialist services, if they know that the specialist services will cost less when based on a referral than if accessed direct (Medicall, Turkey).
- The reimbursement model for organisations can be changed to align their incentives with wider system costs. For example, capitation funding incentivises a more cost-effective management of the population, and discourages unnecessary referred and investigations (Valencia, ChenMed, Geisinger, Torbay).
- Individual clinician rewards and incentives can be applied at different levels across the system to deliver improvements. Those incentives can be for system goals, team goals, or individual quality of care (Brazil, Alaska, Valencia, ChenMed, Torbay).
- Innovation in payment mechanisms can be stimulated by using large-scale pilot programmes in incentives. This is an approach promoted by the U.S. Center for Medicare and Medicaid Innovation, established in November 2010 under the Affordable Care Act. The Center “identifies, develops, supports, and evaluates innovative models of payment and care service delivery”, and has £10 billion of funding for 2011-2019.³⁶ A number of programmes are already well underway, including bundled payments, incentives for care coordination, and public-private partnerships to increase access.

6.6 Greater use of information and technology

Patient information is vital – both at an individual level, for clinical decision-making, and at a population level, for ensuring that resources are most efficiently allocated to those with highest needs and risks.³⁷ Lessons on information and technology from the case studies include:

- Information-sharing across all clinicians in contact with the patient will support proactive management of care. The information should include patient-registry data, risk stratification, decision support, and compliance-monitoring/care gaps (Valencia, ChenMed, Geisinger).
- Information supports transparency of system performance, which generates peer pressure and shared learning opportunities (Alaska, Valencia, Geisinger, ChenMed).
- Information-governance issues must be addressed, to ensure that information can be shared across clinical teams, while still ensuring patient confidentiality (Brazil, Turkey, Valencia, Geisinger, Medcall, Torbay).
- The introduction of electronic health records should be linked to a primary care development strategy (Turkey, Brazil, HMRI).

6.7 Consistent quality standards and regulation

Central to all the case studies outlined is the need for defining and monitoring quality standards for primary care. These standards include clinical and non-clinical domains. Quality standards in the clinical area are developed in the forms of guidelines, and are implemented through clinical audit and IT systems. Quality in the non-clinical area is implemented through adherence to policies and procedures (for instance, on temperature control in fridges for vaccines) that have been developed by respected bodies such as the Royal Australian College of General Practitioners. Lessons from the case studies on quality standards and regulation include these:

- Standards can be set by using contracts, professional bodies (or other regulators), and also by legal means. The standards in question are of four kinds: for individual practitioners and their training; for continued accreditation; for licensing and accrediting of organisations to deliver primary care; and for mobile and technology-driven access (Turkey, Valencia).
- Even if explicit standards have previously been absent, it is feasible to establish and enforce specified training, qualifications, and licensing requirements for primary care physicians, while accepting that it might take time and resources to reach adequate levels (Turkey).
- Rigorously tested, evidence-based protocols linked to established quality standards are necessary for guiding triage, treatment decisions, and clinical practice (Geisinger, Medcall, HMRI, Alaska, Valencia).

7. Policy Actions

The previous chapter summarised actions that can be taken to improve or establish primary care. In this section, we consider what governments can do. Governments have three major sets of levers that they can pull:

1. They can mandate things to be done by the bureaucracy, and adjust aspects of the health systems within the direct control of the relevant ministry. Examples from the case studies include Turkey’s mandating of universal primary care coverage and England’s mandating of quality standards.
2. They can make decisions about recurring funding levels, distribution and mechanisms that influence how the system responds. For instance, Turkey biased reimbursement to incentivise primary care management of conditions, and Valencia uses capitation rather than paying on the basis of activity.
3. They can take a set of supportive actions that merely encourage change to happen. Examples include the establishment of the India public-private partnership HMRI, and the development in England of techniques to support coordination between health and social care services.

Figure 7 illustrates some potential government actions in these three domains, for the first four challenges.

The scope for government intervention varies considerably, of course. It is far easier for the government to intervene in a national health system like that of the UK than it is within the more fragmented U.S. healthcare landscape. We have focused, in more detail, on the final three challenges, which governments throughout the world have the greatest ability to control.

Incentives

Funding of health systems is perhaps the most powerful lever available to governments in influencing the direction of the system. This is obviously true in tax-funded systems like Canada, where the bulk of care is funded by the government. But it is also true in low- and middle-income countries, and even in the U.S., where the government still funds a significant proportion of healthcare despite the large private system. Changing the financial flows will change the way that the organisations which deliver healthcare respond and behave.

Figure 7

Potential levers for government action

	Mandate	Fund	Supportive actions
Patient access and perceptions	Require a gatekeeper for at least some conditions before specialist or hospital visit, to avoid user charge	Fund expansion of primary care in under-served areas	Campaign to reinforce the benefits of primary care
			Encourage telephone access to primary care advice
Coordination and integration	Require changes in information-governance to allow flow of information	Make financial flows support integration through rewarding proactive care that avoids needless hospital activity	Pilot schemes for integrated care
	Permit lower-skilled staff to perform a broader range of tasks		Capture and share evidence of best practice
Workforce prestige and availability	Expand the number of primary care training slots	Waive training fees for clinicians practising in primary care	Sponsor CPD for multidisciplinary working
	Make reimbursement of primary clinicians comparable to that of hospital doctors	Fund expansion of new primary care roles	
Infrastructure investment	Require regulatory approval based on demonstration of need	Channel funds to under-resourced areas	Link access to capital to improving primary care
		Provide funds to support high-quality facilities	

Suggestions for consideration are:

- *Mandate*: Construct tariffs or co-payments to favour treatment in primary care, including incentivising the shifting of activity such as diagnostics out of hospital and into the primary care setting.
- *Mandate*: Establish capitation or year-of-care payments for people with multiple chronic illnesses.
- *Fund*: Direct capital investment in such a way as to create infrastructure in primary care.
- *Supportive Action*: Fund one-off pilot programmes (or encourage funding through other organisations) to explore different types of incentives.

Information and Technology

Every case study and example of success that we investigated had information flows and use of technology at its core. The reasons are clear. Information held electronically facilitates integrated and higher-quality care. It enables standards to be monitored easily, and the transparency of performance that IT allows is itself a driver for improved quality. Technology enables remote working and can transform the delivery of healthcare. It is a highly cost-effective investment, and can be deployed quite swiftly. Suggestions for consideration are:

- *Mandate*: Require the reporting of key clinical indicators that will drive the procurement of record systems.
- *Mandate*: Give patients the right to access their own records, whether electronic or paper.
- *Fund*: Create direct investment or indirect investment (e.g. through performance payments) in electronic health records.
- *Supportive Action*: Encourage the publishing of healthcare-provider performance (e.g. Web-based scorecards).
- *Supportive Action*: Pilot new technologies that transform the model of care delivery, such as those that help to reduce the need for face-to-face access.

Quality Standards and Regulation

Governments are the most powerful agencies for influencing quality standards in healthcare for their citizens, both in the delivery of services and in the training and accreditation of the workforce. For low and middle-income countries, our suggestions are:

- *Mandate*: Regulate for licensing and revalidating individual practitioners and organisations on the basis of minimal adequate standards.³⁸
- *Mandate*: Establish safety standards, and encourage health systems to prevent and mitigate error.
- *Fund*: Arrange the development of defined higher-quality standards that are evidence-based and linked to incentives.
- *Supportive Action*: Create an assurance process for quality standards.³⁹

In most high-income countries, regulations for standards and accreditation already exists, but governments can still take some actions to help strengthen and develop primary care. Suggestions for consideration are:

- *Mandate*: Regulate to enable the sharing of data and the use of technology to deliver healthcare remotely.
- *Fund*: Establish a mechanism to ensure public transparency of performance in provider organisations, and an assurance system for international quality standards.⁴⁰
- *Supportive Action*: Establish “hallmarks” of quality and promote publicly.

Conclusion and Next Steps

The primary care working group is keen to partner with countries that are seeking to try out these policy proposals to evaluate their effectiveness. We also have two more radical ideas that have not yet been tried anywhere and that merit examination (see Panel 1).

Panel 1: Integrating and utilising hospitals for primary care

A country could establish a requirement that a new hospital cannot be built unless it is part of a wider organisation that is delivering integrated primary care in the surrounding community.

Alternatively, where a successful existing hospital has a positive perception among the public and healthcare professionals, it could be used as a “brand” for extended services into community and primary care settings, drawing on its existing infrastructure and skilled teams.

The tsunami of need from chronic diseases is approaching quickly. There is an imperative to change and strengthen all our health care systems. Developing and enhancing primary care is pivotal to that objective. It is hoped this paper provides some practical mechanisms to do that.

Appendix 1. Membership of the Working Group

Rifat Atun Professor of International Health Management, Imperial College London

Professor Paul Corrigan Institute of Global Health Innovation, Imperial College London

Professor James Dunbar Director of Greater Green Triangle, University Department of Rural Health, Flinders University and Deakin University

Doug Eby Vice President of Medical Services, Southcentral Foundation, Alaska Native Medical Center

Dr. Julie Louise Gerberding, M.D., M.P.H. President, Merck Vaccines

Professor Richard Grol Emeritus professor of Nijmegen and Maastricht Universities and past director of IQ Scientific Institute for Quality of Healthcare

Nicolaus Henke, Director and Global Head of Healthcare Systems & Services Practice

Professor Michael Kidd AM Executive Dean & President-Elect WONKA Faculty of Health Sciences Flinders University

Michael Macdonnell Director, Global Health Policy Forum, Imperial College London

Professor Azeem Majeed Chair in Primary Care and Public Health, Imperial College London

Sir John Oldham (Chair) GP and National Clinical Lead Quality and Productivity, Department of Health, England

Niti Pall Chair, Pathfinder Healthcare developments CIC, MD of Pathfinder Health India Pvt Ltd

Ben Richardson Partner, McKinsey & Co.

Professor Gu Yuan General Practitioner Association, Chinese Medical Association

Endnotes

- ¹ Starfield B. The future of primary care: refocusing the System. *N Engl J Med* 2009;359(20):2087, 2091.
- ² WHO. *Primary Health Care – Now More than Ever: World health Report 2008*. 2008
- ³ Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83:457-502.
- ⁴ Starfield B, Shi L, Grover A, et al. The effects of specialist supply on populations' health: assessing the evidence. *Health Aff (Millwood)* 2005;Suppl Web Exclusives:W5-97-W5-107.
- ⁵ Gulliford, M.C. Availability of Primary Care Doctors and Population Health in England: Is There an Association? *Journal of Public Health Medicine* 2002;24:252-4.
- ⁶ Villalbi, J.R., A. Guarga, M.I. Pasarin, M. Gil, C. Borrell, M. Ferran, and E. Cirera. An Evaluation of the Impact of Primary Care Reform on Health. *Atención Primaria* 1999;24:468-74.
- ⁷ Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83:457-502.
- ⁸ Chronic Care Management, Reimbursement and Cost Reduction Commission. *Prescription for Pennsylvania Right State Right Plan Right Now: Strategic Plan*. The Minority Health and Health Equity Archive 2008.
- ⁹ WHO. *Primary Health Care – Now More than Ever: World health Report 2008*. 2008
- ¹⁰ Matthew Parris. GPs – little more than glorified receptionists. *The Times* 16 June 2012
- ¹¹ Grono O, Garcia-Barbero M. Integrated care: a position paper of the WHO European Office for Integrated Health Care Services. *Int J Integr Care* 2001;1:e21.
- ¹² Stillman K, Bennet S. *System wide effects of the Global Fund interim findings from three country studies*. Washington DC: United States Agency for Aid and Development, 2005.
- ¹³ Khodjamurodov G, Rechel B. Tajikistan: health system review. *Health Syst Transit* 2010;12(2):v-xix, 1-154.
- ¹⁴ Rao M, Mant D. Strengthening primary healthcare in India: white paper on opportunities for partnership. *BMJ* 2012;344:e3151. doi:10.1136/bmj.e3151
- ¹⁵ RCGP. *The Future Direction of General Practice – A Road Map*, 2007
- ¹⁶ Schoen C, Osborn R, Doty MM, et al. A survey of primary care physicians in eleven countries, 2009: perspectives on care, costs, and experiences. *Health Aff (Millwood)* 2009;28(6):w1171-83
- ¹⁷ Health care in India. Lessons from a frugal innovator. *The Economist*, 16 April 2009. <http://www.economist.com/node/13496367>
- ¹⁸ Departamento de Atenção Básica, Teto, credenciamento e implantação das estratégias de Agentes Comunitários de Saúde, Saúde da Família e Saúde Bucal. São Paulo, 2012 http://dab.saude.gov.br/historico_cobertura_sf.php
- ¹⁹ Datasus, Pacto pela Saúde 2010/2011. São Paulo, 2012 <http://tabnet.datasus.gov.br/cgi/dh.exe?pacto/2010/cnv/pactbr.def>; Datasus, Indicadores e Dados Básicos
- ²⁰ Macinko J, de Oliveira VB, Turci MA, et al. The influence of primary care and hospital supply on ambulatory-care sensitive hospitalizations among adults in Brazil, 1999-2007. *Am J Public Health* 2011;101(10):1963-70. doi:10.2105/AJPH.2010.198887.
- ²¹ Ministério da Saúde 2008. São Paulo, 2012 http://portal.saude.gov.br/portal/aplicacoes/noticias/default.cfm?pg=dspDetalleNoticia&id_area=124&CO_NOTICIA=10550
- ²² Ministry of Health, *Health Statistics Yearbook*, 2010. Turkey
- ²³ Tatar M, Mollahaliloflu S, Sahin B, et al. Turkey. Health system review. *Health Syst Transit* 2011;13(6):1-186
- ²⁴ Akdag R. *Turkey Health Transformation Program: Evaluation Report 2003-2010*, Ministry of Health 2011.
- ²⁵ Adeslas presentation (April 7, 2008); Ribera Health Department presentation (June 9, 2008)
- ²⁶ Informe Anual del Sistema Nacional de Salud, Ministerio de Sanidad, Servicios Sociales e Igualdad
- ²⁷ Steele GD. Geisinger quality – striving for perfection. *Health Systems Reform Summit*; 2 September 2009. American College of Cardiology.
- ²⁸ Paulus RA, Davis K, Steele GD. Continuous innovation in health care: implications of the Geisinger experience. *Health Aff (Millwood)* 2008;27(5):1325-45
- ²⁹ Moukheiber Z. Concierge medicine for the poorest. *Forbes* February 2012 <http://www.forbes.com/sites/zinamoukheiber/2012/02/23/concierge-medicine-for-the-poorest/>
- ³⁰ Ham CJ. *Working together for health: achievements and challenges in the Kaiser NHS beacon sites programme*. Birmingham: HSMC Policy paper, 2010.
- ³¹ Clement C, Kyle A, Tierney S, et al. *The SCF Nuka Model of Care Customer-Owners Driving Healthcare*. Southcentral Foundation, 2010.
- ³² Baldrige Performance Excellence Program. 2012. www.nist.gov/baldrige
- ³³ Knowledge and Transition Unit. 2012. <http://www.knowledgetranslation.co.za/index.htm>
- ³⁴ Fairall L, Zwarenstein M, Bateman E et al. Effect of educational outreach to nurses on tuberculosis case detection and primary care of respiratory illness. *BMJ*, 2005;331, 750-4;
- ³⁵ Robinson JC, Caselino LP, Gillies RR, et al. Financial incentives, quality improvement and the adoption of clinical information technology. *Med Care* 2009;47(4):411-417
- ³⁶ Center for Medicare and Medicaid Innovation. 2012. <http://www.innovations.cms.gov>
- ³⁷ Sandiford P, Annett H, Cibulskis R. What can information systems do for primary health care? An international perspective. *Social Science & Medicine* 1992;34(10):1077-1087
- ³⁸ Rosen R. Clinical governance in primary care. Improving quality in the changing world of primary care. *BMJ* 2000;321:551-4.
- ³⁹ Institute of Medicine (US) Committee on Crossing the Quality Chasm: *A New Health System for the 21st Century*. Washington D.C.: National Academy Press; 2001.
- ⁴⁰ Qaseem A, Forland F, Macbeth F, et al. Guidelines International Network: Toward International Standards for Clinical Practice Guidelines. *Ann Intern Med* 2012;156(7):525-31

