Perspective

Value Based Primary Care | Models, Funding and Lessons

Danial Saeed[1], Mahmood Adil[2]

[1]Academic Foundation Doctor at Liverpool University NHS Foundation Trust, UK; [2]Medical Director at Public Health Scotland

Abstract

Healthcare systems are evolving and effective use of primary care services is the most efficacious solution. The establishment of a modern, value based primary healthcare system in Pakistan has the potential to transform the health of Pakistan's population, improving access to care and efficiency of the healthcare system. Lessons can be learned from countries in which value based primary care services are well established, with a change in role of family practitioners, the implementation of digital infrastructure and proper communication of a revitalised system imperative in overhauling the present structure of the healthcare service

Corresponding Author | Mahmood Adil, Medical Director at Public Health Scotland. **Email:** madil@doctors.org.uk
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Introduction

The World Health Organisation defines primary care as "first-contact, accessible, continued, comprehensive and coordinated care" [2]. The role of primary care is crucial in delivering the functions of any healthcare system across the globe. Value-based primary care is an approach employed to good effect in many countries, including the UK. Here we will discuss the constituent requirements for the implementation of an effective, value-based, primary care system in Pakistan.

Healthcare systems are evolving rapidly. The burden of chronic conditions and prevalence of multi-morbidity is rising with a globally ageing population[3]. Overall, healthcare systems are becoming unsustainable and a majority of the costs are expended on patients with chronic diseases, with inefficient and unnecessary use of secondary care services for conditions which could be managed in a community setting. Effective use of primary care services is the most efficacious solution, to reduce the resource burden of chronic disease, along with the high healthcare spend from long-term conditions[4]. Proactive population health management rather than individual patient management in primary care, is becoming the norm in many countries, including Scotland in the UK.

The unique data gathering capabilities of the Scottish National Health Service (NHS), through the use of the Community Health Index (CHI) number, assigned to every person registered with a General Practitioner (GP) in Scotland since the 1960s allows for excellent data linkage and insight about the delivery of healthcare[5]. Figure 1 below demonstrates average number of long-term conditions by age band in Scotland[6]:

Over 50% of the 65+ age-group have more than two long-term conditions. 86% of people with diabetes, have other long-term conditions; as of 2017, approximately 5.3% of the population in Scotland have diabetes[7], while spending on the disease accounts for 10% of the health budget (the biggest proportion spent on any disease within in the NHS)[8]. Meanwhile, *Figure 2* demonstrates the burden of disease in Pakistan as of 2019; deaths from chronic diseases are denoted in blue and infectious diseases in red[9]. Of the top 10 causes of death, the vast majority could be effectively managed in a primary care setting.

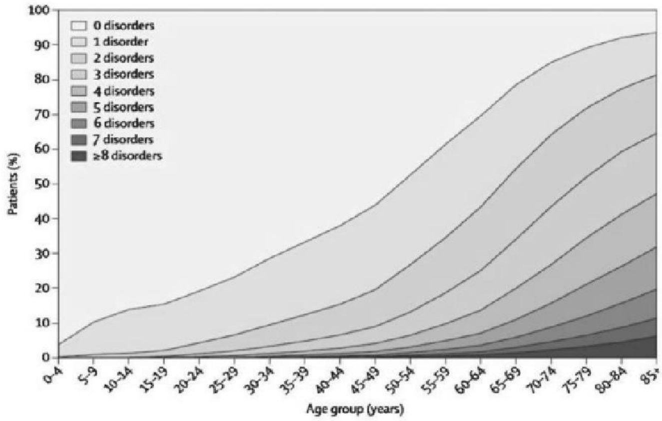

Figure 1: Number of long-term conditions by age band in Scotland

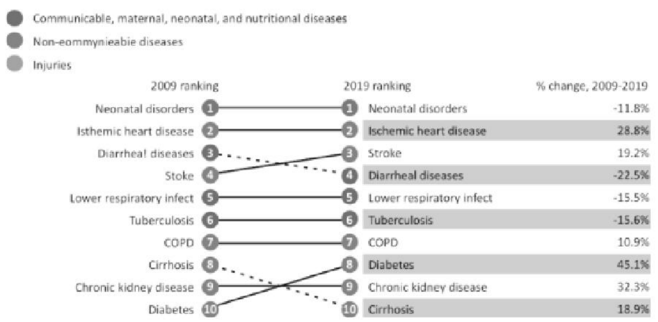

Figure 2: Top 10 causes of death in Pakistan 2009 vs 2019

Elements of a Healthcare System

The tiered elements of delivery of healthcare in most health systems fall into five groups: pre-primary care, primary care, secondary care, tertiary care, and unscheduled / episodic care.

Pre-primary care is playing an increasingly important role in healthcare delivery. This relatively novel element defines the care option before a patient engages in a formal healthcare setting. It involves effective self-care through safe, personalised information and digital tools to anyone who wants to find out more about their health. It is about giving people the confidence to self-care long enough to recover or seek help when they really need to and provides a personalised and trustworthy health information service, enabling patients to take actions themselves. The company *Your M.D.* is a good example of one which provides pre-primary care, with operations in the UK and a number of other countries[10].

Primary care services are the first point of contact in the formal healthcare system and act as the 'front door' of the National Health Service (NHS) in the UK. This sector is comprised of general practice, community medical services, pharmacies, dental practices and optometry services in the UK[11].

Secondary and tertiary care services are provided within hospital settings, whilst unscheduled and episodic care are covered by ambulance services and NHS 111 (a telephone line for advice and direction about urgent but not life-threatening health issues)[12].

The Case for Primary Care

Primary care represents the best solution to the changing healthcare dynamics outlined above. The benefits of a functioning primary care system can be summarised as follows:

1. **Single point of first contact** – family / general practitioners manage the entire health journey of individuals in a very efficient manner as compared to the secondary or tertiary care. These are doctors based in the community who treat patients with minor or chronic illnesses and refer those with serious conditions to a hospital.
2. **Proactive and tailored case management** – patients with long-term conditions and high-risk groups are managed in primary care in a coordinated and integrated way.
3. **Efficient use of system resources** – signifycantly lower cost for similar services, as compared to secondary and tertiary care. Seeing a patient in a hospital outpatient department is much more costly than seeing a patient in a primary care setting.
4. **Convenience** – easy and rapid access to healthcare services enabled by wide footprint and penetration to the whole community, meaning that most of the primary care services are at the doorsteps of the masses of population.

Primary care provides three main types of service:

1. **Preventative care:** regular monitoring and screening of health conditions at an individual level, promotion of healthy behaviour through communication and education and disease prevention through immunisations.
2. **Long-term condition care:** management of chronic diseases, maternal health (routine check-ups for mother and infants) and coordination of elderly and homecare health services.
3. **Episodic care:** general intermittent care, not requiring access to secondary or tertiary services, with ability to refer to these services where appropriate.

The role of Value Based Primary Care

The "value" in value-based healthcare is derived from measuring health outcomes against the resources utilised of delivering the outcomes[13]. This can be expressed as follows:

$$\frac{\textit{Useful Outcomes}}{\textit{Resources Utilised}} = \frac{\textit{Quality}}{\textit{(Direct Cost+Waste+Variation)}}$$

The numerator '*Quality*' also encompasses availability of and access to services in addition to safety, effectiveness and patient experience. As such, in order to achieve value-based primary care in Pakistan we must aim to maximise health outcomes, for every rupee spent.

The key components of value based primary care can be summarised as follows:

1. Appropriate clinical skillset – a family practitioner should be enabled to manage long-term conditions in conjunction with specialist and secondary care services.
2. Expanded scope of traditional roles – e.g. nurses, pharmacists and other allied health professionals have additional responsibilityies, so that we can utilise the qualified personnel to the most value-adding tasks.
3. Systemic integration – leaving full integration and coordination with the rest of the health care system with an appropriate evidence-based referral system and patient care pathways, employing a multidisciplinary team approach to deliver comprehensive, holistic care.
4. Innovative delivery models – including the use of digital channels with telemedicine and bringing care to the patient, through mobile clinics and nursing homes; these methods aim to improve access to care in a cost-effective way.

In order to implement an effective value based primary care system, a number of key enablers must be utilised and implemented effectively, as demonstrated by the countries in which the best primary care services are being delivered. These include:

1. Defined roles, processes and governance
2. Human resources and competency
3. IT and data infrastructure
4. Physical infrastructure
5. Communication systems

With appropriate establishment of the above factors, an incentivised system is achieved and stakeholders including healthcare providers and, most importantly, patients are encouraged to utilise primary care services over secondary or tertiary care. These enablers also allow the execution of an end-to-end, tailored patient process, whilst leveraging health data analytics and improving the public perception of primary care.

Models for Primary Care Provision:

There are two leading models employed for care access across the world:

1. **Gate-keeper model** – a tiered system places the primary care provider at the first point of contact for all non-emergency care. Secondary care works on a referral model from primary care physicians. This is a well-coordinated, cost-effective and financially sustainable system, although it reduces patient choice. Examples include Canada and the United Kingdom. In these systems, primary care providers make up around 65% of hea-

lthcare staff, with speciality care providers accounting for the remaining 35%.

Open access model – patients can select which medical professionals they want to consult, and when they want to see them. The self-referral system is based not only upon need, but on demand. With no physician referral, there is a lack of care coordination, but patients have more freedom of choice. This type of system is less financially sustainable, especially for a public healthcare system which is free at the point of access. Examples include the USA and Japan. Here, primary care providers only constitute 30% of the healthcare workforce, with specialty care making up the 70% majority[15]

Funding Composition in Primary Care

There are three main funding models employed in primary care provision, with varying proportions of each used in different countries' healthcare systems (*Figure 3*)[1]. These models are as followed:

1. **Capitation based** – this entails the state paying a healthcare provider / group of providers to cover the majority (or all) of the care provided to a specified population across different care settings. These regular payments are calculated as a lump sum per patient. For example, in UK the government provides on average £152 per person (80% of total funding) per year to the GPs through capitation based on all the registered population in their practice[16]. The remaining 20% is made up of payment for outcomes and fee for service funding models.
2. **Payment for outcomes** – here, healthcare providers are paid for achieving pre-specified outcomes. This model is employed in the NHS, particularly in England where the Quality Outcome Framework was established in 2004. This consists of 120 indicators across a broad range of outcome domains, with each indicator holding a certain point weighting[17]. The more indicator targets achieved by the primary care provider, the more points and consequently payment they receive. There is a good evidence that higher quality outcome framework performance correlates to lower utilisation of secondary care services[18].
3. **Fee for service** – the traditional payment model, whereby patients pay for individual services from the healthcare provider separately. Payments here are not bundled, meaning that insurance companies / government agencies are billed for every test, procedure and treatment rendered whenever a patient visits the doctor, has a consultation or procedure. This type of system allows complete independence and flexibility to those who can afford it but provides very little reward for delivering holistic or valued-based care[19].

[1]Commonwealth Fund 2016

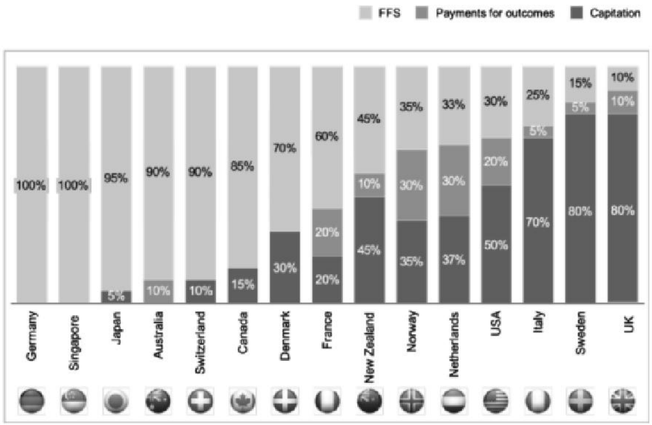

Figure 3: Funding compositions in Primary Care, by country

Primary Care Value Proposition – Benefits:

There are a number of benefits of the primary care value proposition:

1. **Personal value gained for the patient** – there is a benefit to continuity of care, which is associated with improved outcomes and lower rates of hospital admission. 'Social prescribing' is also used; this is where primary care clinicians can refer patients to local non-clinical services, to provide a holistic package of care to the patient, Examples include volunteering, arts activities, group learning, gardening, cookery, healthy eating advice and a range of sports[20]. This concept is being increasingly employed in the UK primary care system. Shared decision making is benefited; patients are supported in making decisions about their care that is right for

them, by bringing together the expertise of their doctor / the clinical team with their own preferences and personal circumstances[21].

2. **Technical value / organisational benefits –** there is better integration between primary, secondary and social care, whilst there is also an ability to deliver information / data enabled care.
3. **Allocative value / population benefits –** countries must decide how to best allocate their resources between primary, secondary and tertiary care in order to achieve the target population health outcomes. Allocating more resources to primary care may allow a country to achieve a better return on investment in this regard. A strong primary care sector can also lead to a decrease in unnecessary hospital admissions, which are costly and carry the inherent risks of hospital acquired infection etc. For example, the daily cost of inpatient treatment cost in the UK is around £400 per patient [22]; preventing patients from being unnecessarily admitted to hospital and providing the care in the community can save a considerable amount of overall expenditure. A well-functioning primary care system can also reduce the pressure on secondary care Emergency Departments for episodic care. This is a particular problem in Pakistan.

Establishing Value Based Primary Care in Punjab / Pakistan – Lessons and Recommendations:

In order to establish value based primary care in Pakistan, we can learn a number of lessons from the countries where value based primary care is well established, such as the UK. The building blocks of this type of system can be identified and put into place:

1. **Organisation, Process and Governance:** the establishment of a comprehensive primary care system with an evidence-based referral procedure to secondary care services. Competent family practitioners adopt the "gate keeper" role. Systematic follow-up protocols are put in place, for the management of chronic diseases, with end-to-end patient journey management to ensure the delivery of holistic care. There should be clarity on coordination and role definitions across primary care institutions in order to maximise the efficiency of the system and fully utilise the strengths of each care provider. The value of outcome driven payment and performance management is paramount; family physicians should be paid appropriately for managing chronic diseases and screening, to encourage the provision of these services to the masses of the population within an accessible community setting. This should benefit overall population health. Family practitioners will also be encouraged to use other allied health professionals, to avoid expending resources on non-value adding activities that create excessive workload. Finally, an effective regulatory system should be put in place, which focuses on quality of healthcare, instead of quantity, disincentivising the unnecessary use of resources on tests / procedures to generate more income and discouraging the practice of 'defensive medicine'[19].

2. **Data Infrastructure and Digital Transformation:** Using information systems to allow for standardised quality data collection and its flow between an integrated care system, in the form of electronic reporting. This data collection should allow for establishment of an electronic patient health record for each member of the patient population. Quality of the data should be automated, so that generic data is rarely entered – for example, in the UK once a patient is registered with the GP they do not need to prove the same basic information repeatedly; the patient record is maintained by the practice for a number of years. Having the best possible system in place to collect the data is half the story; it is important to utilise that data to improve the end-to-end patient journey. Confidentiality is of paramount importance – with an extensive data collection system, clearly defined principles of data flow and privacy of personal information must be adhered to. The data should be used to facilitate systematic reminders and require data entry for patients with chronic illnesses, whilst integrated and standardised software can be used across the healt-

hcare system to track patients who need hospital services by applying predictive analytics.

3. **Communication:** this forms a key facet of the establishment of a value based primary care system. Citizens must be sufficiently aware of the functions of the primary care services, including the 'gate-keeper' role of the family practitioner; many people may not even consider primary care as a healthcare option. The scope of services that one can access from family practitioners and community health units must also be clearly communicated. Health literacy must be communicated sufficiently through credible primary care practitioners including educating patients and the public about risk factors for development of diseases.

Conclusion:

In conclusion, the establishment of a modern, value based primary care system in Pakistan has the potential to transform the health of Pakistan's population, improving access to care and efficiency of the healthcare system. Lessons can be learned from countries in which value based primary care services are well established, with a change in role of family practitioners, the implementation of digital infrastructure and proper communication of a revitalised system imperative in overhauling the present structure of the healthcare service.

Salient Points:

- Value based care is where health outcomes are measured against the resources utilized.
- A value based primary care system is needed in Pakistan
- A change in the role of family practitioners is essential and fundamental
- There is a need for a modern digital infrastructure
- Effective communication across the healthcare system is essential
- Note: This article is based on the presentation given by the author, Mahmood Adil, at the KEMU Annual Seminar in December 2019.

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