

THE WINSTON CHURCHILL MEMORIAL TRUST OF AUSTRALIA



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To study models of bringing care out of hospitals and into the community for people with chronic disease: An Overview of Exemplar Locations and Programs in New Zealand, Canada, USA, UK and Hong Kong and Implications for Australian Primary Health Care System Reform.

The Churchill Trust movement, which is active across a number of Commonwealth Countries, was initiated as a living memorial to Winston Churchill. It was my privilege to visit the War Rooms museum in London whilst on my study tour. There I learnt more about the life and wisdom of this remarkable figure. I have peppered my report with quotes from the great man as my personal testimony to his wit, insightfulness and drive to achieve. I hope they make a similar impression on readers and encourage everyone to use their time and talent to reach for the best life and opportunity can give.



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26th October 2015

Signed

Dated



Executive Summary

Australia has a proud history of contributing to the development of medical science. Assessment of Australia's medical publication and patent application rates consistently demonstrate that Australia punches two to three times above its weight against these criteria. Its health system, underpinned by strong government funding of both primary and secondary care provision, is rated amongst the best in the world. Our ability to attract expatriate health workers is testimony to the quality of care offered via comprehensive policy and funding options. Therefore, any attempt at reform needs to build on the strengths of what is a highly functional healthcare system.

The underpinning of our healthcare system is a large and efficient, predominantly privately run, primary care sector. Preventing illness and optimising patients in community settings are widely acknowledged roles for primary care. They are also exceptionally efficient methods for containing costs. Sadly, the funding and focus of Australian primary care since the initiation of public funding in 1984 has been on infectious illness and child and maternal health. Ageing and lifestyle are impacting on the patient mix seen in primary care and straining the current business model, resources and skills of those involved. In addition, increasing numbers of patients are demanding a more responsive, personalised and comprehensive care system. The fragmentation of care between primary and secondary providers gives rise to both patient risks and frustration for patients, carers and providers alike. This report outlines a variety of new approaches which improve:

- The interface between patients and providers.
- Connectivity between providers enabling the development and delivery of value adding care.
- The accessibility and quality of care.
- The multi-disciplinary nature of primary care and hence ability to address more issues.
- The satisfaction derived from participation for both clinicians and consumers.
- The cost effectiveness of delivery.
- The ability of the system to change health profiles, most importantly by addressing the social determinants of health and working in concert with the social sector.

Initiating new models of care takes political will and preparedness to reallocate resources, inclusive of funding, across the health sector. Current calls to increase funding and train more clinicians have their place. However, many of these policy suggestions are framed based on current approaches to delivery. Doing things the same way, may simply produce the same result. Rapidly rising costs, argued by some as being unsustainable, may be an indication of the insanity of the current system when it comes to managing chronic disease. Exploring options arising from other environments with very different funding and staffing models has the potential to radically change the context for health policy, funding and delivery in Australia. Fortunately, at roughly the same time this author was to embark on a 9.5 week Study Tour focussed on bringing chronic disease care back into community settings, the Commonwealth of Australia announced a major review of health funding. A dedicated taskforce was assigned to the chronic disease challenge. This is a welcome development.

This report suggests that comprehensive, high quality chronic disease care in community settings provides avenues for improved patient self-management, timely access to care, leverage of relevant skill sets to deliver quality interventions at lower cost and whilst attracting new clinicians to regions and services which have historically struggled to attract staff. Introduction of such models involves re-thinking funding, especially via funding value delivering quality over time based, doctor led, re-active care. It also involves restructuring the primary care team to include a wider variety of clinicians, creating physical spaces and time for them to collaborate and recognising the role patients, carers and social sector partners can play in health maintenance.

The locus of control in healthcare must change in an era of chronic disease management. Patients and their carers need to be supported to make decisions related to their care pathway and health. Allied health and nursing staff need to be just as central to care delivery as medically qualified team members. Primary care, inclusive of clinicians with special interests, must be offered opportunities to step into roles which hospital systems can vacate thereby adding capacity to an increasingly overwhelmed secondary care sector. This will also address rising calls by patients and their families for local access to care. Individual general practices need to learn to collaborate internally and externally with other primary care providers, social sector players and hospitals so that the resources and expertise of all these groups are aligned to address the needs in given communities.

Executive Summary cont.

The scale of this change is considerable. It will involve new task and management demands for primary care. GPs will no longer be working as isolated patient processors. They will be part of true multi-disciplinary teams. GPs will need to learn to guide and leverage the expertise of others over longer courses of patient interaction to achieve measurable results. Moving from volume to value, reactive care to planned interventions, will entail new business and clinical risks which need to be managed. The leadership roles which will emerge for nurses within expanded nursing groups, doctors in areas of sub-specialisation or within teams, practice managers in light of larger premises, more staff and more complex payment models will pose enormous challenges. Leadership development of a nature and scale not previously seen in primary care must become a priority both for government and the businesses involved in primary care. Vastly improved systems, capable of providing timely, transparent and relevant information to aid decision making and resource allocation across the health sector are urgently required to support this new cadre of leaders in their respective roles.

General practice has often been referred to as a cottage industry. Its history as a home based occupation for a sole practitioner has in some respects remained constant for many parts of the sector. In more recent years, group general practices have stretched the model to a retail corner operation in catchments sizeable enough to support more than one clinician. In an age of increasing complexity and risk, even this evolution will be insufficient to cater to demand. New alliances across practices to form delivery networks and mergers between practices and other contributors to the sector will become commonplace. Aggregation and new corporate and alliance structures will be the bedrock upon which new models of care will arise. This will involve development of new legal models of association and instigation of contracts, grant payments and incentives. This will change the scale of administrative function across primary care. Performance signals, currently focussed on activity levels each hour or day, will move to incorporate broader lead and lag indicators of patient outcomes. This will enable planning to deliver improved value over the years of a patient's health journey.

The extent to which they are rooted in evidence and can be linked to specific behaviours and interventions will smooth the path to a new remuneration framework which supports the activity of groups of clinicians. This will increase pressure on governments to fund research related to primary care, and health services in general, to establish tolerable baselines which can be linked to performance payments. It will also be necessary to manage transitions to new scopes of practice and multi-disciplinary team models which are acceptable to patients, medical defence organisations, unions and clinical groups.

Innovation, planning, measuring performance and taking a catchment wide view will become core routines in primary care. Traditionally, primary care has been insular, reactive, short-term in focus, small in scale and subject to arbitrary decisions and commercial perspectives rather than public health insights. Cashflow has been almost guaranteed with instant payment for care. The new world of integration will move the dial in all of these areas. It will pose opportunities for the clinical and business leaders with a passion for solving the real problems of patients and communities. This will lead to increasing differentiation in service offerings and clearer signals to patients regarding the care offering of local providers.

Improved choice regarding the array of care patients can access will be accompanied by improved partnerships between patients and their

care team. Patient choice will be at the nexus of the various potential trajectories of their journey.

Given the highly political context of healthcare, none of this will happen overnight. Regions understanding the drivers of demand in their communities have the capacity to embrace some new models of care and use these pilots to build the social and enterprise capital required to enact the next generation of care. A key lesson from all of the studied locations is that no one size, perfect health system exists. The results of a health system are directly correlated to the creativity and direction of the inputs. A bigger vision for primary care, a strategic platform for its activity, innovation in policy and funding, enhancements to training and systems and support for emerging leaders and innovation are all required to achieve change. In addition, the system must be required to let go of traditions and processes which no longer make sense. Too often, healthcare reform involves bridging ineptitude and inefficiency which just adds to complexity. With the current government focus on reviewing the system, it is hoped that root and branch reform can be achieved.

Change we must because no taxpayer, politician or even clinician can endorse continuation of the status quo. It is too expensive and stressful for all parties. Integration, patient centeredness and expanded clinical and social interventions are required to address the age of multi-morbidity. Politically, this must be accompanied by efforts to reduce the gap in health outcomes between the haves, have nots and have yachts. At the same time, healthcare stakeholders need to start managing a productive intergenerational conversation which does not result in victimisation of the aged and infirm. Instead, it needs to create commitment to co-production and shared understanding of the goals and realities of our health system. It is never too early to start. Simply pooling current resources has been shown overseas to be sufficient until larger, government or funder led initiatives catch up. In the words of Churchill:



...and we cannot afford not to succeed!

Victory will come with changes to:

- **The role assigned to primary care.** Primary care needs to be the centre of healthcare activity with its funding contingent upon creating a patient centred, comprehensive care environment as responsive to individual patients as the needs of entire communities.
- **The value of the primary care sector.** It will be recognised and attract the best and brightest to this line of work for reasons other than perceived work life balance or personal autonomy.
- **The incentives.** Perverse, volume based incentives will give way to activity personalised to patient and community needs with a focus on application of evidence based care and delivery of savings across the entire healthcare continuum and disease process.

Executive Summary cont.

- **The funding models.** They must allow for the creation of multi-disciplinary teams which can take responsibility for planning care which reduces disease progression, holds patients in community settings for longer and equips patients and carers to have real input into their own care.
- **Communication and integration.** Facilitation, cross-referencing and seamless handover will become ordinary activities. Health and social care, primary and secondary care, patient and clinician led care will all become melded into continuums which reinforce the strengths of each player and maximise patient responsiveness.
- **Funding which reduces inequities and improves the social determinants of health.** The needs of high risk and complex patients will be adequately recognised and supported by funding which reflects the challenges of dealing with hard to engage groups. The unique circumstances of rural communities will also be recognised in policy, funding and models of care.
- **Cost assignment.** Cost-shifting will be a thing of the past with savings achieved shared amongst contributors to fund ongoing activity and innovation.
- **Thinking.** Using public health frameworks we will invest in communities and individuals in advance of their potential cascade into infirmity. Wellness oriented care planning with 10 and 20 year time horizons will circumvent the tendency, reinforced in current funding models, to maximise clinical income today, clog hospital systems with the frail and forget the needs of the next at risk generation.
- **Expectations.** Innovation will be a recognised and supported activity in primary care, led by well qualified leaders with a variety of backgrounds using outcome measures to feed back into continuous improvement efforts.
- **Quality.** More than accreditation, quality will be everyone's business and core to operations. Research, benchmarking and reflection will all contribute to evidence based practice which contributes to improved health outcomes and funding uses.
- **Risk.** Seed funding will be available to gather coalitions, pilot new ideas and apply technologies and approaches from other sectors. The lessons will be widely disseminated, spurring further change and evolution.
- **Leadership.** People at all levels will be supported to enable new models of care to operate effectively and new collaborative endeavours to flourish in response to local needs and available resources in given communities.
- **System openness.** No longer the prerogative of individual business owners, systems will be designed to share information across the health sector, enable access to key data necessary to track patients, compare care to evidence based protocols and build up datasets necessary to plan and manage community based interventions.
- **Scale.** The size and scope of practices will necessitate the design of new, larger premises which facilitate multi-disciplinary team activity, localised provision of specialty services and professional environments for patient care and self-care amongst providers.

This is a big, bold and encompassing agenda. Change is never comfortable but it can either be imposed or be moulded by those with connection to the real need. Delays will not reduce the inevitability of the change. They may simply make it harder when it arrives. Let us build a coalition of the willing and acknowledging both the risks of staying the same and moving to a very different delivery system, create the health future we sorely need. A new mindset will be required to work through this evolution.

Churchill perhaps said it best:



Fortunately, we are not alone in with our challenges. Others are facing the same calamities. Whilst we need to learn from our past and respect the unique goals and context of our health system, we also need to learn from others. This report outlines key insights achieved through visits to healthcare providers and policy makers in New Zealand, Canada, the United States of America, the United Kingdom and Hong Kong. Their interest in our system, patience in explaining their solutions and openness to probing questions has been invaluable in shaping this document. Using insights from this field of gathered resources, let us be emboldened on our journey into a new future for primary care.

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Purpose

This report aims to provide an overview of themes and high potential solutions arising from a five country study tour focussed on Chronic Disease Management in Community Settings. The document is not designed to be an academic piece. Its objective is to contribute to a broadening of the policy debate in Australian healthcare regarding the future role, funding, staffing and expected outputs of our already world class primary care system. It will do so by highlighting key differences in assumptions, approach and context arising in other western health jurisdictions which are equally challenged by rapidly ageing populations, a plethora of new technologies, rising public expectations and a tsunami of chronic disease.

A central belief is that Australia's primary care system has been tweaked and improved by insiders for decades. More significant step change is required. The proposition is that the new scale and complexity of challenges facing the system are best reflected upon in light of solutions embraced by others. In many respects, Australia's comparatively youthful population has insulated us from this onslaught so we can leverage their experience of working in the unknown. This may encourage a more root and branch review rather than fertilising and leaf polishing current Australian solutions.

A second proposition is that any change environment must support a multitude of experiments. Continuing to fund singular, top down solutions erodes the capacity of the system to be locally responsive and take advantage of the range of local contributors working in or at the interface with healthcare. Therefore, this document presents a portfolio of options rather than a comprehensive and detailed response. Each reader and region can adopt and modify those ideas which resonate, taking into account the overall drivers of reform required to develop a more flexible and responsive healthcare system. Systems theory would suggest this is a better way of creating appropriate responses in a context which is eminently adaptive and particularised.

Funding

The information presented in this report was acquired during a 9.5 week study tour funded by the Winston Churchill Memorial Trust in Australia and Inala Primary Care Ltd (IPC), the primary care facility within which the author works.

The Trust aims to provide opportunities to Australians to travel overseas to conduct research in their chosen field on issues and topics not readily accessible in Australia. Applicants are chosen based on their ability to contribute to the growth of excellence in their field of endeavour and enrich Australian society through the application of the lessons learnt.

Inala Primary Care Ltd is a charitable general practice based in a disadvantaged community. Its role is to serve the local population, which has been rated by Jesuit Social Services as within the 12 most endemically poor regions in Queensland. Disadvantage has a multiplying effect on chronic disease. This is why the practice is also at the forefront of innovation related to models of care and primary care research. This aspect of the group's activities is designed to encourage adoption of change across the health sector and inform policy development. The conclusions drawn in this report are the sole responsibility of the author and bear no relation to the official positions of either the Trust or IPC.



Section 1 | Positioned for Change, The Australian Healthcare System

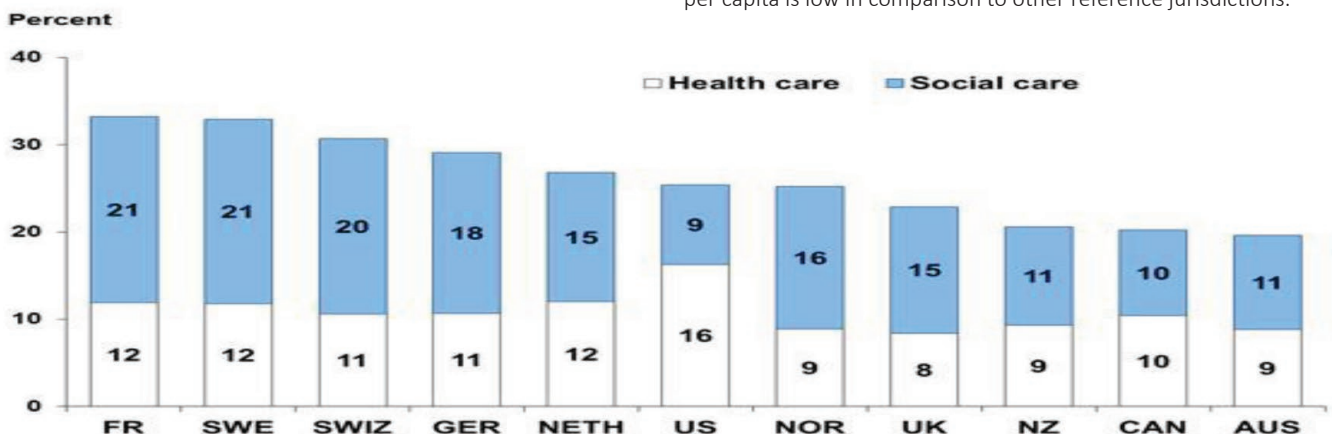
Context

Australia has had one of the most accessible primary care sectors in the world since the initiation of Medicare in 1984. Designed as a mixed funding system, Medicare Rebates are claimed on services most often provided by private, registered health practitioners running their own small enterprises. Medicare is funded through a Medicare Levy on workers earning over a set threshold. This is collected through the Australian Tax Office, the national government revenue collector. Medicare funding is complemented by the private payments patients may also be required to spend when seeing their General Practitioner (GP). Such out of pocket expenses are not compulsory and reflect the mixed public and private nature of Australia’s health system. Services with no out of pocket expense are said to be “bulk billed” to the patient. Bulk billing potentially applies to a range of healthcare providers in addition to general practitioners and other medicos. For example, psychologists and other allied health providers can also utilise Medicare to extend their patient reach. Midwives and nurses also have capacity to deliver care which attracts Medicare Benefits.

The most common form of out of pocket expense in Australia relates to pharmaceuticals. The Pharmaceutical Benefits Scheme (PBS), also funded through taxation receipts, means medications are subsidised when distributed through the thousands of private pharmacy outlets operating in the community. The degree of contribution required when purchasing drugs varies depending upon income. Income levels are indicated to both general practices and pharmacists through presentation of a Health Care Card for those on low incomes and pensions. Additionally, some groups in the population, for example indigenous patients and those who have hit a PBS upper limit through frequent need of prescriptions, are charged even lower co-payments when drugs are dispensed.

Whilst the configuration of Australia’s healthcare system is unique, its total expenditure, format for training clinicians and emphasis on both hospitals and primary care means it nests within a group of Commonwealth Countries with similar heritage. These same countries have also adopted core elements of the “welfare state” in relation to unemployment, disability and ageing which have a direct effect on the health of citizens. For this combination of reasons, health expenditure per capita is low in comparison to other reference jurisdictions.

**Health and Social Care Spending
Percent of GDP**



Source: E. H. Bradley, L. A. Taylor, and H. V. Fineberg, *The American Health Care Paradox: Why Spending More is Getting Us Less*, Public Affairs, 2013.

Context cont.

Medicare was originally targeted at creating a system of choice where patients could quickly, and often at no direct expense to themselves, receive care from a General Practitioner (GP). This outcome has been achieved with just 4.9% of people being noted as deferring a GP visit based on cost in the 2013/14 year. 83.6% of GP services were also recorded as bulk billed (Productivity Commission, 2015), in line with the 80+% benchmark established when Medicare was initiated.

GPs have always been private business participants in the Medicare system. The same is true for nursing and allied health practices. They are allowed freedom in determining their location, practice capacity, patient focus, care available and fee schedule. Only a tiny proportion of GPs are salaried. The vast majority are paid a split of revenue billed. Interactions with patients are therefore, the primary source of revenue for primary care. Most of the items billed relate to fixed categories of time spent with patients. For example, a Level B or Item 23 consultation lasts from six minutes to 20 minutes and is assigned a standard rebate from Medicare. Less than 10% of GP revenue is linked to quality of care indicators, 90% relates to patient volume.

This focus on reimbursement for GP time has generated a system where the bulk of primary care consultations are GP led and “bulk billed” to the Office of Medicare which sits within the Commonwealth Government’s Department of Health. By law, the Commonwealth Government through Medicare is the sole funder of primary care in Australia aside from patient contributions.

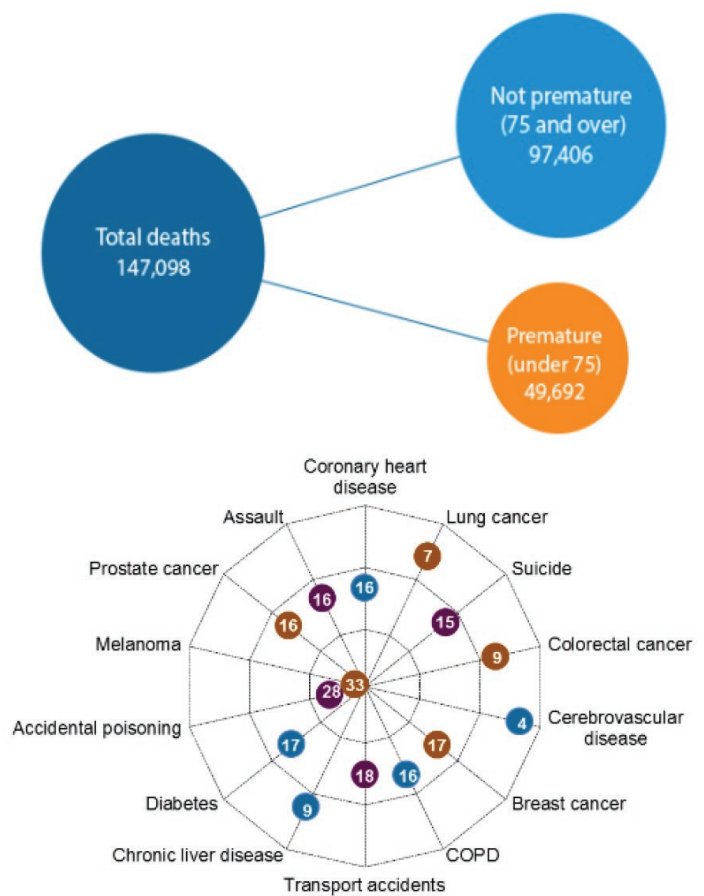
Private specialist doctors were also wrapped into the Medicare arena in 1984. Their services also attract a Medicare rebate. Different item numbers are allocated to different types of activity and time spent with patients. However, bulk billing has never become the underpinning of fee structures within the specialty fraternity. This divergence was created as “free at point of care” specialists were available through State Government funded public hospitals, releasing the private medical specialty sector to charge considerable out of pocket expenses. No such public verse private market arose in the primary care space as State Governments have tended to focus their budgets on secondary care, the waiting lists for which are synonymous with public debate regarding how well the health system is performing. Far less public debate occurs regarding the general practice sector. Almost no voice is given to how the two sectors could or should integrate their efforts.

When Medicare was inaugurated, the average Australian visited their general practitioner (GP) four times per year. The baby boomers were at the height of their child bearing years so the focus of care was child and maternal medicine and infectious disease. Where chronic disease was addressed, it was most frequently through initiation of new treatment options for those with early stage disease. Much of this care involved patients who would most benefit from the recently released blockbuster drugs, which revolutionised medicine in the two decades from the mid-1970’s.

Today our health system, already accounting for nearly 10% of the national economy, is projected to double in cost to \$112B by 2023. It is strained by dramatic growth in demand, especially by Australians affected by chronic disease. McKinsey and Company reported to the Commonwealth Government’s Primary Healthcare Advisory Group in August 2015. They suggest a greater focus on the 5% of Australians with chronic conditions who consume 28% of the available budget. They also note that despite having the second highest life expectancy in the OECD, over 80% of Australians have at least one chronic disease

or risk factor. The result is the highest prevalence of chronic disease of any OECD country.

Our effectiveness in treating chronic disease shows potential room for improvement. Australian Institute of Health and Welfare data (October 2015) shows that each year nearly 50,000 people die prematurely ie. before the age of 75. What is of even greater concern is that our national performance in managing the conditions most associated with these deaths is middling against other OECD countries. In just four disease areas Australian preventative performance rates in the top 10. In just one disease, cerebrovascular, are we in the top 5.



AIHW, Premature Mortality in Australia 1997-2012, October 2015.

Not only do we have room for improvement, we must concurrently prepare for growth in this type of demand. By 2016, more than half of all consultations with a GP will be with patients affected by chronic disease, (Harrison et al, 2013). The growth in chronic disease costs has triggered a national review of Medicare’s scope. The Minister for Health, The Hon Susan Ley MP, stated when launching the review “... the use of Chronic Disease Management Medicare items has grown by almost 17% in 2013-14 compared to the previous year, with over \$587.6 million worth of benefits paid for over 5.6 million services (Ley, 2015). This has occurred despite widespread acknowledgement that significant proportions of general practitioners remain focussed on acute care and referrals to specialty clinicians. They are often reticent to undertake chronic disease management tasks on their own initiative due to income drivers, patient expectations and skills deficits.

Context cont.

GP attendance is also on the rise. The most recent National Health Performance Authority report (National Health Performance Authority, March 2015) showed:

- One third of Australians (33.6%) visit their GP between one and three times a year.
- More than one third (35.3%) of patients visit a GP six or more times per annum based on 2012-13 data.
- One in eight Australians (12.5%) visit their GP 12 more times per year, consuming 41% of all non-hospital Medicare expenditure or \$6.5 billion AUD.
- Those visiting their GP more than 20 times a year (3.8%) averaged Medicare contributions to care of \$3,202 per person, with GP costs being less than half this amount of claim.
- 4% of people attending Emergency Departments report not seeing a GP.

These very high users of primary care are also high users of hospital care, with nearly 60% of hospital admissions coming from patients seeing their GP more than 12 times a year. Four out of ten people in this group visited an Emergency Department in 2012-13.

So with 5% of patients representing 28% of costs (McKinsey & Company, August 2015) and 48% of avoidable hospitalisations relating to chronic disease (Primary Healthcare Advisory Group, August 2015) much needs to be done to explore how community based solutions can ameliorate the rising costs and burden of disease.

The most widely distributed, recognised and accessible workforce currently addressing this issue are GPs. With a total of 32,401 vocationally registered GPs and other medical practitioners billing Medicare in 2013-14, our population of nearly 24 million people is supported by a sizeable but finite supply of medical talent. Increasingly, GPs are working part-time with just 23,000 GPs serving communities full-time. This is expected to rise as more of the older GP workforce and increasing numbers of younger GPs attempt to achieve work life balance.

One of Winston Churchill's more famous Battle of Britain quotes was "Never in the field of human conflict was so much owed by so many to so few". This echoed around the world on 20 August 1940 in praise of RAF activity. It is ironic that almost to the day 75 years later, we have ahead a battle ground in health policy and intergenerational conflict with a comparatively small group at the heart of the war on chronic disease. Improving our already strong standing in healthcare by strengthening primary care and integrating the capacity of primary and secondary care streams is the focus of this report.

Visitation to sites acknowledged in the literature for their innovation in four of the countries compared by the Commonwealth Fund for health performance was funded by the Winston Churchill Memorial Trust. In addition to New Zealand, Canada, the United States and the United Kingdom, Inala Primary Care Ltd funded a visit to Hong Kong on the home leg of the study tour. Details from across this landscape are included in this report. A full list of sites visited and connections made are included in Appendix A.

Primary Care Strategy

Australia has long recognised the value of the GP workforce. The first formal organisation of the sector could perhaps be seen with the creation of the precursor to the current Royal Australian College of General Practice in 1958. Since the late 1960's GPs have been required to undertake examinations prior to establishing practice, with the development of a formal training program instigated in 1973.

Policy over this time has also changed. In 1985 the government started to strategically target wellness through the formation of the Better Health Commission. In the 1999/2000 financial year new funding programs targeted at people with chronic disease were introduced for GP use. With minor modification, these streams of funding have remained in place ever since. Various Primary Healthcare Strategies have also been published, the most recent in 2013. The emphasis of all of this effort has been to retain patients in the community and enshrine primary care, through General Practice, as the first point of contact for people needing health input. Whilst this body of work has cemented recognition of the centrality of GPs in care coordination and delivery of a cost effective health system, the vision for primary care in these documents has been limited. Most recently, they read as testaments to the need for more doctors. However, the question of a doctor shortage is based on an assumption that the current models of care are both effective and necessary. If strategy continues to be framed with GPs as the mainstay of primary care rather than perhaps the leaders of patient responses in primary care, we will default to the same solution; train and fund more doctors. This all seems akin to having a hammer and seeing every problem as a nail.

The National Health and Hospitals Reform Commission, which reported in July 2009, called for greater integration between hospitals and primary care to address the needs of an ageing and multi-morbid population (National Health and Hospitals Reform Commission, June 2009). Fragmentation was identified as the key challenge of our health sector with divided funding and accountabilities demonstrated to reduce responsiveness to the nation's health pressures. Improved access and equity, redesigned systems responsive to emergent needs and inbuilt self-improvement mechanisms were the three goals overarching the many recommendations presented by the Commissioners.

Their report called for a strengthening of primary health services and the sectors' positioning as the "first point of contact" for most of the needs of most Australians. Their work challenged the accepted control of the primary care agenda by GPs, suggesting that a broader array of contributors across the allied health and nursing spectrum needed greater engagement within the healthcare system.

They proposed Commonwealth control and funding of multi-disciplinary primary health care services currently in government hands and the creation of comprehensive primary health care centres and services which expanded the range and availability of primary care in community settings. The health care home and even enrolment of patients were agendas supported by the Commissioners alongside blended funding arrangements. Sub-acute services and palliative care were also identified as components requiring strengthening in primary care. Sadly, very few of the primary care specific recommendations from this report were explored or have since been adopted.

Fragmentation was identified as the key challenge of our health sector with divided funding and accountabilities demonstrated to reduce responsiveness to the nation's health pressures.

Comparative Strategic Landscape

This is in contrast to other jurisdictions which have a more fertile primary care policy landscape. Across the ditch in New Zealand, efforts since 2002 have seen the weight of emphasis in their health system move from hospitals to primary care and especially into regional health collaborations. In their 2015 strategy, the government is explicit with its agenda to create equality of power and opportunity for primary care. They have also incorporated a number of objectives aimed at shifting care out of hospitals and into general practice.

The Canadian policy setting has similar complexity to Australia given both share federated models of government. Despite these challenges, the Canadian national government has increased the strategic focus on:

- Patient and family control
- Collaborative and interdisciplinary care
- Integration across the health system
- Wellness based delivery
- Inclusivity for community agencies and social resources
- Prevention, education and patient action.

Canada is leading the world with initiatives designed to take patient centred care and engagement to new highs. Rather than treating episodically, the emphasis is on equipping patients and their families to make truly informed choices and participate equally in decisions about their care. Health care in Canada is no longer about care “for” patients. Even the accreditation standards are reframed to cover care “with and through” patients and their families. Changing the locus of control from medicos to patients supported by nurse educators, care navigators, patient advocates, well developed decision support tools and patient participation in clinical governance has heralded a new era in Canada. It is opening increasing opportunities for avoiding hospital based care and innovating with models of care for chronic disease.

The NHS, the world’s oldest government funded comprehensive health system, is going so far as to redefine what constitutes health care. In April 2015, the government of the United Kingdom adopted legislation which mandates the combining of health and social care budgets for those with long term conditions. The extent of this reform makes Australia’s finalisation and ultimately national implementation of the National Disability Insurance Scheme (NDIS) by 2018 seem like a half-hearted response.

Australia has had the luxury of complacency at a strategic level for decades. Comparative data on our health system performance has encouraged inattention. Our younger than average population age profile and comparatively high birth rate has shielded us from the burdens which have ruptured and started remaking other health systems.

Changes on the North American continent through the implementation of The Affordable Healthcare Act, or “Obama Care”, are already seeing rapid changes to the health profile and costs of care in entire communities. Innovative players are partnering with Medicare and Medicaid to offer vastly more comprehensive primary care solutions to highly marginalised and disadvantaged groups. Even savvy employer and union groups are demanding cost containment for their sponsored insurance programs. This is stimulating fresh efforts to improve primary care provision and integrate care between primary and secondary players. The benefits of a “one funder” model for these and other insurer led responses mean that real attention is being paid to the role primary care and multi-disciplinary teams can play in the healthcare continuum. The desperate shortage of primary care physicians in North America, promulgated under previously hospital focussed health strategies, has created an environment where the responses to change are more inclusive and radical than we have seen proposed in Australia. A rapid reclaiming of standing in health rankings should be anticipated from US quarters which will flow over into fuelling further change in Canada.

Australia has been geographically and strategically isolated from policy competition for decades. With New Zealand learning from others whilst implementing publically funded primary care since 2002, even our near neighbours are starting to show us a way forward. However, we need to lift our eyes beyond our own petty politics and learn from global responses to guide the re-development and deepening of a compelling primary care vision which offers great value, great roles and great solutions to its stakeholders. Failure to expend energy in this vein will see Australia slip further behind. Our system is already only a mid-level player, disappointing given the decades of healthcare investment. Our high score in quality is probably attributable more to the high levels of skill amongst our clinical workforce than our systems and levels of accountability.



EXHIBIT ES-1. OVERALL RANKING

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/ Capita, 2011**	\$3,800	\$4,522	\$4,118	\$4,495	\$5,099	\$3,182	\$5,669	\$3,925	\$5,643	\$3,405	\$8,508

Notes: * Includes ties. ** Expenditures shown in \$US PPP (purchasing power parity); Australian \$ data are from 2010. Sources: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund National Scorecard 2011; World Health Organization; and Organization for Economic Cooperation and Development, OECD Health Data, 2013 (Paris: OECD, Nov. 2013).

Comparative Strategic Landscape

CASE STUDY

The New Zealand Ministry of Health has strategically pump primed innovation and integration within its health system. They have provided large grant pools to fund competitive models of integrated care which could meet the government priorities of “better, sooner, more convenient”. The nine projects chosen through the most recent round of innovation funding have comparatively flexible funding arrangements which mean management, health promotion and delivery of services can all be balanced within the grant envelopes.

The range of solutions funded have all created catchment based delivery to meet needs demonstrated within a region. GP practices, hospitals and allied health are all involved in delivery. More often than not, the funded projects resulted in hospital based nursing and allied health staff moving into practice based delivery. GPs have also been given the opportunity to step into new roles which free up capacity in hospital clinics. Closer association and even attachment of workers to specific primary care settings is a common theme of these projects.

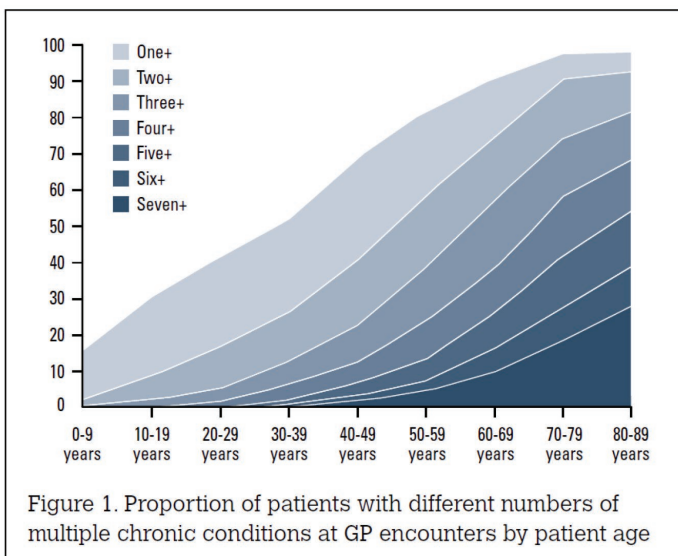
A unifying thrust of all the projects is using multi-disciplinary care to free up medical time wherever possible. In some cases that means utilising GPs with special interests to replace specialty physicians. In a greater number of instances, it has meant utilising the skills within multi-disciplinary groups to engage patients, triage and provide components of care before medical interventions.

Replacing GP time has been interpreted laterally in some instances. Region wide call centres and booking processes have been used to free up GP clinics to focus on delivering rather than scheduling care. This response has recognised the fragmentation of care and paucity of expertise in primary care clinics.

Projects have been able to localise solutions to at risk groups or catchment wide failings. This improved focus on identifying and addressing needs is designed to maximise resources where they are needed most. It also means that region wide step-change has been possible, lifting the capacity across wide areas and enabling attention to be focussed on the next mission of merit.

Chronic Disease

A chronic disease has long been held up in the literature as any condition lasting for more than six months. Infections and conditions which once would have killed have been re-assigned by modern medicine into the realm of chronic at an even faster rate than our population is ageing. Australian's are now living an average of 25 years longer than they were a century ago (Primary Healthcare Advisory Group, August 2015). With ageing, chronic conditions tend to accumulate. Therefore, we have a primary care system instituted to address infectious disease and maternal health starting to recognise its role in chronic disease at the very juncture that multi-morbidity is the fastest rising cost in the system.



(Harrison, C, Britt, H, Miller, G, Henderson, J., 2013, *Multimorbidity, Australian Family Physician, Vol 42, No 12, December, p 845 – data drawn from 2008-2009 BEACH sub-study measuring prevalence of chronic conditions*).

Not only is disease clustering in individuals. It is also clustering in communities and types of individuals. A preventative health effort, especially one addressing health literacy and patient engagement, needs to be cognisant of the vastly differing starting points for groups in our society.

The Inverse Care Law was first reported by Julian Tudor Hart in the UK in 1971. It is paradoxical that I am arguing the case for the Inverse Care Law to be incorporated into Australian funding models given its evidentiary base stems from the year of my birth. Tudor Hart showed providing equal access to care for all members of society was shown to exacerbate health differentials, not create equivalence of health outcomes. The Medicare System was founded and sold politically on Australia's core values of equality and providing a "fair go for all". However, by utilising a Medicare Levy as one of the main inputs to funding Medicare, tax paying Australians developed a sense of both attachment and entitlement to Medicare's fruits.

Investing the fruits of everyone's labour equally may have helped forge the social compact which underpins Medicare's continuation. However, it does not recognise the very real differences in catchments and populations which exist.

Investing the fruits of everyone's labour equally may have helped forge the social compact which underpins Medicare's continuation. However, it does not recognise the very real differences in catchments and populations which exist. Medicare has attempted to evolve over time to address these needs. Special funding items for indigenous Australians, rebates for regional services and those with chronic disease have attempted to put funding where need exists. However, more needs to be done and is being done overseas.

Australian health care funding has also been blind to the realities of the business expenses which go with a private system delivering essentially publically funded services. Whilst rents, electricity and even medical indemnity insurance costs have continued to sky rocket at rates well in excess of inflation, the Medicare Benefits Schedule has been lost in a time warp. This has coincided with the biggest exit from the workforce and into retirement Australia has ever seen. This new cadre of patients are expectant, ageing fast and choosing their doctor based on their willingness to bulk bill. The number of quick consultations available in many catchments to subsidise the longer consultations often required by more complex and ageing patients is reducing. This puts pressure on the business model of all general practices, with some choosing to skim the cream rather than address all the needs of the population.

In some catchments, private billing of 20-40% of patients can be used to supplement Medicare related income. Worried well catchments proliferate Australia's inner cities, the most sought after placements for GPs in the nation. They are also the catchments with the lowest rates of chronic conditions, highest rates of private health insurance and easiest access to a range of private specialist providers and hospitals. It is not surprising therefore, that there is rising disparity between catchments in Australia in terms of health outcomes, numbers of GPs per head of population and the incomes of those GPs.

The Australian response has been to create "Districts of Workforce Shortage" and mandate that overseas trained doctors newly registered in the Australian system work in such areas for a minimum of 10 years. Reductions in student debts for regional placements and creation of more generous rural medical pathways to registration are other initiatives which have been used. However, merely creating a supply of doctors does not change the realities of what doctors are required to address in different catchments. If those catchments are inner city or highly disadvantaged, the number of measures in place to support service provision falls markedly and rarely addresses the economics of care.

GPs in the NHS often operate out of premises owned or leased by the NHS. Therefore, the NHS wears the various relative costs of occupancy across the nation. This means GP contracts have less of a need to reflect the different leasing costs associated with premises in different areas. In addition, certain zones attract loadings which reflect the incomes needed to sustain living in some of the world's most densely populated and expensive cities.

Chronic Disease cont.

The only loadings available in Australia relate to regional delivery. These areas often have far lower leasing, housing and other direct costs than city based practices. The purpose of the loading is to attract clinicians. Money has been designed as a salve to the pains of regional practice. Here, the isolation of practitioners often means they are required to work in shifts around the clock and the calendar. More limited local hospital access, given Australia's huge landmass, also means these primary care providers deliver some of the most diverse medicine in the nation and the world. It is not surprising that the loadings which apply equally to small towns and one doctor communities have not been the panacea to healthcare shortages.

Creating debate around healthcare needs involves honest conversations about levels of disadvantage in the country. Australia's historic attachment to being a "middle class nation" has pushed such debate to one side. Yet, the richest 1% of Australians are now reported to own the same wealth as the bottom 60% (Oxfam Australia, June 2014). Oxfam also reported that our ranking as an equal society has fallen since 1995 when Australia had an OECD average level of inequality in comparison to other OECD countries. With average out of pocket expenses to privately billed patients topping the entire Medicare rebate for the first time in 2014, this "double" income stream allows some general practice providers peace of mind about the viability of their business. What of the remainder of providers which are trapped with the current Medicare rebate freeze? This result was tabled to the Senate Select Committee on Health in early 2015 by the Gratten Institute's Professor Stephen Duckett. He anticipated erosion to practice income in real terms by over 10% by mid-2018 if inflation was at 2.5% for the period.

So for providers in disadvantaged bulk billing catchments with rising numbers of chronic disease patients, they are squeezed between a business model which supports six minute medicine and public hospital waiting lists which force them to maintain patients in the community. This adds professional stress to a work day which is probably already more full than most with patients suffering disability, mental health issues, cultural and language issues and higher than average rates of domestic violence, drug use and employment instability. How can our health funding system remain agnostic about business models and funding realities when provider stress across primary care is increasing but in disadvantaged catchments it is at breaking point?

Other nations have a more evolved response to disadvantage. In New Zealand, a "high need" formula is built into the population funding based capitation subsidies which go to general practice. This is distributed as a General Medical Services Grant making it easier for GPs to cross-subsidise their most disadvantaged patients. In addition, the Kiwis fund Youth Health Centres focussed on disengaged kids and young adults. They also fund Access Practices. These primary care facilities charge no co-payment and have at least 50% of their patients drawn from high needs groups.

Even in America, Federally Qualified Health Centres (FQHCs) have been recognised as core providers for decades.

Alongside the Indian Health Service, FQHCs attract patients suffering extreme disadvantage. They are funded based on an overhead expense average cost basis calculated within the FQHC network. They can also bill insurers like Medicare and Medicaid if patients who present are eligible for insurance coverage with those funders. This means that they are not forced to adopt volume based business models to serve their communities as their main operating expenses are subsidised in core grants. Such an approach has been especially valuable to the refugee and "undocumented" communities they serve who are often outside insurance based healthcare.

The expansion of healthcare funding to more population groups, instigated through the Obama Administration, has seen access to primary and secondary care improve markedly. Given the late entry of a more comprehensive healthcare model in America, large insurance groups have seized the opportunity to be creative with implementation. Insurers and healthcare providers have negotiated new models of care and funding provisions which address the realities of high need groups in very strategic ways.

CASE STUDY

Iora Health, a publically listed healthcare provider, has developed a string of primary care facilities in a number of US states with the intent of exclusively serving Medicare patients. Medicare eligible patients are all over the age of 65 and from poor and working class backgrounds where employer provided pensions are very low. Despite centering their delivery on what constitutes a high need group, Iora is at the forefront of multi-disciplinary models of care which leverage the inputs of patients, non-clinical health coaches, nurses, allied health and doctors. Their custom designed facilities open to a reception area in the guise of a café to de-medicalise the environment and encourage patients to open up to their care team. The creation of a community hub is a whole hearted endeavor. Multi-use rooms are included within the premises to enable delivery of anything from cooking classes, to dancing sessions to health education workshops. The entire team at an Iora facility have an hour long huddle at the beginning of the day to identify at risk patients, plan the management of patients of concern and collaborate on ways to improve patient flow and service provision. One of the fastest growing health providers in the US, Iora is developing its own electronic patient management system to dovetail into other innovations which reflect its mode of operation and philosophy of care.

How can our health funding system remain agnostic about business models and funding realities when provider stress across primary care is increasing but in disadvantaged catchments it is at breaking point?



Chronic Disease cont.

The Adirondack Health Institute is another exemplar of innovation driven by local needs. The Adirondacks is a scenic, rural area in Upper New York State, bordering Canada. Frozen for much of the year, farmers have traditionally eked an existence in their beautiful but hostile landscape and dispensed with health insurance due to its unaffordability. Consequently, Adirondack had one of the lowest ratios of doctors per head of population in all of America and heavy reliance on University run hospitals for care of last resort.

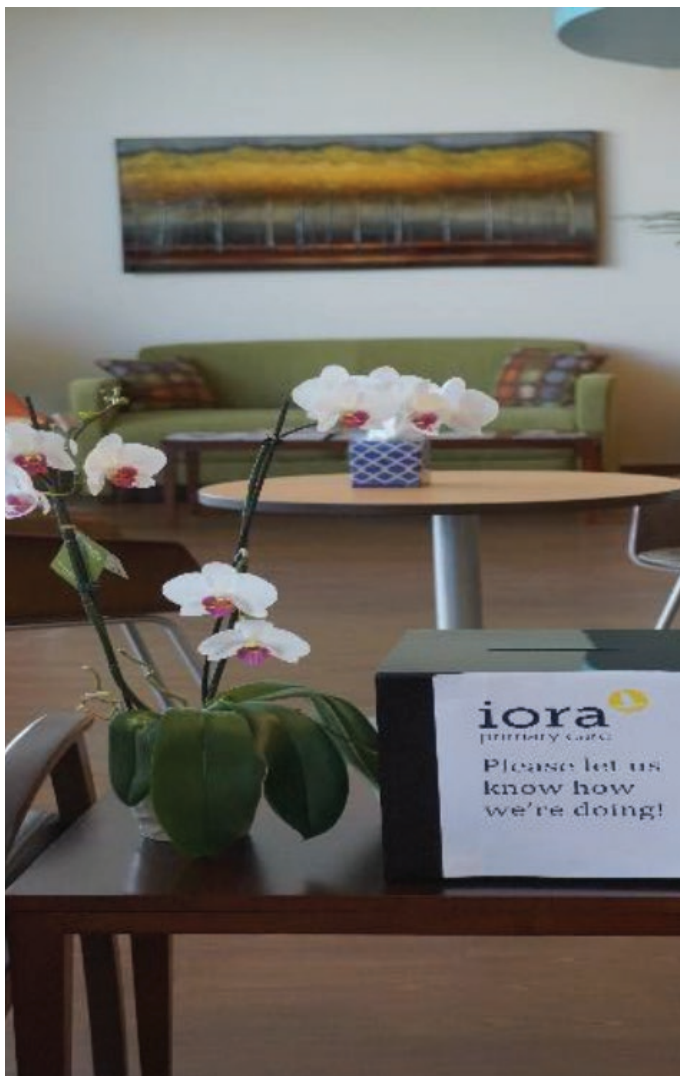
The Adirondack Health Institute is a legal entity encompassing University Hospital Providers, primary care centres, regional stakeholders and partners. It contracts with seven insurance groups (including the three government funders ie. Medicare, Medicaid and the Indian Health Service) to package care for the local population, most of whom would be classified as disadvantaged or low income. The results of well planned, well run, multi-disciplinary care have been staggering. Insurers are now reinvesting the savings made from improved care into new models of care and initiatives with the expectations of reaping further rewards which can be shared with the Adirondack Health Institute. The local hospitals have made large numbers of staff redundant due to falling demand for services. Startling in a region with a rapidly ageing and multi-morbid population.



*Stephens Mundy, President and CEO,
University of Vermont Health Network.*



*Bob Crawley, Director Health System Transformation,
Adirondack Health Institute.*



One of the Adirondack primary care facilities.

Chronic Disease cont.

Perhaps Winston Churchill’s insights about Americans is very close to the mark when it comes to the evolution of their healthcare system “You can depend upon the Americans to do the right thing. But only after they have exhausted every other possibility.” Obama Care seems to have come just in time given recent health spending trajectories, which had the potential for the American health system to consume all of government income within a decade.

In the NHS, practices receive weighted capitation funding to service their enrolled patient group. This allows some flexibility to address the needs of older patients as they usually are associated with more frequent visits and complexity in care planning.



In Hong Kong, government run primary care clinics exist to service the needs of poorer communities. The remainder of primary care is a private affair. These large, multi-disciplinary clinics are free at point of care to the patients and all medications are also dispensed free of charge. Large nurse and allied health teams support patients to manage their chronic disease. Dedicated spaces are fitted out with equipment so that patients can self-monitor their health and participate in education.

All of these systems have developed in recognition that just as patients differ, the very communities from which they are drawn both exacerbates individual difference and require variability in delivery.

Australia’s comparative blindness in health funding to this feature of community landscapes means that the attraction to live and work in harder to serve or more expensive to service communities is rapidly declining or becoming perverse.

Australia’s comparative blindness in health funding to this feature of community landscapes means that the attraction to live and work in harder to serve, or more expensive to service communities is rapidly declining or becoming perverse. Just as the American experience has shown, this can foster greater reliance on hospital care or costly interventions for disease treatment where prevention would have been more prudent.

Context of Policy Formulation

Health policy arises in response to the competing interests and needs of various stakeholders. The cumulative effect of negotiation and compromise creates opportunities for gaming the system, cost shifting and ignoring unmet needs. It also makes designing care systems more or less complex.

In Australia, the federal government through Medicare funding is responsible for primary care. Primary care is inclusive of general practice, allied health, dental and specialty services like pathology and radiology. The majority of funding is directed to medicalised elements of this system ie. doctors in general practice and specialist activity in pathology and radiology. Allied health is funded where it supports medically generated care planning. Dental services are funded where there is a medical imperative for a publically funded response.

In 2013/14 Australia spent \$6.3 Billion on general practice services. This represented just 6% of total government expenditure on health. The total figure was a 50% increase in a decade (BEACH Study, GP Activity 2013/14 Report, University of Sydney, 2014). Since 1993, average healthcare costs have risen by 8% per annum, primarily driven by growth in hospital costs (McKinsey & Company, 2015). Therefore, Australian primary care is receiving a smaller piece of the national healthcare spend each year.

This compares with a post-austerity recent annual average expenditure of 8% in the NHS. Notably, general practitioners in the NHS earn less per year than the average Australian GP, so with more expenditure per practice and far greater use of nurses, the quantum of care possible is expansive in comparison to Australia. Of further interest, the Royal College of General Practice in the UK is lobbying for a return to 13% of health expenditure being directed at general practice. Declines in funding since the implementation of austerity are being soundly criticised for eroding the primary care system which has made hospital expenditure in the UK the envy of the world. Imagine what could occur in Australia if we experienced a doubling of expenditure in primary care? What if the majority of that expenditure was directed at the multi-disciplinary care teams our system has under-resourced since inception?

Australian primary care is receiving a smaller piece of the national healthcare spend each year.

Context of Policy Formulation cont.

Instead, in Australia we have allowed any big leaps in funding to be directed at hospital care. This has delivered waves of hospital building programs across the country. This has perhaps resulted from our fragmented funding models and popular and political attachment to opening new beds. To demonstrate, in Australia hospital care is funded in two streams. The public hospital system is funded through State Governments utilising state taxes and federal government grants. They have no funding or accountability links to their referral channel, primary care, which is predominantly funded by the Commonwealth. The private hospital system is based on the direct payment for care offered by private patients or patients accessing private health insurance. The level of engagement between both public and private hospitals and primary care is limited to providing referrals and sharing details on patient care, predominantly after the event. This is of great frustration to private health insurers who argue that they know nothing about their insured patient base until the patient presents to an allied health or hospital facility which can be claimed on insurance. The same is true for public hospital facilities.

Increasingly, overseas funders are leveraging primary care expertise to reduce avoidable hospital costs.

In other systems, one funder is responsible for the entire continuum of care. This funder might be a government agency like the NHS, New Zealand Ministry of Health or Hospital Authority in Hong Kong, or an insurance group in the case of America and Canada. Consequently, there is far greater incentive in these systems for funders to understand their patient group and manage care across the system to maximise effectiveness and efficiency. Increasingly, overseas funders are leveraging primary care expertise to reduce avoidable hospital costs.

The gains to be made to healthcare systems from integrated models and well run primary care are exemplified by a number of US insurer and hospital systems. Many of these hospital systems have provided hospital based primary care clinics for decades. With amalgamation of hospitals and insurance systems over the last decade, more emphasis is being placed on controlling a primary care network. This can include extending hospital based clinics and developing community based clinics. Both Virginia Mason and UPMC have purchased and operate community based primary care facilities in addition to their hospital and insurance arms. They are placing increasing attention on the operation of these family medicine centres as they are both a key source of referral to their hospital based specialists and they have the capacity to reduce the overall costs of managing insured patients. Detailed monthly reports benchmarking individual doctor or nurse practitioner performance against set standards are produced.

CASE STUDY



Mike Northmore, Newtown Medical Centre CEO and Chairperson PMAANZ.

New Zealand's primary care providers are notified by hospitals whenever a patient presents to Emergency or is admitted. This process is made especially easy as New Zealand has just a handful of clinical management systems. Within many catchments, hospitals and primary care providers have agreed to use the one system. This enables hospitals to literally open and access patient records held in primary care in the wee hours of the morning if required.

The Primary Healthcare Organisation, responsible for directing government funding to general practices in its catchment, is able to draw upon both primary care and hospital data to generate monthly reports. Avoidable hospital admission rates are benchmarked for each practice and sent within monthly performance reports. Of even more benefit, a predictive risk score is assigned to patients. This is used to identify patients most at risk of an admission in the next six months. If a patient has a one in four chance of admission, they are listed and become the subject of intensive case management by primary care. Specialty input into these cases is also assured as both the hospital and general practice receive their streams of funding via the one source.

Context of Policy Formulation cont.

Considerable percentages of clinician income are related to the incentives received from hitting pre-determined targets for evidence based care. In some spheres more than 40% of income can be derived from quality measure incentives. Therefore, clinicians have both funding flexibility and rationale to form teams of care behind patients to ensure they are treated according to guidelines, hit recognised targets and patients stay out of hospital.



The NHS has long embraced quality measures. Currently known as the Quality Outcomes Framework, QOF is awarded once per year. The range of indicators is far less extensive than used in America and New Zealand. The income impact is also far less significant. Targets are rarely benchmarked and reported transparently to clinicians and practices. No coverage of hospital admission data or hospital avoidance incentive is built into the overall UK system. However, some regions like North West London have pioneered alternatives which operate in addition to standard nationally defined contractual measures.

The Tower Hamlets Primary Care Trust also uses the clustering principle. They have made incentives a group achievement. Like North West London, they have formed clusters of 5-6 practices, inclusive of sole practitioners and larger group practices. The clusters are awarded incentives based on every member meeting minimum thresholds of treating to target. The potential for embarrassment with colleagues and collective responsibility for ensuring incentives are paid has led to even more rapid change within these clusters. Commercial incentives combined with collective responsibility have resulted in increased collegiality and willingness to change. This is remarkable given that each practice is its own legal entity and traditional economic models focus on competition not collaboration as a way of achieving efficiency. Sadly, in healthcare, where patients have few signals to use to assess providers and prefer local provision to travelling, such assumptions may not be the whole answer to continuous gains.

CASE STUDY

Clustering of practices into groups of 5 or 6 practices, localised to a region, is occurring in a number of London municipalities. The local Primary Care Trusts have been instrumental in encouraging adoption of common patient management systems which facilitate easier access to data and improve ability to align data between primary and secondary settings. The Trusts then deliver data back to the clusters, showing how they rate against each other. This is a practice in common with some American and New Zealand systems which create sub-regions within their areas of oversight. They generate dis-aggregated league tables and reward practices moving into high performance bands and even punish those failing to meet set thresholds. The power of this approach is that it circumvents arguments from providers that their catchment is unique. It undermines claims that benchmarks are less reliable when applied to their performance.

The unique contribution of the NHS Primary Care Trusts in London has been twofold. When focussing on diabetes, the North West London Primary Care Trust, employed a GP to deliver training, facilitate exchanges leading to agreed benchmarks, facilitate joint bids for equipment necessary to improve care and meet with each cluster to report back on results. Cross-cluster meetings are also convened by the GP to further refine systems and explore innovation which will lead to better results. Localised competition and the delivery of small rewards for improved performance have stimulated remarkable and rapid change. The increasing capacity of GPs to deliver local management of diabetes has created additional capacity in the hospital system, necessary to cope with the rising tide of disease. Success with this initiative has caused the cross-cluster representatives to form their own alliance group. Over 30 practices have come together to engage an Alliance Manager and work on strategies for reforming healthcare within their region.



Dr Tony Willis, Diabetes Cluster Clinical Lead.

Section 2 | A Way Forward, The Patient Centred Medical Home

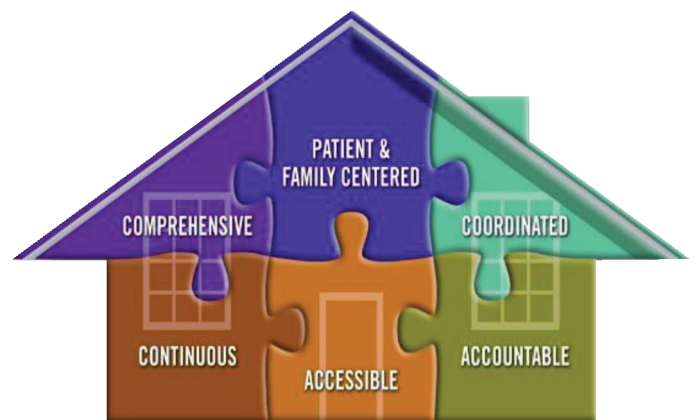
The Patient Centred Medical Home

Every country starts from a different position when it comes to healthcare reform. Population profiles can be markedly different, clinician roles may be divergent, public expectations are heavily shaped by local histories, power can be distributed uniquely, the funding capacity of the system and the very infrastructure it depends upon are all variables which affect the combinations of changes necessary. Despite this, every country visited was determined to provide primary care with more eminence, power and accountability. The driver for change was consistently the ageing and increasing morbidity of the population due to chronic disease.

Care directed at a core group of patients with long term association with their own practitioners was found to deliver improved problem identification, better management and greater compliance.

The first step was always to define more roles for primary care in relation to chronic disease management. The missing link in effective primary care was usually cited as incentives for primary care clinicians to move from acute, throughput based activity models, to planning and coordinating care with less reliance from specialty physicians. Care directed at a core group of patients with long term association with their own practitioners was found to deliver improved problem identification, better management and greater compliance.

The roots of the patient centred medical home, with GP led teams responsible for coordinating and delivering care directly related to



patient need, was first identified as a model via survey in the NHS in 1992/93. The first publication outlining the features of a medical home was printed in 1994 to wide criticism. The move from activity based to capitation funding involved considerable changes in risk and accountability which were widely deplored. Such low initial levels of traction, despite evidence that patients managed according to the medical home model received better outcomes, was common across the world.

A study of the Canadian experience, where academic clinicians were at the forefront of the movement, was possible during the trip. In Canada, a large country with disseminated population aggregated near water, geographic clusters of indigenous populations, mining communities and a federated system of government has many parallels with Australia. They took the work of the NHS and undertook further studies in Canada. There too, evidence emerged in support of the patient centred medical home. In 1996 a primary care committee representing key academics and stakeholders formally adopted the medical home model as preferred policy. It took until 2000 to get political interest in the province of Ontario, home to Canada's largest city and its capital.

The Patient Centred Medical Home cont.

In 2002, the patient centred medical home was central to the health policy platform taken to an election. Pilots were initiated upon the election of the government providing the first trials of locally generated incentives and capitation payments. The results seemed to verify rolling out the system more widely. The political cost of this scaling up was to create a bidding process by primary care sites interested in the new funding model. The sought reward was an increase in income of between 35 and 40%. This far exceeded the prevailing Medicare fee schedule increases. They were routinely in the order of 2% per annum.

200 centres in the province of Ontario embraced the model, covering 3 million of the 12 million population. Others wanted to follow over time. Limits to the funding cap implemented in a post-mining boom environment mean that no additional doctors have been registered to the model for some years. Retiring GPs manage complex processes to transfer their billing right to new doctors who sit in queues to take up the opportunity.

Patients also queue. Access to walk in clinics, a third tier of less comprehensive care provision, is readily available as an interim care strategy. A second tier of the GP sector includes GP practices where booked appointments with a known clinician and limited access to allied health are possible. The highest level of care is the patient centred medical home. They provide even more comprehensive access to care, larger teams and newer premises. Patients wait for medical home sites to open their books for new registrations and rush to enrol. This can mean some family members gain access whilst others remain with the other tiers of care. Hardly an outcome with the potential to reduce fragmentation. Access to a medical home place has even been known to influence where people will live, a perverse health outcome. Sadly, the falling away of the mining boom and the lack of a Council of Australian Governments style process to allocate tax revenues across states with varying levels of self-generated income means that the success of the model is not assuring its transfer. There has also been a multi-year freeze on indexation of incentives to medical homes. Clearly, the Canadian government is aware that doctors in this model are the most highly paid on the North American continent, attracting clinicians to register to work in Canada but at considerable taxpayer cost.

Lessons from the Canadian implementation are many. First, doctors were very willing to take on Nurse Practitioners as part of the care team. It meant they could extend their registered patient base by 900 patients per Nurse Practitioner. Their corresponding increase in real patient load or oversight was negligible as Nurse Practitioners across the American continent operate with very high levels of autonomy. Second, the additional opening hours required of the medical homes were poorly audited. Consequently, patchy after hours provision is available and often the sole domain of the Nurse Practitioners. 24 hour on-call systems are typically run by registered nurses. Third, access to onsite social workers, diabetes educators and other clinicians has been popular and extended the models of care operating in primary care. This has led to significant change in communication within practices. Case conferencing across the practice, inclusive of allied health, pharmacy and attending specialty physicians like psychiatrists is very common. Even the design of practices has changed. It is becoming more typical for banks of computers to exist where doctors complete their administration and non-patient facing tasks. This builds collegiality. Separate areas are available for the non-medical workforce to deliver, creating a chronic disease focussed sub-specialty environment within the general practice environment.

The most unusual change has been the mandatory inclusion of patients on governing bodies which direct the facility. These groups are involved in developing plans, monitoring performance against targets and reviewing system compliance. Interestingly, the Canadian government requires patient centred medical homes to be accredited but allows the remainder of the primary care sector to opt in to accreditation. The result is that Australia has by far the highest rate of primary care accreditation of any of the countries visited. Canada was a distant second. The result may be that Australian general practice has more consistency in basic business and clinical processes than evident in other parts of the world. However, the capacity of these same standards to reinforce the best practices of the fully fledged version of the patient centred medical home may be limited. Therefore, over time, Australia may find advantage in adopting two categories of accreditation which reflect the varying mandates of different parts of the primary care sector and allow practices to market themselves accordingly.

The NHS has taken a very different tack regarding the introduction of patient centred medical home concepts. They, like Canada, have introduced a far wider number of quality measures which attract incentives. Many are input based like delivery of screening (eg mammograms, FOBT), wider immunisation schedules (eg influenza) and the like which have no comparator in Australia. They have a two tiered contracting system with varying delivery expectations. However, the differences in the contract components do not appear to be so marked that patients select their provider based on their offering. The NHS also funds walk in clinics to address after hours and emergency department bypass needs. However, these are not mainstay providers in the same way that walk in clinics operate in Canada. The NHS and NHS Scotland have periodically funded GP practices to merge through building custom premises, dramatically reducing the number of sole practitioners and micro practices. Capitation has enabled the deployment of Nurse Practitioners and Nurses with chronic disease interests. However, there is no requirement for Nurse Practitioners to be connected to the patient load of a practice or single GP.

Recently, the NHS has spearheaded campaigns to recruit Physician Assistants to add to the clinical mix. There remains daylight between the ratio of physician extenders on the American continent and those found in NHS establishments. For example, amongst the leading NHS practices visited, some employed a Nurse Practitioner but many did not. In the Canadian landscape it was common for the GP to Nurse Practitioner ratio to only slightly favour GPs. The range of allied health and nursing contributions found in Canadian medical homes is not as apparent in the NHS. It is still largely a medical model. With Councils and other Trusts delivering community health, GP practices tend to link with these other providers rather than incorporating the functions within their teams. This means that patients must navigate to hospital diabetes support services and other chronic disease education units rather than accessing these as a continuum of care in their trusted and familiar medical home. In this respect, the NHS is less patient centred. It allocates resources to Trusts and existing facilities with greater dexterity than in the direction of patient preference, cost or comparative performance. That said, the NHS and other policy contributors in the UK are keen to take the patient centred medical home concept forward. The person centric elements of the model of care and how they affect planning, resourcing and engagement with patients are being carefully examined.

Evaluation

Evaluation in healthcare is fraught. However, the inexorable moves by independent agents whether they are funders or providers across so many countries would indicate merit in the Patient Centred Medical Home concept. In the recent submission by the RACGP to the Primary Healthcare Advisory Group, the patient centred medical home was amongst the recommendations of Australia's peak GP registration body. Standing alone, the medical home is not the panacea to the health system ills created by chronic disease. However, much as a skeleton provides a place for organs and the necessary mechanisms for movement, the patient centred medical home is fundamental if other models of care are to be implemented. Whether they involve integration with the secondary care system, adoption of new screening measures, introduction of new therapeutic regimes or simply increased contact and support for patients with chronic disease via access to a multi-disciplinary team, the patient centred medical home provides the roots from which greatness can shoot.

Why? The patient centred medical home is built on access to and use of data in new ways to support the targeting of patient care. The systems which underpin this are fundamental to the data exchanges needed to guide integrated care. They are also the evidence base used to apportion savings to the system and generate new funding pools for innovation.

Core to all of this is the patient. A medical home without the patient at the centre is just another mechanism for organising work to suit clinicians and funders. Denouncing the demagogy of healthcare that it is a system to serve the needs of funders and clinicians who know best is far from complete. Chronic disease patients manage their own conditions and care for the vast majority of every calendar year. Their insights regarding what will assist them improve health outcomes, remain active, reduce time away from work or the burden on carers are fundamental to securing compliance, engagement and co-production. Patient centred care captures aspirations, capability and creativity in ways which will deliver sustainable system change.


Local delivery is also more likely to meet the time and budget constraints of the multi-morbid patient. Their lives can become one long calendar of medical visits and hospital car parking payments. Their capture in centralised medical models also reduces access to local community resources which may improve health and societal outcomes. Building a relationship with a core and continuous care team has been shown to reduce fragmentation, increase trust and improve compliance. These are all necessary to drive down waste and ensure more patients are treated in accordance with evidence. However, local delivery can be much more.

The patient journey has historically been defined by funders and large systems with little recourse to patients. Improving that journey will not only reduce multiplication of the same tests and eliminate waiting, it can also exacerbate or reduce signals to the patient changing their willingness to actively manage their own health. The role of patients and their carers in delivering 24/7 care has often been overlooked in the tussle regarding which player or priority should take centre stage. Patients are on stage with respect to their health each and every day. We have historically refused to attend that theatre at a cost to our appreciation for what is possible in care.

Co-design is when health providers and patients actively engage each other in designing care solutions which make sense to all parties. These solutions have been found to leverage local resources and attention far in excess of systemically generated options. However, this takes time, inclusive processes and patients feeling empowered to participate. Canada has proceeded down this pathway with gusto.

Reviews to the Canadian accreditation framework have refocused attention to care with and through patients. They mandate patient participation in clinical governance functions, patient safety processes and even patient education. Imagine a government sponsored repository of patients whose relatives have died at the hands of the healthcare system. These family members receive training in patient safety and investigating serious and adverse events. They deliver training to clinicians to remind them of the real consequences when things go wrong. They talk to patients and carers and remind them of their duty to speak up when receiving care. Patient safety under this model is a far more transparent system. It incorporates feedback inclusive of patient perspectives on drivers which lead to poor outcomes.

This perspective has led to the development of "client and family centred care". Even the use of the word "client" in place of the word "patient" remains challenging in healthcare. The focus of client and family centred care is not who is delivering the care. It is about better defining the outcomes to be achieved and then addressing who will contribute to ensure the outcome is generated. This is underpinned by co-design.



A medical home without the patient at the centre is just another mechanism for organising work to suit clinicians and funders.

Evaluation cont.

The Guiding Principles of Client and Family Centred Care in Canada:

- *Dignity and respect*
- *Information sharing*
- *Partnership and participation*
- *Collaboration*

The commitments of all parties to designing care are to ensure that services are designed for giving just as much as they are designed for receiving. Fundamental is the right of the patient and their carers to be involved or disengaged. To support their informed choice, patient literacy efforts are receiving increasing funding. In addition, Canada has emerged as the hotspot worldwide for the development of shared decision making tools.

To reinforce the patient view, accreditation audit teams include patient representatives in addition to encouraging patients to share their views via practice specific surveys. In many settings patient representative roles are included on clinical governance or operations management structures.

The journey to embrace the paradigm is well demonstrated at St Elizabeth's, a healthcare provider of Catholic origins. Their mission is to spread hope and happiness. Even this wording represents a broader healthcare ideal. Based on their engagement with what they term person and family centred care they have moved from:

Patient Centred Care

(deemed too illness focussed)

To

Client Centred Care

(ultimately deemed too challenging for healthcare staff)

To

Person Centred Care

(deemed more holistic and mutual)

With active steps to embrace the person and their family as appropriate

One way of living this approach was to empower their paid carers, the lowest level of health contact, to ask their patients questions along the lines of:

- 1. What is the most important thing I need to do for you today?*
- 2. If I have a few minutes left before I finish today, what would you like me to do?*
- 3. Is there anything I need to tell the office (re changing their schedule, plans, equipment, etc)?*

They report that their focus has moved from providing care to enablement, a much more mutual framework for co-production, the ultimate consequence of co-design reaching its natural ends.

Evaluation cont.

The core lesson from this move to co-production is that initially it challenges staff, many of whom gain great satisfaction from what they do “for” people. When working with and through others, staff can experience a loss of power. They need to adopt a new vision for what the outcomes of healthcare need to look like. It is a little like being a parent. Acute care often involves telling patients what the diagnosis and treatment will be, a bit like the mother of a toddler intervening and re-asserting authority. However, as the issues become more complex, as they do with chronic disease, you need to engage the adult in co-delivery of the solution most likely to fit their circumstances. Healthcare workers who have made this transition at St Elizabeth’s reported their work was more satisfying and less stressful.



So with models like this you are immediately extending the care team. This may increase the time required to generate solutions. UPMC in Pennsylvania has recognised this challenge. Already a top 10 hospital system, they have embraced primary care as a mechanism for delivering even greater value and innovation in care. UPMC are trying to implement a system where their primary care doctors are assigned half an hour or more to see each patient. Those consultations are supported by Medical Assistants who address pathology and take other biomarkers in advance of and after the medical episode of care. Hence, the total time a patient is involved in the interaction can easily extend to 45 minutes or more. However, the whole premise of the medical consultation is that plans will be generated with the patient. Acute and reactive issues are left for Nurse Practitioners associated with the doctor and that patient to deal with in future consultations. Thinking, discussing and mutually agreeing a desired course of action are the contributions involved to produce the plan or at worst, set the direction and allow other parties like Nurse Practitioners to finalise the plan.

This is a very different model to the time constrained consultations doctors frequently have in Australia. Little deep thinking is possible when working against the clock. Working without the benefit of someone warming up the patient and uncovering core issues and drivers means the element of surprise undermines delivery of a planned intervention. Conversation is further limited when the doctor is trying to type notes at the same time as elicit agreement. Often, with no nursing input or access to tools and information which can support informed decision making, patients are less prepared to make decisions related to their preferences. The spectre of primary care delivery means patients and their families are unused to entering the process of decision making as an equal. This may lead to heavier reliance on surgical and medical interventions, a more costly patient journey than others which may produce equivalent or just as satisfactory results.

The Care Team

Multi-disciplinary teams are the future as the pendulum in primary care swings to serving patients with chronic disease. The doctor in such environments is not the sole or even primary delivery agent. In fact, they may have far less contact with patients than other members of the team. Their role becomes focussed on use of their training in diagnostics and prognosis to identify key junctures in the patient journey which require change to treatment or the management plan.

Once treatment is defined or a management strategy in place, less skilled members of the care team take over. Their role is supporting effective patient engagement, co-ordination of implementation and monitoring results. These team members only escalate the patient to medical review when targets are not being reached within the framework set or an agreed time period has elapsed.

For example, Registered Nurses may be empowered to generate scripts for repeat medication where the therapy has resulted in the patient approaching, achieving or remaining at target. If the medication has the potential for more severe side effects or the patient is on a larger number of medications, a Pharmacist with additional clinical skills could review the patient, assess prescribing options (paying particular attention to scripts which may offer opportunities for drugs to be dispensed in combination), polypharmacy issues and even make recommendations about de-prescribing. In America, a PhD level program is offered to pharmacists so that they can work as primary care providers. Such primary care providers care for patients in many of the same ways we currently associate with GPs. If funding is related to an annual year of care for a patient and the outcomes achieved, inclusive of savings made in their medication expenses, it makes sense to deploy a variety of primary care providers. Each is suited to different types of interactions or patient groups.

The consistency required to reduce fragmentation of care is delivered in two ways; remaining within the one medical home ensuring everyone can access the same patient record and coordinating the patient’s care through one nurse. The nurse becomes the hinge relationship rather than the GP. This does not mean the nurse is expected to be the most expert member of the team. The nurse is expected to have the most continuous relationship and through this, flag with other members of the team issues in the patient’s life or course of treatment which may be problematic. The other members of the team are then coordinated by the nurse to intervene. The trusted, ongoing relationship with the nurse allows other members of the team to enter the spectrum of care well briefed and under the relationship halo of the nurse. Leveraging nursing time to generate and maintain therapeutic relationships seems to draw on the more patient focussed disposition of the majority of nurses. Gains also arise from their cheaper per hour cost. More time for the same funding means improved understanding of real patient needs, drivers and perspectives, critical for stimulating self-management.



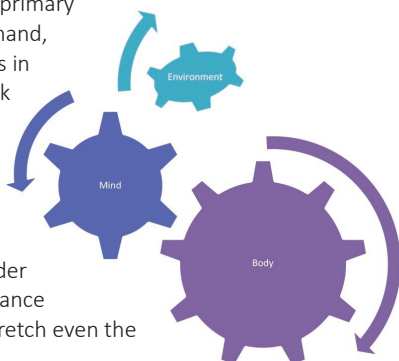
The Care Team cont.

Of course, the American system has given rise to greater variety of primary care providers because payment for doctors in this sector has been comparatively poor. This reality has reduced the medical workforce pool. In turn healthcare systems have created a plethora of providers working under huge pressure to service a growing stream of patients. The logic of how these different providers relate to each other or should be organised to support different types of patients has been less thoroughly thought through than might be expected. Therefore, simple replication of the American model is not recommended until a real coherence of the parts is articulated and tested. This calibration process may drive up the efficiencies already obtained within the American system whilst improving the clinician satisfaction derived from working in the model.

For example, the emergent nature of the American model can lead to limited decision making structures determining which patients should be assigned to which type of provider in totality or occasion of care. On many occasions, I was told that it did not matter if a patient saw a GP/family physician, a Nurse Practitioner, a Physician Assistant or a PhD qualified Pharmacist. This was most pronounced in areas where multi-disciplinary teams around the primary care provider were small and hence siloed activity fostered by the environment. This seems an unusual result given the differing developmental pathways of the various primary care providers. To maximise the utility of the various groups, it would seem to make sense to allocate patients more rationally, acknowledging that over time patients may deteriorate and need assignment to teams led by more qualified clinicians. This may also be a way of providing career paths, ensuring time is taken to mentor less skilled clinicians and reduce the fragmentation of care.

Chronic diseases more frequently arise in patients with poor diets, low activity, obesity, addictions, mental health issues and the aged. What generates the physical presentation can be just as significant for long-term outcomes as the immediate therapy selected. To that end, the behavioural insight is fundamental to treatment. Access to life and health coaching, psychological support to overcome the challenges of life transitions, addictions treatment to reduce reliance on poor coping strategies and education which cements new behaviours are all important contributions to delivering improved outcomes.

This focus on behaviour modification for people with sub-clinical or low level mental health conditions is new for primary care. In most systems its value is unrecognised. The detail is currently performed by a largely unskilled mix of nurses and GPs cramming behavioural modification processes into what is funded as an acute care episode. Blending chronic disease care with long-term care for those with more pronounced mental health diagnoses is also a comparatively new process for the primary care community. In many countries, the need for mental health support in primary care was far short of the demand, despite recent advancements in funding and training. This lack of supply reduces the impact primary care could make in changing the trajectory of disease progression or maintaining wellness. Extending this role into broader behavioural and life circumstance related considerations will stretch even the most well-resourced system.



Taking into consideration aspects of the patient's life which impact on their clinical presentations but which are driven by social and lifestyle issues is something most primary care providers have felt disempowered to do for decades. Housing quality and stability, food security, personal safety, life predictability and self-direction are all fundamental to patients being able to organise their environments to achieve better physical and mental health. However, for a significant proportion of the population this is an ideal not a reality. The role of primary care in forging links between the patient and other players in the broader environment who can impact on the social circumstances and lifestyle choices of individuals and the population is an entirely new perspective for primary care. This, at times population health level of focus, is a new arena for engagement. It requires new paradigms, skills and vocabulary for primary care players. This is before funding considerations are even raised.

The role of primary care in forging links between the patient and other players in the broader environment who can impact on the social circumstances and lifestyle choices of individuals and the population is an entirely new perspective for primary care.

With this level of input into patient care, what is the role of the GP? The GP becomes the ultimate problem solver in relation to what is wrong with patients and which paths should be considered for treatment or intervention. Once these decisions are made, they step back and ensure orchestration of the rest of the movement takes place. The ongoing roles may only be clinical governance, looking at data about patients and making choices about when a patient requires further high level review or referral to an even more specialist provider. This is an entirely different role, relationship to the patient and style of interaction in a primary care environment.

Intraprofessional care rather than interdisciplinary care is the way forward. Assessments of patients will increasingly focus on whether disease is being driven by psychosocial or biomedical drivers or a combination of both. Where the psychosocial elements predominate, improved access to behavioural support and social sector resources will be fundamental to stemming disease progression. In Australia, as the often only freely available and ubiquitous resource, GPs have been forced to medicalise social and behavioural issues. Their funding envelopes and training do not precipitate alternative interventions.


This is clearly suboptimal and may represent a more expensive solution overall. What seems to be important is that access to these professionals is immediate and contiguous with the medical interaction. A core component of the Adirondack Health Institute's medical centre model is the introduction of addictions counsellors and onsite psychology. Iora Health, delivering care under the Medicare banner in the United States, employs health coaches to see every patient before they engage with a clinician. They also employ psychologists and mental health nurses to more directly support those within their over 65 population of patients requiring additional support.

The Care Team cont.

Canada seems to be the outlier. They have extended waits to see psychologists. This part of the sector earns rates per hour closer to GP remuneration. This occurred once the government agreed to fund access in primary care without significantly increasing the workforce. However, patient centred medical homes do have capacity to employ onsite psychiatrists, typically for one session per week. Included in their paid session time is up to one hour per week to case conference with their GP colleagues regarding patients being managed by the GPs. Mental healthcare like this attracts a chronic disease management bonus under the capitation funding model.

To work in a multi-disciplinary environment effectively, a multitude of changes are required. First, doctors need to be trained to work within a team. For the latest generation of recruits in Australia, team based care has been included in the curriculum. However, the focus of the practical application is often over a hospital bed or with an outpatient setting in mind. This may not reflect the direction of general practice. The current training is also focussed more on discussions related to planning and shared care than coordinating immediate responses and being ultimately accountable for results arising today and over the longer term.

Squirrel Hill Medical Centre, a federally qualified medical centre serving disadvantaged groups in Pittsburgh asks every patient to complete a screening questionnaire prior to every consultation (extract provided).



TODAY'S DATE: _____

Patient Visit Sheet

Please complete before your visit and keep to give to your provider

Name _____ Date of Birth _____

1) What would you like to discuss with the doctor today?

- _____
- _____
- _____

2) Over the past two weeks, how often have you been bothered by any of the following problems?

	Not at All	Several Days	More than Half the Days	Nearly every day
1) Little interest or pleasure in doing things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Feeling down, depressed, or hopeless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Where the patient indicates levels of psychological distress, they are directed to see the onsite behavioural team prior to engaging with their physician (which may be either a doctor, Nurse Practitioner or Physician Assistant). In addition, the practice is attended by a Psychiatrist on a part-time basis. This means the needs of patients with every level of complexity can be dealt with. The trust built between patient and primary care provider is also able to transfer to behavioural team members as they are seen as part of the same whole. Little psychological resistance can be built up when patients are visiting the same site and do not have the stigma associated with visiting dedicated mental health facilities.

When meeting with their physician, if it becomes evident that they require ongoing behavioural inputs, this can be organised in advance. What is important about this system is not just that the mental health of patients is foremost in care provision but also that the diaries of the various care providers are sufficiently flexible to allow on the day discussions as well as planned consultations.

The Care Team cont.

Nurses also need to be upskilled in this way of working. Nurses have historically been protocol driven and responsive to direction. The more autonomous roles available in the patient centred medical home require increased reliance on clinical judgement and deeper understanding of various diseases and drug therapies. The Hong Kong Hospital Authority has taken this challenge very seriously, engaging in an ambitious scholarship program. Nurses are sent overseas for periods of a month to study chronic disease care provided by nurses in settings around the world. This scale of investment is remarkable given the participating nurses usually hold Masters level qualifications, often obtained in other countries. This program is now an established component of the Hong Kong government's response to upskilling its workforce and generating new ideas for primary care delivery.



Hong Kong nurses visiting Inala Primary Care.

New communication strategies may also be required by nurses to conduct motivational interviewing, engage in social prescribing, facilitate shared decision making, work as a patient advocate or participate in co-production. Finally, the nursing teams in many of these facilities are large and offer real career pathways. Practice nurses in Australia often work alone or in very small groups without a team leader. Their ability to manage less skilled nurses and larger groups of nurses needs to be given serious consideration. The pay rates primary care nurses have historically attracted will also rise. Presenting data to nurses related to their own performance so that they can modify their conduct to deliver improved patient outcomes will also be necessary. This may be easier to deliver to Nurse Practitioners and others involved in prescribing or case management than to nurses working in patient screening, triage and support where the data might be more frequency and time based than outcome related.

The ultimate benefit of providing a multi-disciplinary environment is that more care can be delivered and supported at much lower cost with improved outcomes. Patients will often experience vast increases in time spent engaged with their care and also be supported to take more responsibility for themselves, further multiplying the gains. Given the rapid growth in demand anticipated with an ageing population, training less skilled health workers would appear to be a far more efficient and effective solution than continuing to ramp up medical or even nursing programs and pathways. Less skilled workers can also have unexpected benefits.

New Mexico is a large, poor and geographically dispersed state in America. Small communities of migrants and Indians offer unattractive work environments for doctors. In line with trends from studies of the social determinants of health, these groups are significantly more likely to be affected by infectious and chronic diseases. They are also far more likely to be uninsured or under insured, meaning available funding needs to stretch even further. The University of New Mexico has obtained funding to pilot a service in six locations for multi-morbid and very disadvantaged patients. The Complex Care Service involves teams constituted by:

- *A Nurse Practitioner or Physician Assistant as the medical lead*
- *A Registered Nurse who works as the main team coordinator*
- *A Social Worker*
- *2 Community Health Workers*
- *A very part-time Physician*

To be eligible for the service, the patients must be multi-morbid, have been hospitalised in the last six months, had at least one other hospital admission in the previous 12 months and issues with addiction and/or mental health. The model's activities over just less than 2 years would indicate a reduction in hospital admissions by more than 60%, a remarkable achievement. The costs to the insurance program dropped from \$3000 per member per month to \$1800. This has been achieved with the main workforce being low skilled Community Health Workers. Most worked as Medical Assistants, an occupational group which often receive as little as three months of certified training, before joining the pilot. At the commencement of the program, they received a three day face to face induction and then two hours a week of learning and case review over the next three months. This second component is delivered virtually and focusses on improving skills in relation to motivational interviewing, case management, disease specific knowledge and lifestyle interventions.

Being drawn from their communities, with many being survivors of violent relationships and homelessness themselves, the Community Health Workers provide more than in-home care. They are role models of possibility and advocates for patients as the pilot develops. Each team is tasked with supporting 125 patients within the model. Hence, the Community Health Workers can be asked to manage a case load of 50-60 patients. Most importantly, this model supports improved outcomes in inaccessible communities with hard to reach people. Using video conferencing technology to provide training and also to review difficult cases, a team of specialist physicians in Albuquerque have ensured that this model well and truly lives up to the Project Echo challenge of "moving knowledge instead of patients". Each week, case reviews of more complex patients are submitted by the field teams for discussion. The process builds collective confidence across the network with regards to managing multi morbid patients. The ease of access to a group with Psychiatry, General Medicine, Addiction, Pharmacy and Nursing expertise means that on the ground teams are well briefed and learn from each other so that subsequent cases can be locally managed. In addition, the Project Echo specialty input group includes people from Legal Aid, Housing and other social sector providers. Thus bridging the real needs these patients have to manage their long-term conditions as well as their general wellbeing.

Section 3 | Management, A Change in Direction

Management Challenges

Multi-disciplinary teams and patient centred medical homes multiply the number of people involved in primary care. It has already been suggested that training and new roles exist at a clinical level to meet this emergent challenge. However, every primary care facility is much more than just a workplace for clinicians.

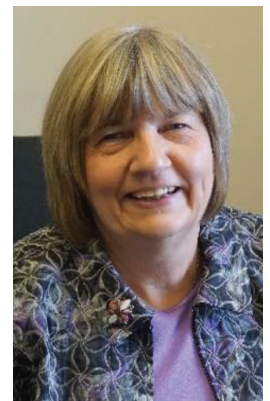
Practice Managers in these environments take on new prominence. Their contribution can be so important that insurance groups in the USA, like UPMC, actually pay for practices to hire more management focussed operatives. If the practice has no appetite for directly engaging the necessary complement, UPMC operates a hub and spoke management service. This shares different sorts of expertise across the medical practices associated with the fund.

The Adirondack Health Institute offers a corollary service. They employ Practice Development Officers across sub-regions to assist practice managers to install and work with new reporting systems, hire staff and manage them, plan for expansion and even supervise the building of entirely new facilities. The Practice Development Team also look at new models of care, partnerships and possibilities across the network and liaise with other Adirondack Health Institute staff to put proposals to insurers. This ensures the ongoing evolution of the delivery system.

In America and Canada, the accreditation requirements of patient centred medical homes means that these providers have their own network, conferences and professional development providers. Most Practice Managers in these situations are clinicians with a Master of Health Service Management or experienced managers with MBAs. Their core toolkit is the ability to manage teams capable of interrogating data and managing clinical intelligence systems to ensure patient care is high quality and thereby clinicians and the practice receive maximum payment bonuses. The Montefiore Medical Centre, which is part of the UPMC insurance program, receives 46% of income from quality indicators with the remainder being based on activity. Therefore, attention to data, reporting, quality and controlling patient management within evidence based parameters through a large team is in every days' work.

In addition, the Practice Managers are responsible for driving cultures where the large teams are well functioning, finely attuned to the needs of patients and highly responsive to options for driving down costs. In such systems, success delivers increased income to the practice which can be invested in ongoing innovation.

In the UK, the move to more comprehensive care environments has been slower. Consequently, a number of groups have seen opportunities to merge or take on the management challenges of others as a specialist management provider. This move to mega-practices has been strongly endorsed by the NHS. New funding streams have been provided which recognise the capacity of these large practices to provide specialty care streams, drive integrated models of care and even run out-patient style services on behalf of nearby hospitals.



Joanne Riley, Practice Manager, Montefiore Medical Centre, UPMC Pittsburgh.

The UK Primary Care Workforce Commission 2015 report "The Future of Primary Care" recognises the following categories of GP association as supporting its goal of practices being large, linked and enabled to provide high quality care:

Super Partnerships – large scale single partnerships created through formal partnership mergers

Multi-practices – small-scale GP partnerships managing multiple practices and services

Federations or networks – collaborations between multiple practices through informal linkages (networks) or formal contracts (federations).

Management Challenges cont.

The Vitality Partnership in Birmingham is a case in point. The CEO is a Masters qualified entrepreneur in equal partnership with the medical partners of the foundation practice. The practice has been rapidly expanding by merging with other practices and thereby creating a delivery network in the region. At last count, they had merged nine practices in the space of a few years. Core to managing this growth was a strong management function led by an Executive Board inclusive of:

- The Executive Partner (representing the partners in the practice)
- Director of Primary Care
- Medical Director
- Director of Corporate Services
- Director of Specialist Services (Medical)
- Managing Director (non-clinically trained partner with overall operational responsibility)
- Finance Director
- Non-Executive Director

In addition to monthly Executive Board meetings, the group runs monthly Clinical Group meetings. These provide further opportunities for clinical leaders to have input, ensure quality and safety and drive consistency across the group. To reinforce the need for management perspectives, new practices are not automatically guaranteed a seat at the decision making table. Even GPs who were previously practice principles need to agree to become a specialist in an area of care or business operation before they will be considered for election to a role or entry into the partnership. They also need to take on one area of performance dictated under the Quality and Outcomes Framework and monitor performance and improvements across sites. If their performance in these roles is deemed by other partners to be satisfactory, they are then invited to become a partner in the overall Vitality Partnership.

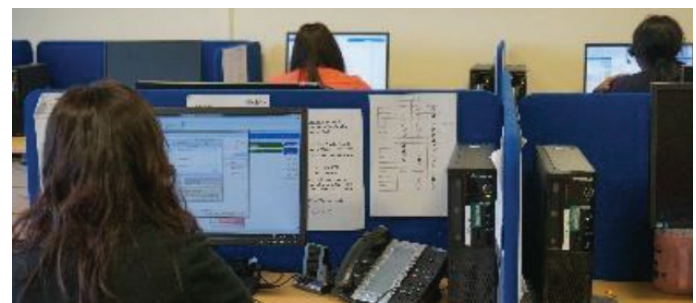
Economies of scale have been achieved in administration by centralising the phone booking process, running a secretariat service to support doctors via a pool of medical secretaries and processing all accounting and IT through a central hub. The central hub is also home to a telephone support service. Patients are screened by nurses when they wish to make an appointment. If required, doctors can connect with patients by phone to elicit further symptom details or provide more medical insight. Where the doctor or nurse deems the patient requires an appointment, they are then booked in. This has reduced face to face appointments such that in one practice between 300-400 patients are seen each week with a further 150-200 supported by telephone consultations. Similar proportions of care are being achieved in New Zealand practices which have embraced nurses and the telephone support model.

To maintain local responsiveness various committees and clinical governance structures exist within the Vitality Partnership. These allow those with a passion or demonstrated expertise to take leadership of various parts of the business. Economies of scope are also present. The group has fostered GPs with special interests across the network. Various sites specialise in functions like dermatology, diabetes, rheumatology and other diseases in addition to standard care. This allows for coaching, internal referrals across their system, improving patient management and reducing costs of service.

Most importantly, to sustain this momentum and ensure referrals from other GPs in the area, the NHS is now contracting 29 Vanguard sites.



Enki	BCU	
Calls waiting 0	Calls Waiting 0	7
Offered 130	Offered 0	5
Answered 129	Answered 0	712
		698
		84
HWMC	SMC	
Calls waiting 0	Calls Waiting 0	0
Offered 135	Offered 81	00:00
Answered 135	Answered 84	0
		02:07
PHC	Hollybush	
Calls waiting 0	Calls Waiting 0	74
Offered 172	Offered 19	73
Answered 170	Answered 18	1



Management Challenges cont.

These sites are provided with additional funding to generate new models of care which integrate primary and secondary service provision. The Vitality Vanguard contract means that Vitality is now a recognised multi-disciplinary community provider or MCP in the area of aged care. This means they provide a single entry point for patients and are funded both to deliver care and navigate the system on behalf of patients under their management. They are piloting systems so that patients who present to Emergency are where appropriate directed back to their GP. The hospital and GP clinic liaise to block out GP time so that the patient is expedited back to primary care. The GP clinic is also paid to do education with Gerontologists and ED physicians so that they better understand the capability of the primary care system.

The Vanguard model has been embraced by the NHS Hospital Trusts. In both Birmingham and Glasgow recent hospital builds have merged previous hospitals into one entity. To further drive innovation and efficiency, overall beds under management have been reduced by very significant proportions. For example, in Birmingham beds have gone from over 1200 back to 700 with an expectation that primary care will pick up the difference in patient load. This has created greater interest in collaborating between the two sectors, with the Vanguard funding model one means of stimulating and sustaining integrated models of care. The clinical and leadership challenges of such cross sector projects are substantial. It requires additional investment in and grooming of team members.

Supporting all of this clinical innovation at Vitality is ongoing innovation in business systems. The Group has a separate IT business which has developed the telephone, patient management and clinical governance supports required to manage such a multi-faceted, multi-site operation. Some traditional management structures remain, with each site employing a Practice Manager. Their localised and daily focus is augmented by input from a Head of Operations, a leader for Governance and Quality, who supports the Clinical Management Group, and a Central Operations Manager looking after the centralised clinical support functions. This is in addition to heads of IT, Finance and the Managing Director. Such an organisation provides a career path for Practice Managers whilst also removing much of the professional isolation felt by many Practice Managers.

Information Technology as a Management Extension

Clearly, groups like Vitality are actively investing in smart technologies to support clinical operations, harness efficiencies and ensure safety. Clean data is key to ensuring they are paid appropriately in their annual Quality and Outcomes Framework payment. Throughout the year a coding system is deployed to ensure that the various clinical leads are attending to the patients falling behind with screening, immunisations and other incentivised interventions. Vitality uses the RAG system, well established as a project management tool. Each of the elements of the QOF are listed and red, amber or green (hence RAG) assigned to progress against each measure. A number of the US based systems applied a similar process. Given the annualised nature of the QOF process there was no benchmarking of performance of practices except within the Vitality group. This has proved to be an internal competitive stimulant with practices reaching new highs and earlier attainment of goals. This in turn reduces the burden of the “crazy months”, noted by many in the NHS as the weeks leading up to the annual data submission.

Where performance moves from flow to outcomes, more data will be required to manage both quantity and quality. In New Zealand, the possibilities for measurement are extraordinary. Over 300 performance measures were being discussed for inclusion in the performance framework negotiated between GPNZ and the Ministry of Health. Practices can select around 30 measures they wish to focus on from this gamut of possibility. Their flexibility in doing this will be constrained by the benchmarking program of their catchment based Primary Healthcare Organisation. Many PHOs provide monthly reports to practices in their catchment on their relative performance within the catchment. Such processes were common in US insurer models, some opting for monthly, others quarterly data.

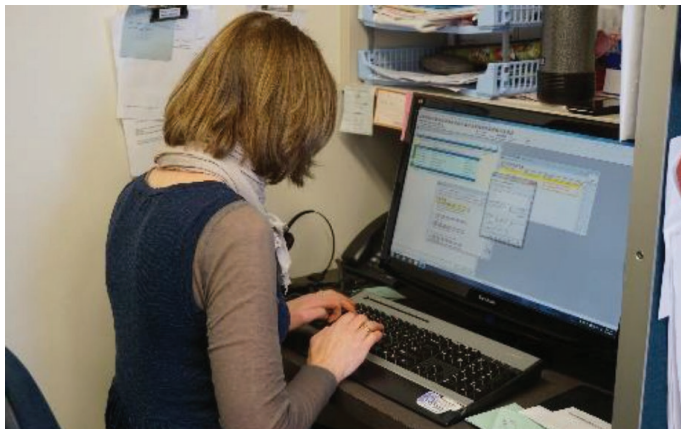
The value of the New Zealand model was the flexibility practices had to adopt measures which had received rigorous review and could lend themselves to benchmarking without having to pick up everything. It is unrealistic to think that practices will be able to attend equally to all of the signals arising from a panel of indicators of upwards of 40 measures. It is equally unrealistic to believe that every patient neatly fits “treat to target” indicators which health systems can produce.

A common complaint amongst American primary care providers was that each month they had to provide the same explanation to insurers regarding particular patients whose treatment appeared to fall beneath set thresholds. It is suspected that the insurer panels of benchmarks will improve over time to be able to more effectively accommodate clinical decision making and patient variance without undermining the overall intent to achieve consistent quality.

The New Zealand option, to periodically focus on areas of interest or significant risk and achieve in those, has the capacity to enable practices to localise performance to the unique needs of a region. They can also garner the necessary attention to really innovate. This is a bottom up approach very much at odds with the top down nature of most of the US systems studied on this tour. Doctors involved noted that it feels empowering rather than imposed and stimulates creativity rather than reinforcing mundane operations. In both systems, new indicators were often associated with additional education for clinicians. This improved attention, created readiness for adoption and enhanced capacity to comply. When indicators were more mature, sharing the approach of the best performing sites or providing additional incentives to gain a top five or 10 position in a region are necessary to keep driving up outcomes against targets. Remembering that primary care sites are generally small units of willing people stretching across 30,000 odd diagnoses is fundamental to ensuring incentive systems are not punitive but leverage the strengths of the system.

Another emergent trend was the deployment by practices of patient portals. Again, New Zealand was a leader in this regard with a number of PHOs actively fostering the creation of portal systems within their jurisdictions. Developing portals which are truly engaging and support patients to self-manage, reduce their visitation rate by being able to securely email their clinical team and exchange data and even access pathology results within the normal range was deemed to be a potential benefit of the current New Zealand pilots. The portals are also areas where the PHOs can deploy patient support tools across the practices they support. This may be a way of increasing the penetration and usefulness of the rapidly growing number of applications and systems emerging to assist with patient education and self-management. In line with the PHO role to commission services from their respective practices, PHOs can also aggregate data to provide insights into regional needs. They use this to develop population based responses which will increasingly involve technology and patient self-management.

Information Technology as a Management Extension cont.



Nurse at Newtown Medical Centre processing script requests.

Given nurses in New Zealand are already involved in running repeat script telephone request lines, telephone triage and chronic disease case management support services, it is a natural evolution for them to be involved in reviewing the data some of these online patient support tools generate. Where relevant, they follow the existing models of work already in place where they escalate patient review to a doctor. If the biodata remain within tolerable limits, the nurses retain responsibility for patient management. Adopting similar models in Australia will be more difficult in the absence of funding which supports extended nursing time for chronic disease patients. Barriers also exist if doctors can only claim for care when they are face to face with a patient. Most of these systems can record who interacts with them so virtual consultations and data review are enabled by these approaches just as they enable patients to engage with their own care. Sadly, Australian funding models do not empower clinical teams to move to these models of workflow and patient self-management, despite the capacity for an audit trail to be generated.

Notably, the portals have only some features in common with the Australian My Health Record system. The ability of hospitals in many regions to access patient records held in general practice means that less need exists for a transferable patient health summary. Of course, portals will be more effective where patient health literacy, access to technology in the home and general enablement levels are high. Rolling out portals as a “solution” rather than as a tool which will appeal to some is a mistake some regions appear to be at risk of making.

Another application of IT is in patient monitoring. A visit to the Ottawa Cardiac Institute was revealing. This institution allows all patients to have full access to their patient files. The Institute’s data and performance against patient outcome measures is valued highly within the organisation and used in patient and GP education initiatives. The Quality Board within the Institute is the most highly sought after appointment as data is seen as so key to driving innovation and patient outcomes, so everyone wants to have a role.

Adopting similar models in Australia will be more difficult in the absence of funding which supports extended nursing time for chronic disease patients. Barriers also exist if doctors can only claim for care when they are face to face with a patient.

CASE STUDY



Dr Thierry Mesana, President and CEO of the Ottawa Cardiac Institute.

The most innovative use of technology within the Ottawa Cardiac Institute was the development of an interactive voice response system. Once patients are discharged they are followed up by an automated phone system. This system uses a variety of algorithms to know when to contact patients and what to use as an engagement strategy based on the patient profile. The system asks questions like:

- *Did you buy your drugs (naming each on their medication list)?*
- *Have you purchased your scales?*
- *Did you organise your appointment with your GP?*
- *Have you been given a follow-up appointment time with your physician?*
- *Do you want information on various topics mailed to you?*
- *Would you like to listen to various short educational case studies? (patients can listen, skip or even nominate times they would like to do the sessions)*
- *How satisfied are you with the care, system of support, etc?*

The system can also be programmed to collect biomarker information from patients and monitor patients virtually. The response to the system has been extraordinarily positive. It has improved the proportion of patients accessing the right care in the right place at the right time leading to ongoing gains in clinical outcome measures. The cost of developing each algorithm set was listed as just \$60K (Canadian), well within the capacity of many integrated care project partners.

Deployment was far cheaper than use of nursing and administration staff who have historically been involved in this style of contact. The technology also enabled much more frequent and comprehensive patient support. Where patients do not engage with the system or report behaviours likely to impede their recovery, they are followed up by trained Cardiac Nurses. Hence, this part of the care team are increasingly focussed on value adding patient interactions rather than simple collection of data. Increasing efforts are being made by the Ottawa Cardiac Institute to engage with the primary care sector. These are deliberate and recognise the geographic spread of their patient base, costs and most importantly, their desire to remain the most successful provider of heart health services in Canada and one of the best on the American continent.

Section 4

Clinical Innovation: New Models of Care

The Interface of Technology and Clinical Practice

Technology is only useful where a volume of standard activities or data sets is produced within a system. Many have strained against the application of technology to healthcare, charging that each patient is unique and clinicians, especially doctors, should have the capacity to use informed judgment. Dr Atul Gwande's more recent works, especially his book "The Checklist Manifesto" have gone some way to addressing the value of consistency and protocols in every healthcare environment.

In many catchments, the growth in the Octogenarian cohort is generating increasing numbers of multi-morbid and frail patients. The number of decisions which need to be taken regarding these patients both in terms of treatment and de-prescribing is far beyond what most physicians have been trained to do. Devon in the UK has the most aged profile in Europe with 8.7% of its population over the age of 85. It's "English Riviera" status has meant it is a magnet for retirees from across the UK. This has stretched the capacity of local health systems.

One response has been the development of frailty guidelines. Initiated in the Hospital Trust in an effort to reduce medication costs and errors as well as friction between clinical groups, the guidelines are now a collective protocol system influencing activity in both primary and secondary care. The guidelines were generated after extensive review of evidence to inform the clinical practice of the various sub-specialties. The result has been increased confidence by GPs in managing frail aged patients in the community without reference to specialty input. Lower hospital admission rates have also been achieved. In particular, GPs have been empowered to support patients and their families with conservative management, reducing the costs of futile end stage care on the hospital system. This approach has also reduced admissions due to patients inadvertently confusing their medications. This has been achieved via inroads into de-prescribing where clinically validated.

The further hope is that patients experiencing a decompensation, surgery or debilitating episode will be more appropriately assessed

and supported to return to a new level of improved function. Seeing patients through the lens of a differential frailty system, which articulates one goal as being to help patients establish and maintain new baselines on rebound from a major health event, is being embraced as a medium for reducing the homogenous treatment of the frail aged. When everything seems complex and on a downward path there can be less motivation to try and achieve new levels of improved function. There can also be a reaction by GPs to want to institutionalise the care of such patients via hospital stays or domiciliary environments where "experts" become responsible for care. However, the ability of our systems to be more responsive will not only add dignity to lives and reduce carer stress, they will save costs by maintaining people in their homes for longer.

Seeing protocols as a technology may be a stretch for some. However, agreeing on standards and developing more consistent approaches to care is mandatory if many types of other technologies are to be applied to improving the patient journey. In the case of Devon, this has already led to greater standardisation of referral criteria which in turn will lead to improvements in the exchange of data as well as patients between the primary and secondary care settings.

Developing shared understandings between the primary and secondary sectors is core to integrated working. It enables identification of real issues rather than blaming each sector for its contribution to a given result. Clarity equals consistency, consistency equals a pattern which can be recognised, recognition creates volume which can be organised and organisation creates outputs which can be compared.

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The Interface of Technology and Clinical Practice cont.

These are all vital to drive innovation and efficiency. Getting the delivery of healthcare on an evidence based footing is the first step in this process. Having the guidelines and protocols shared and understood is the next. This footing creates room to open up conversations regarding where and how care can best be delivered. This is important before moving many aspects of care from the specialty or medical realm into other parts of the sector. This applies equally to distributing work across a multi-disciplinary team and utilising technology in new ways to support both clinicians and patients.

Another approach to complex patients which shows potential for much broader application is Project Echo. This system was referenced earlier in relation to initiatives for regional, multi-morbid and disadvantaged patients. However, it warrants further explanation.



Project Echo is an initiative of the University of New Mexico. It was piloted eight years ago by Dr Sanjeev Aurora, a Gastroenterologist in Albuquerque. Like many health systems, Hepatitis treatment was fraught by extended waiting times and poor adherence by patients to the interferon treatment usually prescribed. In order to provide improved access, reduce the potential for disease transmission, increase clearance rates and ultimately reduce cancer cases, Dr Aurora embarked on a journey to deploy technology to multiply knowledge. His goal was not to improve use of tele-health. Tele-health is defined for this purpose as where we connect a physician in one location with a patient in another. The problem with hepatitis is that patients so frequently have their diagnosis missed or ignored. They also need such long courses of treatment or ongoing surveillance to detect cancer early that tele-health was insufficient to address detection rates, waiting times or improve compliance by both patients and their care providers.

Project Echo uses video conferencing technology to link clinicians. Cheap web cams are provided to sites to enable this process. A propriety software system called Zoom has been licensed which enables the teams to see each other and combine views from multiple screens. For example, in Albuquerque a screen is dedicated to images associated with patient case notes or training materials. Other screens show the faces of the various teams participating in the videoconference to build a sense of community. In the event that a practice operates with just one screen, a combined view is generated so that the combination of information is not lost.

On occasions where the clinical team believe it might assist with building patient engagement, patients are included on the video conference. This is unusual. The main use of the technology is to provide education to doctors and nurses in primary care so that they are attuned to the demands and treatment protocols of liver disease. Its second use is to accelerate access to specialty input for primary care teams so that they can more effectively treat complex or new presentations. Therefore, the system is a many to many process. More ingeniously, the access to advice is mediated by the primary care team presenting a case which is viewable by other primary care teams involved in the video conference. Therefore, the case review becomes part of the teaching exchange, further adding to the multiplication potential of the system. Having become more skilled, the primary care team is expected to start treating and managing patients without reference to the central hub of experts. They are still encouraged to participate in the scheduled Project Echo sessions to stay abreast of changes to drugs or protocols, but will experience no pressure to present an ongoing case list. In this system, being a "lurker" is not viewed as being an inactive participant.

The final multiplier is the range of clinical input provided to each case. The central expert panel is constituted by a range of providers. For example, a typical hepatitis panel would contain an Infectious Disease Physician or Hepatologist (or both depending upon availability), a Pharmacist, Psychiatrist or Mental Health Nurse, Addictions Specialist or Social Worker and a Nurse. Together this group of informed experts adds their commentary to the advice provided by other primary care teams who might comment on like cases they have treated. The combined recommendation is documented by the Echo Nurse Administrator and sent to the primary care team who referred the de-identified case. The system collects information on participating sites and providers. Logs can be sent to each site annually for use in documenting professional development.

The success of Project Echo in treating hepatitis led to its application to a range of other diseases and patient groups. It has been adopted as a core clinical system in many states in America and countries as diverse as Uruguay and Namibia. General Electric is funding a pilot to expand the network to embrace all Federally Qualified Health Centres in the US. The aim is to link them with academic medical centres to improve the care available to the disadvantaged. This is being driven as those with only Medicare or Medicaid insurance are usually deemed "under insured" by private specialists. Hence, patients with chronic disease in these circumstances have difficulty accessing secondary care unless it is as a last resort. However, a not dissimilar circumstance exists in Australia in disadvantaged and regional catchments. Despite our free public hospital system, considerable waiting lists can exist. Patients in regional areas can find the travel costs of accessing care a real barrier to provision of service. Adopting a very cost effective solution like Project Echo, which is based on a free market commons philosophy, could reduce the stress of GPs holding these patients and improve patient take-up of care. Sadly, under our current funding models paying for the time of GPs and Practice Nurses to participate in the videoconferences would be challenging as neither the tele-health nor case conferencing item numbers lend themselves to this application. In particular, GPs serving disadvantaged catchments in inner city areas are excluded from tele-health. Therefore, any consideration of this model needs to acknowledge that complex patients and disadvantage are not just bastions of regional and indigenous communities.

Clinical Integration

Both the frailty guidelines in Devon and Project Echo are exemplars of health integration. The development of such approaches was a common development in all of the countries and catchments visited. The drivers were generally threefold; generating cost savings, improving clinical satisfaction and transforming the patient journey. The results achieved against each of these goals was remarkable. The impetus for change varied:

- Funding constraints especially attributable to austerity, changed economics or funder needs to contain costs.
- New money for innovation, eg the New Zealand regional pilot funds, various NHS innovation rounds which specifically targeted health service innovation and integration, the availability of insurance for new populations in America.
- Changes to infrastructure, eg new hospitals with less beds, mergers of providers creating new possibilities for cooperation and reform.
- Legislative change mandating a new frame of reference, eg the combined and personally led health and social care budgets for patients with long term conditions in the UK, New Zealand's mandate that primary and secondary care would have equal power in health policy formulation.
- Access to new data which politicised care, eg highlighting differential outcomes for disadvantaged groups by "GPs at the Deep End" in Scotland, pharmaceutical companies creating pressure to screen at risk populations for hepatitis in the US.
- Use of data to plan care, eg insurance systems analysing primary care data once they controlled both hospital and primary care provision, creation of regional primary care organising bodies with responsibility for delivering change.
- Identification of areas of extreme clinician shortage, eg Adirondack's need to create a proposition which would attract primary care providers to the region, Glasgow's ongoing efforts to retain the GP workforce north of the border, ageing of the GP workforce which is becoming acute even in comparatively "young" countries like New Zealand and Australia.
- Lobbying by an interested group, eg Cardiac clinicians interested in maintaining their status as the top provider in their area of expertise, Endocrinologists concerned about growth in demand, nurses keen to work to the full extent of their scope of practice, patients and carers concerned about current outcomes and demands.
- Changes to accreditation or incentives, eg the reframing of accreditation in Canada to be patient centred, introduction of incentives to reduce the number of patient re-admissions over a given timeframe.
- Health Economics insights, eg looking at the long-term cost of supporting a patient with addiction, mental health or chronic disease vs the cost of intervening before the population becomes adult or affected.

Notably, the ideas generated rarely seemed to be driven by the mobility of the clinical workforce or sharing of ideas in journals, by word of mouth or by planned study tours. This was surprising given the supposed reliance of the health sector on creating and disseminating an evidence base.

Clarity equals consistency, consistency equals a pattern which can be recognised, recognition creates volume which can be organised and organisation creates outputs which can be compared. These are all vital to drive innovation and efficiency.

This may indicate the scale of change necessary to get the primary and secondary care sectors working together more collaboratively. There appear to be few avenues whereby the groups connect at conferences, through shared literature or even in policy consultation. Hence the slow take-up of innovation within countries let alone between them.

What was even more interesting was the journey required to gather data useful to inform change. Healthcare systems generate huge amounts of data. Very little of this data is called upon to review system performance and almost nothing is shared or disseminated in a timely manner. Most importantly, real planning is impeded as few organisations have responsibility for all of the component parts generating the data. The exceptions are some of the US insurers, the NHS and the Hong Kong Hospital Authority. The NHS was the first to try and leverage the disparate data systems through contracts with pharmaceutical companies. This move was soundly defeated in public debate. At a forum in London, attended on this study tour, proponents conceded that the poor framing of the proposal had set ambitions to generate data around the real efficacy of drugs back more than a decade.

Perhaps a more considered approach is simply mining the data to provide better planning of care. This approach does not come with a funding tap from big corporates, hence its consideration as a secondary objective in other jurisdictions. Big Data processing tools have the capacity to personalise care more efficiently, identify epidemics and patterns in presentations earlier and improve our understanding of multiple therapies in complex patients. Despite these profound upsides, privacy issues seem to prevail at the real expense of improving health at a population or personal level.

Demystifying the potential of Big Data may require our health systems to be more honest about the paucity of data which exists to substantiate the treatment protocols we routinely recommend for the multi-morbid and frail aged. A concurrent challenge is communicating to the public the scale of costs involved in caring for these populations. Most people live under the convenient myth that their taxes or in Australia's case, their Medicare Levy, pays for the costs of care. Working through the inconvenient truth regarding the costs of certain procedures in ways which do not create division against those providing the care or which do not victimise those asking for it is a political challenge. It could test the foundations of our democratic compact. Martin Luther King Jnr said "of all the forms of inequality, injustice in health care is the most shocking and inhumane". Just process and just doing something appears to be our greatest need in this instance. More efficiently tapping into the data we already hold in healthcare stands to generate its own reward by validating clinical protocols and increasing the evidence base for what occurs. Australia's newest Prime Minister generated a personal fortune in the technology and legal sectors. Harnessing his knowledge of both to identify a way forward which satisfies privacy advocates but which also stimulates use of data to improve planning and delivery of care could be one of the most useful national conversations he orchestrates.

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The Interface of Technology and Clinical Practice cont.

Across the world, there was also a startling attachment to perceived differences in funding, training and staffing as the reasons new models of care emerging in other jurisdictions should be handled with delicacy. This negative attachment to the prevailing system, whatever that may be, is a form of inertia which impedes innovation as the participants in the system feel powerless to enact change. Rather than designing new systems, innovation tends to be plugged onto existing systems and constrained in effectiveness by being anchored to a deep and unnavigable bottom. Stakeholders were frequently suspicious of receiving any reward for the effort involved or protection from the risks which inevitably accompany major change. Across the board, the players generally feel overburdened by current demands so have limited bandwidth for considering anything new. Their skill set for generating data, making proposals, pitching for change, building coalitions, managing negotiations, costing projects, project management and representing groups are all so deficient that they were often fearful of taking part. This is a perverse attitude in a system which in every country visited contributes a minimum of 10% of national economic activity. The consequence is that healthcare everywhere sits in the lowest segment of productivity growth despite consistently rating amongst the fastest growth sectors.

This is the inverse of what economic theory tells us should occur. It is equally explained by economic insights regarding monopoly protections and legislative capture. Embracing technology, whether it be Big Data, personalised healthcare apps or improved decision making tools and clinical protocols are ways the system can be quickly and safely reformed.

Despite these unpleasant realities, in every jurisdiction there were the few who felt the fear and did it anyway. The difference between ideas and action was usually either breaking point driving a determined effort to break or break through or a new funding opportunity or person appearing through the fog to encourage or facilitate activity. This often generated small steps which slowly cemented conviction and followers who in turn could drive the wholesale reform required to develop integrated models of care.

It would appear that regional level primary care coordinators whether they be insurance groups, Primary Health Organisations or Trusts appointed by government to plan, review and commission regional outputs, local government level stakeholders or Clinical Academic Groups, are vital in creating a climate where the natural leaders or idea holders can rise to the challenge.

It would appear that regional level primary care coordinators whether they be insurance groups, Primary Health Organisations or Trusts appointed by government to plan, review and commission regional outputs, local government level stakeholders or Clinical Academic Groups, are vital in creating a climate where the natural leaders or idea holders can rise to the challenge. Australia has a dire shortage of clinical academics and an absolute paucity of research interest in primary care. Therefore, avenues of support from these quarters are less likely than they may be in other countries. The creation of PHNs (Primary Health Networks) to undertake needs assessments, plan responses, engage stakeholders and coordinate regional initiatives across the broad spectrum of primary care would appear to be fundamental to delivering change. However, even their mandate is behind the game in terms of the tasks assigned to broadly equivalent bodies overseas. The capacity these organisations have to access the right data and bring together the right players will be crucial. Given their comparatively vast and recently expanded territories, the Australian model of primary care coordination appears to be moving in the opposite direction to such efforts in other countries. When this is paired with the strongly private sector driven nature of most of Australia's primary care provision, our PHNs appear to lack the teeth inherent in other coordinating groups to fund and where necessary enforce change until it becomes valued and routine.

Most of the integrated care initiatives identified overseas involved, were coordinated by or received seed funding from groups equivalent to PHNs. They would do well to remember Winston Churchill's plea to Britain when faced with seemingly insurmountable odds – "Let us go forward together". It is this shared commitment to a different future which underpins the success of the efforts to be outlined in this section.

Virtual Medical Wards:

North West London NHS Trust has partnered with the local Borough to generate an Emergency Response and community stabilisation approach to managing patients at risk of a hospital admission. By combining team members from the Council social and community health divisions with resources from the Primary Care Trust, a unique medical ward has been established. Funding for the multi-disciplinary care teams supported in the model comes from innovation funding directed through the Primary Care Trust and competitively assessed by the Clinical Commissioning Group. This is pooled with workers already funded through Borough based district nursing and social services contracts.

Its key elements are:

- A centralised patient triage centre (Single Point of Referral or SPOR) which receives referrals from GPs. Staffed by nurses, the centre reviews incoming referrals and directs them to one of two teams; the Red Bed Group and the Intermediate Care Group.
- If a referral is sent to the Red Bed Group, patients are assessed in their home by a nurse, occupational therapist or physiotherapist within three hours of receipt of referral. This group of clinicians are empowered to deploy medical aides and devise care plans for the patients to ensure they remain in home based care. The team works from 8am until 8pm each day.

The Interface of Technology and Clinical Practice cont.

- Once per day, the entire team huddle to review all cases under management and obtain input from social workers, mental health nurses, diabetic educators, a part-time GP and a part-time Gerontologist (depending upon which medical officer is rostered that day). The objective is to stabilise patients within five to seven days, avoid hospital admissions and where possible discharge patients back to their GPs or the step down Intermediate Care Group. The Red Bed maintains connectivity with the hospital system by siting a nurse within the main referral hospital capable of discharging to the Red Bed as well as enabling hospital admissions if they are required.
- The Intermediate Care Group is inclusive of an array of allied health, social care and nursing staff. They will respond to a new referral within 48 hours. All are deployed to care for patients in their homes and with ongoing reference to the referring GP. Their main focus is re-ablement and rehabilitation. They routinely care for patients at high risk of falls, recovering from surgery or a decompensation or temporarily alone due to the hospitalisation of a partner. They periodically support patients with degenerative disease experiencing an episodic decline but where there is expectation the patient will rebound. The teams are led by nurses and therapists and support patients for intervals of up to six weeks. Up to 15% stay with the unit for more than six weeks but additional permissions need to be sought to retain these patients. This protects the unit's focus as it does not want to replace palliative care and long-term home care services. Around 68% of patients leave the service without needing ongoing care and with heightened functional competence.

Devon has developed an alternative to the centralised systems in London, where patients are closely clustered and therefore easier to service by rotations of nursing and allied health staff. In the Devon Virtual Medical Ward, GP surgeries are provided with additional funding grants to run one or a number of "virtual beds". The annual grant is audited to ensure the "bed" is filled with a patient meeting the referral criteria. Beds must achieve 80% occupancy. All of the patients referred to the beds are patients of the practice.

GPs devise care plans in conjunction with nursing input. This generally leads to a much more intensive patient management and care planning process than has been possible under historic funding systems. The care plans trigger access by the patient to a multi-disciplinary team funded to support the "bed". This ensures that patients are where necessary, receiving more home visits by all types of clinical staff, more regular reviews and ongoing monitoring. The focus of the program is patients identified by an algorithm as being at high risk of a hospital admission in the next six months. The heightened level of care is designed to reduce unplanned admissions and admissions overall. The project has been evaluated a number of times since inception. It would appear to be achieving anywhere from a 1/3rd to 25% reduction in avoidable admissions in the region. Based on its success, the model has been expanded across the entire Devon region and includes inputs from over 100 general practices.

Denver Health, a Council based care system in Colorado, has also been engaged in developing models to avoid hospital admissions. The focus of their effort has been patients with multi-morbidity who are disengaged from primary care. Their Ambulatory Intensive Outpatient Care Model targets patients in high risk categories according to a

Clinical Risk Categorisation methodology they use across their patient group. They visit patients whilst in Emergency or Hospital to build relationships. These patients are then invited to a clinic for a two hour intensive review which is planned with reference to their hospital stay. Real histories are taken and a comprehensive GP management plan developed.

A multi-disciplinary team then supports these patients, often through home visits, to stabilise their health and begin to engage with their primary care team. Included in the team is an addictions counsellor, psychiatrist, exercise physiologist and array of nursing positions. Active engagement with social sector partners attempts to reduce the medicalisation of social issues, especially those related to mental health, addiction and homelessness. Eventually patients are supported to migrate from this care offering to mainstream general practices. The savings from reduced hospitalisations have been so significant, savings are being reinvested into seed funding other novel services.

Interventions for the Disadvantaged

The Denver Ambulatory Intensive Outpatient Care Model is not just a virtual medical ward. It is also an intervention targeted at the disadvantaged. Many of the patients managed through the ward are beneficiaries of the Obama Care revolution or uninsured. To prevent the next generation of patients being created, savings from the model are being invested into a High Risk Child Service. This will target children whose parents have a mental illness and try and improve their mental and physical health to reduce the potential for developing chronic disease or lagging in school attainment.



Such an approach is also being tried in Devon. There advantaged populations live on hillsides adjacent to valleys which house the next generation of poor. The proximity to great wealth for these young people heightens their sense of frustration and despair. Devon has the highest rate of youth suicide in the UK. With an ageing and tourism based economy, rates of youth unemployment in the region are at all time highs. At the same time property prices have sky rocketed through the influx of cashed up retirees.

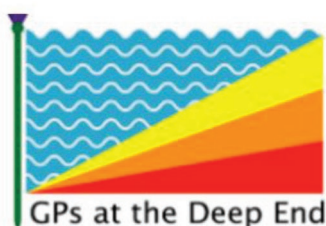
Interventions for the Disadvantaged cont.

Therefore, young children and teens living with single parents attracted to the region for lifestyle, often find themselves at the bottom of the pile as housing instability and rental costs eat away at discretionary income and hope. Targeted interventions which combine health, education and social care are being planned. The political bravery of this strategy is significant. The funds to resource the intervention are coming from reductions to mental health support for the aged. The thesis is that intervening to prevent health deterioration is cheaper and therefore a better use of funds long term than continuing to provide band aids to older generations.

A similar approach is being employed in New Zealand. There, teens can access services under the banner of Primary Solutions. This program supports 10 to 24 year olds avoid life's catastrophes. It starts with provision of training to primary care nurses and general practitioners in supporting patients with moderate mental health or life transition issues. Each year, teens and young adults can access up to one hour with their nurse or GP to discuss sexuality, depression, anxiety and the myriad of changes occurring in their minds and bodies. It is hoped that these interventions will reduce youth suicide, with New Zealand a world leader in that regard. It is also hoped that reductions in teen pregnancy and the transmission of infections will result through improved understanding and use of contraception. Some GP practices are taking these services into schools or engaging in novel partnerships with speciality youth health services to improve the impact of the funding.

In addition, parts of New Zealand have implemented a 15 year old health check. This involves 15 minutes with their GP and 45 minutes with a nurse. They have adopted the "HEADSS" tool from the USA for performance of this health check. Funding for youth health centres is also provided through the government. Through this mechanism, funds are dedicated to developing youth friendly healthcare which appeals to different groups of youth not just the marginalised. Through these measures, the New Zealand government hopes to engage young people with their health and delay the onset of a variety of chronic diseases and reduce the incidence of infectious disease.

The Scottish Government is also targeting significant program money at the marginalised. Funding for the activity of the GPs at the Deep End group, allows GPs in disadvantaged areas to be replaced by locums so that they can participate in semi-regular forums, professional development and policy engagement. The Group is supported by the University of Glasgow Medical School to undertake research projects which highlight the differential outcomes achieved by patients in the 10% of most disadvantaged catchments.



Through highlighting the realities of care outcomes and GP stress, GPs at the Deep End have been able to garner significant monies for novel pilots. In partnership with The Alliance, a Scottish Social Sector lobby and provider group, GPs at the Deep End, are piloting the use of Links Workers in General Practice. Links Workers are not social workers, nor are they nurse navigators or psychologists. Their role is to be a point of handover for GPs when they believe a patient has social or other issues impacting upon their ability to comply or engage with care. Rather than GPs spending time listening to issues arising from relationship troubles, unemployment, abuse, isolation or other mitigating factors, the Links Workers perform the role of listener. They can then engage in social prescribing to support patients find resources in the local community to address their needs. Often the trusted relationship with the Links Worker leads to first time disclosures of abuse or tragedy. This can then be dealt with by trained psychologists, counsellors or community volunteers.

Where Link Workers detect an aggregation of need and no corresponding social or community response, they can also engage with other partners to develop projects, funding bids or attract existing providers into an area. They become a walking directory of resources in the local area, supporting nurses, GPs and other providers attached to the practice to more appropriately refer patients to support. At times they even become the resource, running walking groups, forming other social clubs and directing community encounters to increase options for connectedness.



Mark Charlton, Programme Director, Links Worker Project.

Links Workers are not clinical. Most have been trained or attracted from the social sector. Their role is not to replace clinical provision whether that is psychology or social worker led. Their real role is to free GPs and Practice Nurses to ask patients about Pandora's Box and not be afraid of what will be brought into the open. The Links Worker then forms part of the glue to transition patients to the right providers and agents to help them continue their health journey. If that means accompanying patients to initial visits, Link Workers can be involved. This role recognises that patients in very disadvantaged catchments often lack the social capital to trust and may need others to make the transitions between care providers safe and useful. It also accepts that patients in disadvantaged catchments are far more likely to be surrounded by death, life's unexpected and difficult. This means their lives are more chaotic and prone to episodes of grief. Additional investments in building patient relationships are therefore necessary to ensure patients access appropriate care, comply with recommendations and disclose other battles which may impinge upon their ability to self-manage their own care.

Interventions for the Disadvantaged cont.

Augmenting the Links Worker capacity are Attached Workers. GPs at the Deep End statistics were used to show that patients from disadvantaged catchments had far higher need for some community care services but were often less able to navigate to or access these services. Hence, the group have been successful in achieving funding for another initiative. It assigns dedicated hours of a named Social Worker, Addictions Counsellor or Community Nurse to a practice. This improves the ability of the entire group to form a multi-disciplinary team, case conference on difficult patients, develop handover protocols and prioritise patients in need.

Another UK initiative which will benefit the disadvantaged is the passing in April 2015 of new legislation which mandates that anyone with a long-term condition is entitled to bundled health and social care funding. These funds are also to be allocated based on personalised plans approved by the target patient. Pilots which led to the national change showed heightened patient engagement, vastly improved patient outcomes, reduced carer stress and increased likelihood of patients returning to the workforce or volunteering. This legislation mandates that health and social care players interact and also work with patients on a different footing. Such change makes the National Disability Insurance Scheme in Australia, which is also underpinned by patient control and choice, look less revolutionary.

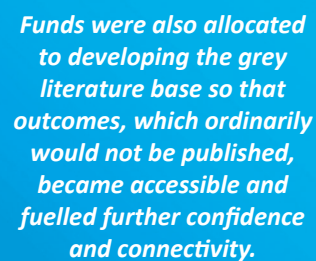
Of course, one of the most silent and debilitating drivers of disadvantage is mental health. Primary care skills and staffing in relation to mental health is improving across the world in line with recognition of the scale of need. In North West London a less evident form of service integration was apparent with a number of outpatient clinics. After funding was initiated to improve training, skills and management for patients with diabetes in general practice it was still necessary to maintain Endocrine clinics in local hospitals. It was decided to look at these patients more closely as some seemed to respond to second tier care through an Endocrinologist, others did not show any improvement. A Psychiatrist was introduced to screen patients for low level mental health impairment.

Charing Cross Hospital was one of 14 Whole System Integrated Pioneers funded nationally in the UK. They were funded to develop multi-disciplinary care teams to support care for the most complex and least responsive patients across a number of disease states, including diabetes. The Pioneer money paid for GPs to spend four hours per month involved in the multidisciplinary care teams which also included specialist input inclusive of psychiatry. The result was that 20% of patients were diagnosed with dementia or personality disorders. They were key factors impeding their ability to comply with their diabetes care plans. Mental health care for these patients was delivered at home or in the GP surgery by a psychiatrist and associated mental health therapists and nurses.

The results of the effort multiplied beyond initial expectations. Better diagnosis led to improved patient care and outcomes. However, the exchanges between both primary and secondary teams achieved much more. Primary care became better skilled at motivational interviewing and working with patients with depression and anxiety. Endocrinologists were also seconded to work on psychiatric patients at high risk of metabolic disorder due to their medication regime.

The application of Cognitive Behavioural Therapy (CBT) to a broader range of patients also delivered results. COPD and Asthma patients

seem to respond well to CBT when it is applied to their breathing difficulties and related triggers and fears. This in turn triggered relationships with respiratory physicians. The psychiatry team became more involved in smoking cessation programs which improved the prognosis for those with lung disease. Given many of the least compliant patients with diabetes also used substances like alcohol and tobacco as part of their addictive behaviours, the ability for the care team to be GP led improved the rounded nature of care planning for these patients. This enabled other specialists to be plugged into the treatment cycle in new ways.



Funds were also allocated to developing the grey literature base so that outcomes, which ordinarily would not be published, became accessible and fuelled further confidence and connectivity.

The evolution of this project was strongly supported by application of research and the plan, do, study, act improvement approach. This led to further reasons for the multi-disciplinary team to evolve and extend its reach into areas like respiratory care as outlined above. Funds were also allocated to developing the grey literature base so that outcomes, which ordinarily would not be published, became accessible and fuelled further confidence and connectivity. This was noted as being especially important in the primary care space as clinicians in this part of the healthcare sector are far less likely to have the confidence, skills and connection to take their work to a peer reviewed journal in the first instance.

The Ottawa Cardiac Institute has also developed an assertive approach to smoking cessation. They have engaged staff and partners in the cause and method and radically improved their rates of behaviour change. With a 50% success rate over six months, their model appears superior to many quit smoking models. They are now piloting the approach with 80 general practices in Ontario as part of their mission to reduce the incidence of heart disease in the province. Their public health vision is so broad that they even support family member cardiac prevention programs. Their view is that if they can reinforce improved lifestyle for their patients by ensuring family members are also healthier, they address secondary prevention as well as perform a low cost primary prevention for other high risk members of the community.

Interventions for the Disadvantaged cont.

In Hong Kong, the Hong Kong Hospital Authority took over control of primary care for disadvantaged groups in 2003. Over the decades, the Hong Kong government, through the Hospital Authority and its precursors, has taken hospital care previously provided by church and philanthropic groups into a continuum of care, inclusive of primary care. The Authority now operates a variety of large, multi-disciplinary primary care facilities across the islands of the country. Unlike the equivalent system of federally qualified healthcare centres in the United States, these units operate at a scale and with such strong interdisciplinary activity that they represent an ideal many countries might aspire to create.



Underpinning the Hong Kong Hospital Authority model for disadvantaged groups is one of the largest and strongest complements of nursing staff seen in any jurisdiction. Nurses specialise in various diseases of prevalence in disadvantaged groups and provide ongoing care to a cohort of patients. Their work supplements the exceptionally time constrained role of doctors, who appear to provide little more than diagnosis and prescription in the tiny windows of interaction they have scheduled with patients. Nurses and allied health providers do the remainder of education and management having brought out of hospitals and into community settings an array of public health programs and tailored them to primary care delivery. Nurses in this system also have a career path. A variety of roles of increasing complexity exist for those with the desire to undertake further study and accept greater responsibility. Further consideration by the Hong Kong Hospital Authority to using their highly skilled nurses and allied health staff in intraprofessional models of care which reduce stress on time poor doctors could open up further opportunities for balancing existing skills with evident need.

Drugs are provided free at point of care to patients eligible to receive care in this model, further reducing the impediments to taking up recommended treatment. Australia could learn from this approach. Very many multi-morbid patients from disadvantaged backgrounds routinely miss medications. The current co-payment system, whilst a small cost by many international standards, can still be significant if three or more medications are required with each trip to the pharmacy. Extending the cost cap which applies to indigenous patients to broader groups of disadvantaged patients is one way forward. What is clear is that the time taken to reach the high use cap, at which point all Australians are eligible for further reductions in the costs of their medications, would reduce time wasted not complying with the medication recommended by doctors in many vulnerable groups.

New Staffing Models

Integrated care, multi-disciplinary teams and new funding models all drive primary care systems to adopt new ways of caring for patients. This usually and very quickly results in new roles and additional positions within primary care.

The first group to start multiplying is usually nursing. Various categories of nurses can be involved in triaging, tracking and recalling patients, reviewing medication needs and repeat scripts, pathology collection and results review, patient education, care planning, hospital discharge planning and even administration of drugs and treatments. Clearly, this means that general practice needs to invest in its nursing team to ensure that their skills are suited to the array of tasks which can potentially be accommodated with year of care style or multi-disciplinary team funding models. It also means that protocols need to be established, clinical interventions standardised and processes measured so that patient safety and the efficiency of the new system can be monitored. This will usually mean increasing attention to clinical governance and the business systems which underpin operations. All of this takes time which is not patient facing. Under Australia's current funding system such time thinking and reforming is difficult to fund.

Finally, the nursing team, more sizeable and with a range of discrete responsibilities will need a management structure. This can be very helpful in developing career paths and retaining high performers. However, it will come at a cost. Primary care is currently the worst paid sector of nursing, with most employed in the sector more for lifestyle reasons than remuneration. With added responsibility, more visibility for their work and increasing demand for skilled practitioners in a market experiencing a shortage of new entrants, the value of nurses and their pay rates will need to rise. This may be offset by the potential savings in GP time, which is ordinarily a much more expensive resource.

A typical general practice with well developed programs for chronic disease and complex care may end up with a nursing complement resembling the diagram below:



Potential array of nursing related roles available in primary care facilities pushing the patient centred medical home boundary.

This is a very significant change which will probably be embraced more quickly by the nursing community than the medical profession. Winston Churchill noted that "Tact was when you can tell someone to go to hell and they look forward to the journey". Beginning the conversation to set up change must be rooted in the reality that we are at a turning point in the role of primary care. No longer is it predominantly a system designed for infectious disease and acute care. It is a system where the majority of care provided will be for patients with chronic disease.

New Staffing Models cont.

In systems previously used to support such patients, nurses have been the dominant workforce, at least in terms of number. It is not surprising therefore, that the ratio of doctors to nurses will significantly change as we attempt to support growing numbers of patients with this profile in community settings. Hence, any changes to staffing are not about eroding power, prestige or control, they are simply re-allocating resources to places where they are more necessary. Adding allied health to the mix is a further extension of this premise.

For many doctors, work environments which remove so many familiar tasks and assign them to nurses may appear like hell on earth. Introducing such significant change will not be easy because it fundamentally changes the doctor patient relationship and the technical difficulty of whole periods of the day when doctors will be working. Balancing this change with clear indications of the benefits in terms of others chasing patients, patients being more enabled and less dependent, improved patient outcomes, playing to the medical strength of problem solving and identifying complex patterns, and reduced stress will be critical. It must also be accompanied by training in team working and active consultation around the protocols and standards which will be adopted.

Creating environments where these new roles and positive relationships can be established will be crucial. The existing infrastructure in primary care in Australia is in many instances aged, outdated, outgrown and a natural limit to team based care. Massive refurbishment and extension efforts will be necessary to develop the physical places for case review, patient handover and patient support. Given many existing facilities are owned by the doctors who work in them and they may be landlocked, significant infrastructure investment incentives would need to be applied to stimulate rapid change. Certainty regarding the funding model will also be necessary for building owners to refurbish, extend or take on additional leased space in the hope that their investment will be repaid.

Another significant change in staffing will be the potential to include volunteers in activities undertaken in primary care. In both the US and UK, volunteers were involved in a variety of tasks which supported patients. Volunteers have historically been associated with hospitals, some aged care facilities and the social sector. They have never played a role in Australia's privatised primary care network. Engaging volunteers and managing them requires both systems and processes where they can safely be engaged in value adding tasks. With chronic disease patients there are a plethora of potential tasks from taking patients to specialist visits, driving partners home when a spouse is admitted to hospital, caring for pets and spouses when a partner is hospitalised, supporting rehabilitation programs, running education programs, visiting the housebound and dying, running cooking, dancing and parenting classes and providing volunteer counselling and education. With increasing numbers of aged patients choosing to live at home and even die at home, the potential of the volunteer sector to support more effective patient care in the community cannot be underestimated.

Another significant change in staffing will be the potential to include volunteers in activities undertaken in primary care.

Helping primary care to identify and safely harness this group of support workers will be crucial. In the process, the primary care team will actually be providing care to many volunteers who are often drawn from the retiree or carer parts of our population. Giving them meaningful, regular and engaging activities will reduce their social isolation, improve levels of activity, increase engagement with healthcare issues and reduce the potential healthcare burden as they age.

Aside from patient facing tasks, primary care lacks connectivity with its community despite solid evidence that patient engagement and health interactions are significant to communities. Engaging patients on clinical governance groups, program design working parties and accreditation teams are just some of the more intellectual pursuits patient representatives could play. Additionally, healthcare providers need to find new ways of bridging into schools, aged care and social care to improve the social determinants of health and the patient journey. Volunteer contributions might be a creative way of forging improved linkages between these sectors.

Finally, there is the domain of research. Data will become of increasing importance in running a primary care facility due to the outcome measures and performance targets which will increasingly be adopted. Once facilities understand the data they control, they may have increased interest in using it for more than case management and funding. Research, whether health services related, public health centred, disease or therapy specific in nature is a field waiting to blossom in primary care. Partnerships which involve non-paid contributors or which deliberately engage the local community in monitoring and reporting on episodes of interest could be another way of generating the data required to improve and justify innovation. Community based research is becoming increasingly common in fields like biology where community contributors send in photos or count sightings of animals of interest.

GPs will also see their professional lives transformed. Many will be interested in developing special interests. How those interests are supported to achieve economies of scale and impact will vary by clinician and area of focus. In Canada, some GPs were taking on new roles monitoring patients post-cancer treatments. Others are routinely employed in Emergency Departments or as surgical assistants to extend hospital capacity. In the UK, GPs with special interests are becoming more common with larger practices fostering this. The Vanguard contracts require special interests not just to be fostered but employed for the overall benefit of a region. Areas as varied as dermatology, rheumatology, urology, ENT, gynaecology, multi-morbidity, mental health, geriatrics and more are emerging as areas of focus.

Communication



The “off stage” corridors behind clinic consultation rooms where nurses, doctors and allied health cluster their desks to ensure ongoing communication throughout each session at Virginia Mason’s primary care facilities.

The method, frequency, quality, contributors and content of communication in primary care systems oriented towards supporting chronic disease adjust markedly as the system embraces new models of care. In many ways, the nature of communication occurring with and within primary care could be used as a litmus test of how far evolved the system is in dealing with the challenge of chronic disease. Where the system is dependent upon individuals, less communication volume will be generated. Where discrete roles exist for various types of clinicians and their performance is directed by one individual, communication in one direction will be the recurrent display. Only in systems where the patient is at the nexus of every decision will communication become so frequent, inclusive and necessary that new methods of communication will be fostered.

In many ways, the nature of communication occurring with and within primary care could be used as a litmus test of how far evolved the system is in dealing with the challenge of chronic disease.

All of the systems engaged in multi-disciplinary or integrated care factored communication into their workflow in novel ways. For example, more time was taken with patients to ensure real communication exchanges could be fostered. Another obvious indicator was the nature of intra and cross-team communication. In all patient centred medical homes, a standard routine was the huddle. The length and frequency of the huddles appear to be an artefact arising from culture and funding more than outcomes which can be achieved. For example the following routines were evident and seemed to produce reasonably consistent results:

- Daily huddle of 15 minutes of all doctors and nurses to review diaries and patient demands (aspiration of PHO CEO in New Zealand who had seen the process at work in many of the practices under his direction).

- Huddle of 15 minutes at beginning of each clinical session between pairs of doctors and their associated registered nurse and medical assistants for that shift (Virginia Mason Healthcare).
- Daily huddle of one hour before the clinic opens inclusive of all clinical and non-clinical team members to address patients coming in, patients needing follow up and patients not on the list who need to be chased (Iora primary care facilities).
- Daily huddle of one hour to discuss case load, discharges and new admissions (North West London Virtual Medical Ward).
- Weekly case conference inclusive of doctors, nurses and allied health to discuss patients under management on virtual medical ward (Devon Virtual Medical Ward model).
- Weekly case conference between Specialty Physician panel and six complex care pilot sites to discuss progress against plan, target achievement for particular patients, rhythm of work within each location (Project Echo Complex Care Pilot).

These processes are a far cry from the occasional staff meeting scheduled to discuss plans for the Christmas Party and responsibility for the tea room roster. They are true occasions for the meeting of clinical minds regarding planning for patients about to be seen or who should be seen but appear to have escaped the system. Detailed discussions of individual roles, staging points and processes for escalating review are made clear. The team also takes time to debrief and care for itself by allowing time to reflect on progress being made. They discuss options which may produce a better result and share the load of concern in ways which allow others to offer insights. The result is a dramatic reduction in siloed working, leveraging strengths (including relationships) across the team, more informed consideration of options, attempts to intervene proactively with patients swimming outside of the flags, agreement on priorities and objectives for each patient, reduced fragmentation in interventions and a sharing of the emotional burden of care. This final point improves individual clinician resilience and galvanises commitment to the common cause. This is in spite of that objective often being difficult to achieve and progress even harder to quantify.

Where the huddles were inclusive of non-clinical team members, it was obvious that reception and administrative team members felt empowered to play a role in patient care. These systems recognised that care is both impacted by and really begins at the point of first contact with the health service provider. The way other parts of the team set patients up is critical to ensuring a smooth flow with the patient. Examples were provided of reception team members deliberately building rapport and running distraction with patients prone to anxiety whilst waiting for their appointments. The groups also discussed their reception team’s capacity to engage in social prescribing with patients suffering depression or new diagnoses. Patient education and assistance with navigating the health system were other roles performed by these workers. Finally, working through patient objections and no shows to ensure priority patients were recalled in a timely fashion were all listed as critical elements of care. All of these sorts of actions reduce the cognitive and facilitative load on the clinical team and grease the patient journey so that it is more likely to flow. Without information on patients or direction to attend to certain patients, these sorts of roles are less likely to be performed consistently. Patients are also more likely to be anxious when attending clinicians, reducing their capacity to engage and share in decision making. For these reasons, a number of health systems are valuing team time and the process of planning and collaborating which huddles of every type open up. This work adds value and also contributes to reduced volume. This is why it should be funded in every primary care system.

Section 5 | Innovation in Models of Care

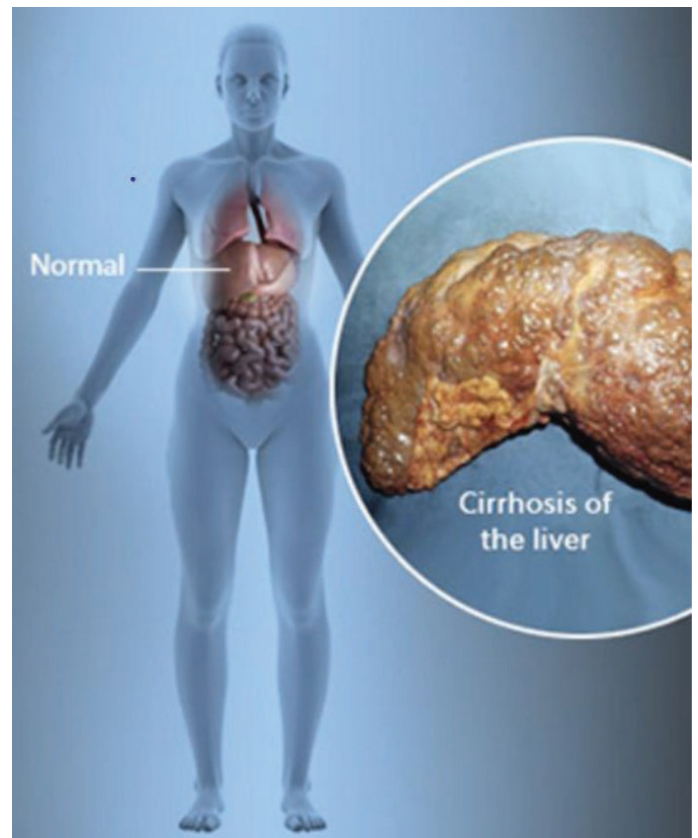
Livers

What started this journey into models of care suited to complex chronic disease in the community was an approach by a Hepatologist keen to explore models of integrated care suited to liver disease. Sadly, scans of the clinical landscape in Australia produced little in the way of innovative models. Liver disease is still captured by a specialty system which has largely been unable to engage primary care. What is of most concern is the rapid rise in demand for liver care. Demand of a scale that will rapidly overwhelm current responses. The cost of inaction will be increasing numbers of patients receiving their first diagnosis of liver disease at the same time as they are informed of their Hepatocellular cancer, one of the most incurable cancer presentations.

Misunderstanding of liver disease and the threat it poses were common themes in every country visited. With obesity and increasing consumption of alcohol driving dramatic growth in rates of non-alcoholic fatty liver disease, new models of care are fundamental to addressing rising demand. At a clinical level, tools to stage and manage patients also have a long way to evolve. However, what is opportunistic for liver disease is that the required therapy largely lies in the hands of primary care, lifestyle interventions. With current primary care processes being oriented to volume, liver disease has largely been overlooked. Funding streams need to support approaches which improve patient response to impending disease. Without them, any health system will be unable to stem the tide.

Liver disease is misunderstood, multi-factorial, viewed with prejudice and most likely to burden working age populations. Given the dynamic diagnostic and therapeutic regimes applicable to liver disease, models of care which bridge the primary and secondary divide would appear to warrant the most consideration. Project Echo was the most viable candidate in this regard.

Other systems had also embraced screening with greater gusto than Australia. In New Zealand, the national disease body deployed nurses to attend practices on an annual basis to screen patients identified on practice lists to be at high risk of liver disease. The nurse also prompted annual screening for liver cancer in those with histories of hepatitis. This external facilitator and resource was noted as being



invaluable in providing patient education, ensuring the primary care system remained attuned to the needs of the affected population and delivering consistent quality of care.

In America, pharmaceutical companies have successfully lobbied for screening to be implemented for those born 1945 – 1965. Public health data has been used to establish this as the most at risk cohort with the greatest potential to benefit from drugs and surveillance.

Livers cont.

Widespread take-up of this mandatory screening is evident across the USA. Given the focus in the US on hospital and specialty physician led care, it is not surprising that this strategy has generated increasing waiting lists for Hepatology clinics.

In response, the UPMC system has created a new model of care. There Hepatologists run teams of Nurse Practitioners on a ratio of 1:8. The Hepatologist provides diagnosis and treatment planning. The nurses run the courses of treatment and manage the complications arising from use of interferon treatments. In this model, the Hepatologist is the mentor of the other participants in the care stream rather than the director of all care. The use of Nurse Practitioners has been adopted as they have prescribing rights, hence reducing the demands on the Hepatologist when supervising such a large group of patients.

Given the shortage of Nurse Practitioners in Australia and the larger geography to be served by the three specialist liver centres in Queensland, it would make sense to replace the Nurse Practitioners with GPs. They are closer to the patient, removing the considerable costs involved in receiving care currently borne at a personal level by patients with liver disease. However, in the absence of proximity to the Hepatologist, technology may be required to make such a hub and spoke system work. This is where Project Echo seems to come into its own and is the main driver for its dissemination not just for liver disease but for many conditions.

Liver disease is a condition with a long gestation period. Up to 20 years can transpire before patients become symptomatic. Therefore, engaging patients in decisions related to their care is a real possibility if they are identified early. Canadian players have developed a comprehensive array of decision support guides which could be used to generate decision support tools suited to liver disease in the Australian context. Greater patient engagement would appear to be key to adopting the lifestyle changes required to avoid decompensations and slow disease progression. It is also core to compliance when faced with the traditional interferon drugs which have well established complications.

The newest drugs, whilst far better tolerated by patients, have no greater efficacy but are vastly more expensive. Whilst the future of funding for these drugs is uncertain in Australia, we need to prepare for the possibility of the government recommending only certain categories of patients be eligible for these treatments. Thorough understanding of the patient, their lifestyle and likely compliance would therefore be necessary to establish who should access the latest generation drugs. This will be underpinned by strong and ongoing clinical relationships, something the hospital sector is less able to provide.

The breadth of drivers of liver disease mean that patient education is vital to reduce the potential for infectious liver disease to spread. It is also necessary to moderate the lifestyle drivers which lead to obesity or use of substances to alleviate the pain of daily life, both known risks for liver patients. Alcohol and drugs are commonly abused or over-used by liver disease patients. This increases the risk of being re-infected, disease progression and periodic decompensations. Therefore, multi-disciplinary care inclusive of behavioural and social elements would appear to be mandatory for this patient group. Sadly, hospital systems have historically underserved the needs of patients with respect to the drivers of their disease, leading to suboptimal results, even for those with access to drug therapy.

Introducing multi-disciplinary care to help the patients address addictions, social issues, mental health and lifestyle change is more favourably received in community settings. This is particularly the case where those settings reflect the patients they serve. Community based care was also shown to reduce the stigma of accessing care and the time taken, fundamental when supporting patients who are more likely to be of working age.

This study tour embraced the possibility of learning from complex chronic disease care and applying that to the needs of liver patients as so many are multi-morbid. It is clear that co-design and co-production with patients suffering from liver disease merits further attention. Their needs as a population with latent disease are such that real innovation is required to address the escalating pool of potential sufferers. Clinician led models have had decades to evolve. It is time to try something which is inclusive of patients. The first group to really tap into this collective intelligence will position themselves to be at the forefront of models of care. Given Australia's unique relationship with alcohol as a social lubricant and celebratory accompaniment, co-design which addresses these factors for the most at risk groups would appear to have a real place in developing relevant, local solutions.

It should be anticipated that patients will demand care in their own communities, customised to fit their particular circumstances. Given the likely span of need from psychosocial to biomedical, responses which bring disciplines together are likely to result in the best fit. The patient centred medical home has the umbrella capacity to support numerous disciplines all oriented to supporting the particular needs of individuals throughout the course of their disease cycle. Patients suffering from liver disease are by nature of their profiles likely to suffer from a variety of other conditions. Intraprofessional care, such as that possible in a true patient centred medical home, is therefore the most attractive solution we could employ.



Liver disease often clusters. The Indian Health Service in America has funded a network of clinical facilities which routinely deal with liver disease. They are all organised to be culturally sensitive and pragmatically supportive of the needs of their patients. The patient centred medical home with strong connectivity to specialty care is core to their effectiveness. In Queensland, two distinct clusters exist for hepatitis related disease. The focal point of both is communities with high representation from indigenous and ethnic minorities. The patient centred medical home has been shown to be more engaging, increase compliance and foster self-management in other contexts.

Livers cont.

In communities of high need and with such strong rates of presentation of liver disease, the patient centred medical home would appear to offer the comprehensiveness and personalisation of care necessary to ensure patients are identified, treated and monitored whilst providing access to a suitable array of clinical workers. Funding this work, which is likely to be slower because of the multi-morbidity and cultural issues, will be a test for any capitation system. Ensuring the funding model factors for ethnicity, socio economic status, rates of morbidity and geographic isolation are the only ways such care can be sustainably delivered.

Assuming Australia introduces patient centred medical homes through changes to its funding system, it is entirely conceivable that some practices will adopt the model earlier or more conclusively than others. This will result in an effective tiering of primary care responsiveness. Within the most comprehensive and responsive groups, GPs with special interests could be supported by hospital based colleagues to deliver liver care. Their special interest could result in other GPs within the practice or region referring for care or seeking mentoring on care. Supporting this localised provision and expertise with dedicated funding has been shown overseas to produce sustainable and safe models.

What of the remainder of patients who may not find themselves in or seek out such general practices? Changing funding models to cope with varying patient complexity and allow for flexible funding which can be deployed across a variety of workforce types appears to be essential to increasing the rate of detection, education and support offered to these people. Patients with liver disease are likely to be multi-morbid and high risk patients. Their care will be compromised in a system which only rewards volume. To that end, incentives for screening this population would appear to have merit, especially if identifying these patients results in increases to funding available to support them. This will significantly change the attention provided to liver care in primary care. At the moment, GPs receive no signals that this is a growing problem with which they are expected to engage.

Given such patients are far more likely to suffer with mental health issues, come from culturally and linguistically diverse backgrounds and be multi-morbid with poor health literacy, the cocktail of care may be unattractive to provide for many. For those working in disadvantaged areas, refusing to engage may not be an option as such patients are far more likely to live in low socio-economic catchments. The potential for hospital waiting lists to further extend given the dramatic increase in presentations, means such providers will be left with the least desirable and most maligned patients with few sources of support. Moving their capacity from being a hospital referrer to a patient provider will involve significant changes to funding so that the clinical team is not stressed and overburdened.

Conclusions

Liver disease started this journey. It remains, alongside other chronic diseases likely to be clustered in disadvantaged populations, an ugly problem requiring new approaches. Therefore, it is an ideal catalyst for testing models of chronic disease care which have arisen in other settings. It would appear that Australia has just as far to go in engaging with these new models of care as it does to working more effectively with the volume of patients with liver disease. However, bringing these two realities together would appear to be possible with significant changes to funding models. They must empower teams of clinical and non-clinical people to work with patients in their communities on paths forward which have the engagement of all.

This represents a new era in primary care. Putting patients and primary care at the centre of our health system is the only viable solution in a system which is increasingly being clogged with chronic disease. Within that new sphere of opportunity, multi-disciplinary teams need to be allowed to flourish in ways which engage patients, carers and their families. Working with and through others offers a way forward. It will be such a new way of working that many clinicians will be profoundly challenged. Their work routines, power and even current ways of receiving remuneration will be changed under such a system. The rate of adjustment and re-skilling required are therefore incredibly significant. One lesson learnt from overseas is that whilst no health system is perfect, the health systems which have been prepared to re-think and re-direct energies rather than using new solutions to mask old problems, are those systems likely to gain the most traction.

The advent of new streams of funding under Obama care, have led to coalitions redesigning health services, provider roles and remuneration. In some respects, they started with a more blank slate than Australia which has decades of vested interests sustained through Medicare. Consequently, their results in the space of just a couple of years have been marked and worthy of recognition. Hopefully, such recognition might lead to desire for emulation. Bringing together entire coalitions of providers at every level of the health system whether funder, provider, hospital or primary care with one goal, improved patient outcomes, would be a watershed in Australian healthcare history.

The move from volume based to value delivering care has the potential to trigger such novel reform. Using groups of patients most likely to benefit from change, for example patients with liver disease, to guide discussions and test solutions would be a viable guide for assessing the proposals. Clearly, the future is already here, it is just not equally distributed. This is especially the case in Australia which has relied on activity based funding and doctor led models whilst the rest of the healthcare world moved to embrace new solutions. With demand rapidly increasing and no change to funding models, GPs in Australia were able to attract a premium for their services. Hopefully, this report provides insights, models and roles which can be adopted and quickly propel Australia into a new and more sustainable future for chronic disease care. This will alleviate the supply side issues at a time when demand will still dictate GPs remain valued.

Winston Churchill famously quipped “My tastes are simple: I am easily satisfied with the best”. Whilst he is renowned for indulging in more than a little French champagne, hardly the antidote to liver disease, his view that we should only accept the best is something which should resonate in all of our hearts and minds. Our population of tax payers is shrinking at the same time that the demands for growth in our healthcare system are becoming exponential.

With the government already spending one in four dollars on healthcare, the answer cannot be to simply increase expenditure. Doing nothing is also not an option. Some say that healthcare statistics are just people with the tears wiped off...and the bad statistics are mounting. There is ample evidence that both our health workforce and our patients need other options to maintain their affection for the process of care. This report outlines the best solutions in five countries to the complex problem of chronic disease.

Let us also be satisfied with their best becoming our own. Inclinations to be suspicious of things which are “not invented here” or involve capitated style funding are unwarranted. Our very lives and their level of function could depend upon how we sift through overseas experience to develop responses which leverage the real gains made by others. Learning from their lessons is our best course of action.

Winston Churchill said “Success is not final, failure is not fatal; it is the courage to continue that counts.” In proposing such a wide scale of change we need to be realistic that some failures will occur. Some of those will be failures in implementation just as often as failures in direction. Having the courage to persist in light of the potential risks will be the hallmark of those who succeed here, just as it has been overseas. We also need to be open to continuous change. Success on one front does not mean we have won the fight for the hearts and minds of those we serve and who serve. Continuous innovation funded by new streams of flexible funding, fuelled by time to think and collaborate, in new facilities which support intraprofessional care are the only things which will keep our system in a state to address the changing needs and expectations of our population. Leaders who are trained and courageous will be fundamental to delivering this new system capacity in primary care and through integrated models of care.

Given the inherently political nature of healthcare delivery, we also need to call upon those involved in the politics of change to remember Churchill also said “Success consists of going from failure to failure without loss of enthusiasm.” Elements of this report will be challenging. Hopefully, in presenting the drivers, components, implications and applications of change we can create more healthy dialogue about what is possible. We have many giants upon whose shoulders we can stand. Each and every one of them must be acknowledged for their generosity in sharing their story and allowing it to be captured in this report. Hopefully, by weaving their many tales into one document, they too will benefit from seeing what is possible in delivering care for the growing masses with chronic disease.

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Itinerary

All of the people and sites listed below lived up to the Churchill philosophy that “To improve is to change; to be perfect is to change often”.

I apologise in advance for any errors in the list of names and omissions of the names of the many people I met in workshops and site visits.

Country	Site	Key Person / Group
Wellington, New Zealand	GPNZ	Fiona Thompson
	Newtown Medical Centre	Mike Northmore, CEO (Chair, Practice Managers and Administrators Assoc, NZ)
	Island Bay Medical Centre	Kevin Rowlatt, Practice Manager
	Ministry of Health	Nemu Lallu
	Compass Health, Primary Healthcare Organisation	Martin Hefford, CEO
	Practice Managers & Administrators Assoc of NZ, Wellington Branch	Branch meeting
Ottawa, Ontario, Canada	Accreditation Canada	Wendy Nicklin, CEO
		Stephanie Carpenter
		Karen Kieley
		Alyssa Brian
		Pamela Naymark
	Queens University	Prof Walter Rosser, Head of Centre for Primary Care Studies
	St Elizabeth Healthcare	Tina Hamilton, Regional Director
	Canadian Patient Safety Institute	Ioana Papescu
		Steve Routledge
		Joan and Abby
		Dannine Currie
	Rideau Family Health Team	Alicia Ashton, Practice Manager
	Ottawa Cardiac Institute	Dr Thierry Masana, Dr James Robblee and a complement of nurses and doctors involved in clinical innovation
	Ottawa Hospital Research Institute	Prof Dawn Stacey
Adirondack, New York State, USA	North Country Family Health	Doctors and nurses involved in care
	University of Vermont Health Network	Dr Stephens Mundy CEO
		Brenda Stiles, Director of Care Management and Quality
	Adirondack Health Institute	Bob Crawley, Director of Medical Home Initiatives
		Annette Parisi, Health Home Manager
		Colleen Florio, VP Health System Transformation
	Hudson Headwaters Health Network	Jessica Fraser, Director of Care Management & Cynthia Nassivera-Reynolds, VP of Medical Support
	Northern Adirondack Medical Home	Karen Ashline, Assistant VP
Pittsburgh, Pennsylvania, USA	UPMC Health Plan	Dr Steve Perkins
		Dr James Schuster
		Dr Mike Parkinson
	Squirrel Hill Medical Centre	Dr Andrea Fox
		Dr Ken Thompson
	UPMC	Dr Francis Solano- Primary Care Physicians Group
		Dr John Stewart Maier- Director R&D, Department of Family Med
		Dr John Kokales- CKD Care
		Dr Peggy Hasley- Montefiore
		Prof Linda Siminerio- ED Diabetes Institute

Itinerary

Country	Site	Key Person / Group	
Pittsburgh, Pennsylvania, USA	UPMC	Dr Mary Korytowski- Director Endocrinology	
		Dr Kapil Chopra- Director Hepatology	
		Dr Loren Roth- Ass Senior Vice Chancellor Clinical Policy & Planning	
		Joanne Riley- Practice Manager, Montefiore	
		Dr Beth Piraino- Director Renal Medicine	
		Kidney Organisation	
St Louis, Missouri, USA	SSM Healthcare	David Kelch- cancelled due to family illness	
Denver, Colorado, USA	Denver Health and Hospital Authority	Dr Tracy Johnson	
Albuquerque, New Mexico, USA	University of New Mexico	Prof Art Kaufman, Vice Chancellor	
		Dr Bruce Baird Struminger, Associate Director, Project Echo	
		Karla Thornton, Director Project	
		Dr Miriam Komaramy- Associate Director, Project Echo	
		Venice Ceballos, Complex Care Project	
		Jutta Lehmer- Namibia HIV Project	
		Amy Armistad	
		Elizabeth Clewett- Director Replication, Project Echo	
		Erika Harding- Manager Replication	
		Indian Health Service, Santa Fe	
		Dr Brigg Reilley	
		Dr Chad Thompson	
		Centres for Disease Control	
		Dr David Espey	
Seattle, Washington, USA	Medical Group Management Assn	Dave Gans, Senior Fellow Industry Affairs	
	Harborview Medical Centre	Dr John Scott	
	Iora Health	Dr Jay Mathur	
	Virginia Mason- Kirkland Centre	TJ Burke- Practice Manager	
		Dr Kim Pittenger	
		Dr Richard Furlong	
	Virginia Mason- Downtown	Dr Norris Kamo	
		Susannah Hugo	
		Matt Fankhauser	
Birmingham, United Kingdom	Vitality Partnership	Jane Hunt- Head of Operation	
		Laura Harper- Governance & Quality	
		Ryan Smith- Central Operations Manager	
		Enki Practice Manager	
London, United Kingdom	North West London Primary Care Trust	Dr Tony Willis- Diabetes Clusters	
		Ed Cox	
		Sonia Patel- Clinical Commissioning Group It Governance	
		Toby Hyde	
		Matt Meade	
		Dr Amrit Sachar- Psychiatry Charing Cross Hospital	
		Caroline Bailey- Strategy & Transformation	
		Sophie Ruiz	
		Big Data Seminar	Mayfair, London
		North West London, Integrated Care Pilots	Prof Lis Paice- Chair NW London ICP, Hillingdon Hospital NHS Trust
		Hammersmith & Fulham Virtual Medical Ward	Shane Brackenbury- Assistant Coordinator Community Independence Service
			Brooke Russell- Head of Occupational Therapy
	Jake Lawler- Single Point of Referral		

Itinerary

Country	Site	Key Person / Group
London, United Kingdom	Hammersith & Fulham Virtual Medical Ward	Gillian McTaggart- Operations Manager Community Independence Service
		Winnie Blackwell- Lead Nurse
	GP Federation of Hammersmith & Fulham	Forum of 31 Practices
		Chris Adams- Federation Manager
	Brooke Green Medical Centre	Dr David Wingfield
	Blizard Institute, Queen Mary University of London, Barts Health Trust	Prof Graham Foster- Hepatologist
		Tower Hamlets Primary Care Trust
		Mariska Barrett
		Josh Potter
		Dr Phil Bennett-Richards- Aberfeldy Practice
	Dr Austen El-Osto- Primary Care Research	
Devon, United Kingdom	Barton Surgery, Dawlish	Jenny Turner, Practice Manager
	Devon & Torbay Clinical Commissioning Group	Derek O'Toole- Mental Health Solveig Sansom- Virtual Medical Wards
	Torbay NHS Trust	Dr Rob Dyer- Endocrinologist
Glasgow, United Kingdom	University of Glasgow	Prof John Montgomery
		Prof Graham Watt
	Health & Social Care Alliance	Mark Charlton- Programme Director
		Cameron McFarlane- Link Worker
	Govan Health Centre	Dr Anne Mullin
NHS Scotland Primary Care Conference	Glasgow	
Hong Kong	Kwun Tong Community Health Centre	Senior Management team, Nurse Managers and Allied Health staff
	East Kowloon General Outpatient Clinic	Senior Management team, Nurse Managers and Allied Health staff
	Hong Kong Hospital Authority	Susanna Lee, Chief Nursing Office
		Chiu Kwan Chung
	Workshop with Senior Nursing Managers	



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