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Supporting Primary Health Care Providers in Western Sydney areas of socio- economic disadvantage

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Acronyms

Acronym	Definition
AHP	Allied Health Provider
ED	Emergency Department
GP	General Practitioner
GWS	Greater Western Sydney
HCP	Health Care Provider
HREC	Human Research Ethics Committee
HWA	Health Workforce Australia
IT	Information Technology
LGA	Local Government Area
NHS	National Health Services
NSW	New South Wales
OOP	Out-of-Pocket
PCMH	Patient Centred Medical Home
PHC	Primary Health Care
PHCP	Primary Health Care Provider
PN	Practice Nurse
SE	Socio-economic
SEIFA	Socio-Economic Indexes for Areas

Background

Social disadvantage is strongly associated with health disadvantage (1-5). Not only do socially disadvantaged patients experience more ill health but the General Practitioners (GPs) and other Primary Health Care Providers (PHCPs) working with socially disadvantaged populations also face challenges. Our research builds on findings of the Scotland 'GPs at the Deep End' program (6), and explores the relevance of their methodology in an Australian context.

GPs AT THE DEEP END

The UK-based Deep End project aims to support health care providers working in very deprived areas to improve health outcomes and to narrow health inequalities (6). The project drew on first-hand accounts of GPs from 100 practices in the most deprived areas in Scotland. Fifteen meetings were held in which the experiences and views of GPs were gathered. The topics selected by participants for discussion were a mixture of issues particular to deprived areas such as mental health and addiction, patient empowerment and support for providers, as well as issues relevant to all general practices such as relationships with secondary care and other providers and infrastructure and premises. The meetings highlighted the strengths of the general practice model, which emphasises the importance of contact, coverage, continuity, coordination, flexibility, relationships, trust and leadership. Within the meetings, participants expressed frustration about the lack of resourcing, support and the marginalisation of their practices within current National Health Service (NHS) arrangements. A strong theme that emerged was the problematic and dysfunctional nature of many external relationships, including those with non-practice-employed staff and certified health specialists (7).

The GPs at the Deep End project has had a significant impact on the Scottish NHS, as it has enabled GPs to share their experiences and views for the first time, and to address the health problems of the most deprived areas in Scotland. Research findings have been described in 15 reports and serialised in the British Journal of General Practice. Recommendations include: providing practices with additional time to address patients' problems; improving patient health through a series of visits; enabling practices serving socio-economic disadvantaged populations to share their experiences and undertake demonstration projects, for example to examine the impact of attached workers in general practice (in mental health, addictions and social work) as well as the impact of combining groups of small practices with area-based services (6).

Given the significant role the Deep End project has played in supporting PHCPs working in the most disadvantaged areas of Scotland, a Deep End project adapted to the Australian context, may have the potential to increase support for PHCPs in disadvantaged areas of Western Sydney.

THE WESTERN SYDNEY CONTEXT

Greater Western Sydney (GWS) has a growing population comprising 1,923,698 residents in 2011 (8). GWS includes 14 local government areas (LGAs): Auburn City, Bankstown City, Blacktown City, Blue Mountains City, the Camden Council area, Campbelltown City, Fairfield City, Hawkesbury City, Holroyd City, Liverpool City, the City of Parramatta, Penrith City, the Hills Shire and Wollondilly Shire. Our project focuses on general practices and primary health care providers in the Blacktown LGA.

Blacktown City LGA has the largest urban Aboriginal and Torres Strait Islander population in New South Wales (NSW), making up 2.7% of the Western Sydney population (9). Western Sydney is often the first point of call for migrants entering Australia (10) and has some of the largest population groups of non-English speakers. According to census data, 42 per cent of the population in the Blacktown LGA are born overseas and just over one third speak a

language other than English (11). The most common languages spoken are Arabic Filipino/Tagalog, Hindi, Punjabi and Samoan (12).

The 2011 Index of Relative Socio-economic Disadvantage (SEIFA)¹ indicates that Greater Western Sydney area is a mixture of social advantage and disadvantage, with some areas classified as extremely disadvantaged (such as Blacktown South-West) and other areas classified as affluent such as the Hills Shire (12). Despite this socio-economic (SE) diversity, Western Sydney is generally more disadvantaged compared to Metropolitan Sydney, with lower average household incomes and lower levels of education for persons aged 15 and above. The unemployment rate for the Blacktown LGA (7.2%) is higher compared to Greater Sydney (5.7%) and NSW (5.9%) (13). Within the Blacktown LGA, the Mt Druitt precinct (Blacktown South-West) shows the highest levels of SE disadvantage and is ranked the second most disadvantaged statistical local area in Sydney (14).

The health challenges and barriers described in the original Deep End project are not therefore unique to the most deprived areas of Scotland. In fact, Western Sydney shares many of the same health challenges. The health of Western Sydney is generally poor compared to Metropolitan Sydney (12). The Western Sydney population has a higher prevalence of health risk factors including smoking (in men), physical inactivity and obesity (15). Western Sydney residents have a higher prevalence of chronic diseases such as heart disease, hypertension, asthma and Type 2 diabetes (16, 17). Data from the National Diabetes Services Scheme suggest that Mt Druitt, Westmead and Blacktown are among the five geographical areas with the highest number of registered diabetes cases (18). Data from the National Mortality Database also indicates that cardio-vascular related mortality rates in some western and south-western suburbs of Sydney are higher than northern and southern suburbs of Sydney, and exceed rates in regional areas of New South Wales such as Maitland (19). Mental health is also an issue for the Blacktown region, with reports indicating high death rates from self-harm and suicide (20).

The strong similarities between disadvantaged areas in Scotland and Western Sydney, suggest that the success of the 'GPs at the Deep End' project could well be repeated in a Western Sydney-based 'GPs at the Deep End' project, to the benefit of PHCPs working in disadvantaged areas of Western Sydney and with relevance in other such communities.

RESEARCH AIMS AND OBJECTIVES

Primary health care providers in Western Sydney are addressing the health and healthcare problems of severely disadvantaged communities. Although they have substantial knowledge and experience, there has been little documentation of their views to date. Accordingly, it is valuable to explore the first-hand accounts of GPs, GP registrars, Practice Nurses (PNs), practice staff and Allied Health Providers (AHPs) working in areas of SE disadvantage. The specific aims of the 'GPs at the Deep End: Western Sydney' project are to:

1. Report on the international evidence related to PHCPs working in areas of social and health disadvantage including related support strategies
2. Investigate views of PHCPs working in Western Sydney areas of social and health disadvantage regarding stresses experienced and support needs, and
3. Develop a plan for strategies that would assist in meeting the needs of these practitioners.

¹ The SEIFA index rating or Socio-Economic Indexes for Areas is used to represent the levels of socio-economic disadvantage. The index is derived from attributes that reflect disadvantage such as low income, lack of education, high unemployment and jobs in relatively unskilled occupations.

Methods

We used collected and synthesised data from the following sources,

1. Review of the Australian and international literature, including the “grey” literature
2. Qualitative data from face to face and telephone interviews.

LITERATURE REVIEW

We reviewed academic databases including PsycINFO, PubMed, EBSCO, and MEDLINE, as well as Government websites including websites of the Australian Primary Health Care Research Institute and the Australian Department of Health. We used keywords and phrases including “primary care”, “health care”, “family practice”, “general practice” “socially deprived” “deprivation” and “socio-economic disadvantage”. Australian and international literature was included in the search, as well as “grey literature” such as government reports, theses/dissertations and research reports.

QUALITATIVE ANALYSIS

We received ethics approval from the Western Sydney University Human Research Ethics Committee, HREC approval number H10989.

Informed by the literature review and discussion with the Project Reference Group, we developed a semi-structured interview schedule and a focus group interview schedule. The Project Reference Group assisted in identifying interview participants including GPs, practice staff, AHPs and community members. Interview participants were initially contacted via email or telephone using the ethics approved participant information statement. Additional recruitment methods were employed, including snowballing - participants informed team members and colleagues about the research project. Another recruitment strategy involved identifying practices that met the research criteria and contacting them, providing information regarding the research project.

In order to recruit patients, potential participants were identified by GPs and their administrative staff provided the study information at reception. A standard script was used to ensure that potential participants were given consistent information.

Participants completed and signed an ethics-approved participant consent form prior to commencing the interview and completed a brief demographic form. The interviews were conducted by a member of the research team and were digitally recorded. Interview recordings were transcribed by an independent transcription service.

We conducted a thematic analysis following the relevant guidelines (21, 22).

During each stage of analysis, the method of analysis and the codes derived were discussed with members of the research team and the Project Reference Group. This ensured that there was a consistency within patterns identified, and that the analysis was plausible. Data were categorised by creating codes using Nvivo². The final stage involved the revision and refinement of themes, examining at the level of the codes to ensure a coherent pattern (21).

² Nvivo is a qualitative data analysis computer software package. It has been designed for qualitative researchers working with very rich text-based or multimedia information, where deep levels of analysis on small or large volumes of data are required.

Results

LITERATURE REVIEW

This literature review focuses on exploring impact of SE disadvantage on patient health, challenges experienced by PHCPs working in areas of disadvantage and strategies through which PHCPs can be supported.

The Importance of Primary Health Care

Primary health care is a critical element in the health care system – it is key to maintaining and improving a population's health (23, 24). As well as the role of primary health care in preventing illness and death, there is evidence that health care systems that are based on *strong* or high performing primary health care are associated with improved health outcomes. There is concordance between strength of primary care and key health indicators including birth outcomes, life expectancy, and age-adjusted death rates (24-26). The enhancement of primary health care, particularly general practice, is associated with lower all-cause mortality, regardless of income inequality (26), suggesting that strong primary care can buffer the negative health outcomes associated with SE disadvantage.

Populations with higher primary care provider to patient ratios have lower hospital admission rates for acute and chronic conditions (27), as well as improvement in low birth weight; life expectancy; and self-rated health (28). Adequate provision of primary health care is associated with lower costs and more cost effective health care (29).

Socio-economic disadvantage and health outcomes

Poor social and economic circumstances affect health throughout life (6, 30-32). Compared to advantaged populations, patients from socially disadvantaged populations have different health needs and priorities, and face challenges in management of their health (7, 33-35).

Patient health outcomes

Patients from SE disadvantaged communities have higher mortality and morbidity rates compared to those from advantaged communities (3, 4, 36). Socioeconomic disadvantage is linked to a range of health problems, including low birthweight, cardiovascular disease, hypertension, arthritis, diabetes, and cancer (37). Patients living in the most disadvantaged areas report poorer self-assessed health and are more likely than their wealthier counterparts to experience issues relating to mental health and disability (1, 32). As the SEIFA score of an area decreases, the prevalence of psychological distress increases, however the causal relationship is unclear (38).

SE disadvantage is also associated with a higher prevalence of risk factors, such as environmental exposures, lack of social inclusion and cohesion, limited access to health care, chronic stress and poor health behaviours/choices (39). Research suggests that children who experience SE disadvantage have a high risk of developing tobacco, alcohol, or drug dependence, as well as a poor cardiovascular risk profile entering young adulthood. Poor health outcomes in adulthood are, in part, due to disadvantaged children's high levels of exposure to a combination of factors, including mental and physical health issues in the family and exposure to childhood maltreatment (40).

Patient priorities

Patients from lower SE groups not only have greater health needs compared to advantaged groups but may have different priorities regarding primary health care (41-43). Studies show that in general, patients prefer a GP who provides information, support and involves them in treatment decisions (44), and place high value on accessibility and availability of primary health care (45, 46). However, research focusing on priorities of SE disadvantaged patients suggests that when choosing a family practice, they have a greater focus on access (43).

While patients value medical skills, continuity appears to be a more important reason for attending their current practice (41). This may be related to the high prevalence of chronic disease within disadvantaged populations and the need for continuity in these situations.

A qualitative study of patients living in a highly disadvantaged area in Scotland reported that patients valued two key factors in relation to their GP experiences, competence and empathy or caring. Specifically, participants emphasised the importance of feeling listened to by the doctor and feeling able to talk; being treated as an individual; feeling like the GP understood them as a whole; receiving explanations that can be understood. Similar to the findings above however, factors such as continuity, access and time during consultation were also described as essential (47). Such inconsistencies in research findings suggest that further research is needed to further understand SE disadvantaged patients' preferences and values in the context of primary health care.

Health care needs – The Inverse Care Law

Patients from disadvantaged areas generally have greater health care needs than advantaged patients. Despite this, provision of health care is often poorer. This phenomenon, whereby those in most need are least likely to get the care required, has been labelled the 'inverse care law' (48, 49).

Universal health care systems such as in Australia, are intended to provide equity in health outcomes across the social spectrum (50, 51). However, it is argued that universal health care "is not a one-off and irreversible achievement" (52) (p 244). Health care costs carried by Australian patients have risen and are now higher than in most other high income countries. Gaps in government funded services (notably dental care) increasingly making it difficult for SE disadvantaged patients and those with chronic and complex illness to access needed health care (42, 53). Such gaps in health care illustrate the inverse care law, as patients in most need of health care, are least likely to be able to afford it and thus less likely to seek it.

When they do access care, lower SE patients are likely to receive lesser quality care compared to those from higher SE groups (51). GPs have been shown to give patients from disadvantaged backgrounds less involvement in treatment decisions; more biomedical talk; less control over communication; less information, and more time spent on physical examination (54). Evidence suggests GPs spend less time with disadvantaged patients (55). This is concerning as a strong relationship between HCP and patient is linked, not only to patient satisfaction, but also improved health outcomes (56-58). Development of such a relationship is argued to centre on trust, empathy, information exchange, rapport and shared decision making, requiring the HCP to engage in patient centred care (59-61). However SE disadvantaged patients may not be receiving this type of care.

Supporting SE disadvantaged patients and barriers for Primary Health Care Providers

Differences in quality of care provided to SE disadvantaged patients do not necessarily reflect prejudice in relation to these patients. Some research suggests that some PHCPs may intentionally change clinical management decisions based on their patient's SE status in the belief that this is in their patients' interests (62). A GP may provide a SE disadvantaged patient less aggressive diabetes management, postpone testing, or use than ideal or nonstandard treatments in order to provide care that is more affordable, feasible, or understandable to their patient. Further research also suggests that the discrepancy in care demonstrates the ways in which PHCPs struggle to cope with the negative impact of SE disadvantage (35).

Patient related factors

Primary health care providers working with disadvantaged populations address an increased burden of ill health with limited resources and time (31, 62, 63). For many GPs, the constant stream of complex issues is an "ongoing struggle" (p 51), with professional and personal

consequences (35). Interviews with 15 GPs and 4 PNs in practices with a high percentage of SE disadvantaged patients, revealed many were overwhelmed and exhausted by their attempts to assist patients in managing their chronic illness and multi-morbidity. One GP described her ongoing struggle to “get...one thing under control (then) something else happens” (p. 51). Participants also described aspects of their work as “demoralising”, “overwhelming” and “soul destroying” (p. 52). Such accounts emphasise the emotional toll for GPs of working with SE disadvantaged patients with chronic illness and multi-morbidity.

The high incidence of social problems in SE disadvantaged populations means that PHCPs often attend needs beyond physical health. PHCPs often provide social support for patients, and assist them to navigate the complex health care system (31). These tasks increase PHCP workload as do patient factors including lower education and health literacy, distrust of specialised services, heightened expectations of GPs, cultural differences and difficulties articulating needs (55). These factors impact on communication and affect adherence (64).

Higher prevalence of psychological distress amongst SE disadvantaged patients means GPs often need to attend to this (65). GPs are required to move beyond a role of medical practitioner, with some describing themselves as taking the role of “friend” or “priest” (35).

Time pressure

The addition of these extra duties to a busy schedule places pressure on PHCPs increasing their stress (66) and restricting their capacity to provide adequate support for patients (67, 68). Simply gathering information about the illness, including symptoms and psychosocial context, can take significant time with complex physical and psychosocial issues (69). Such tasks take longer in settings of language and cultural differences and lower health literacy.

Given that patients with complex needs are likely to require longer visits, payment systems based exclusively on fee-for-service (FFS³), can be a major barrier for PHCPs wanting to provide longer visits to such patients (31). Many countries use one, or a combination of the following payment systems: salary⁴, capitation⁵ and fee-for-service (70). In Australia, GPs receive most of their remuneration through FFS payments (71). GPs working in disadvantaged areas may be more likely to bulk bill and may therefore utilise multiple short consultations rather than fewer long ones, in order to maximise their income (55).

Burnout

Burnout is an occupational stress reaction to demanding and emotionally charged work (72). Risk factors for burnout in PHCPs include workload, changes in systems, financial strain, challenges with work relationships and difficulties balancing professional and private life (73). Burnout is detrimental to PHCPs, leading to physical exhaustion (74), insomnia (75) and increased use of alcohol (76). It also impacts on patients, as burnout alters the quality of care provided and relationships with patients as HCPs coping with emotional exhaustion and burnout may distance themselves emotionally from their patients (76).

The constant challenges and stresses encountered by PHCPs working with disadvantaged patients, put them at risk of burnout. However not all such PHCPs experience burnout (34). Of 15 GPs working in disadvantaged urban communities, some reported experiencing burnout, however most thrived (34). These ‘thriving’ doctors, described three factors that promoted strength and resilience whilst working with marginalised groups - respect and appreciation for their patients, a sense of control over their practice, and being intellectually interested in their work. Such findings suggest strategies that protect PHCPs from work-associated distress and burnout, enabling them to provide high quality care to their patients.

³ **Fee-for-service (FFS):** payment made to a PCP for every item of service or unit of care that they provide.

⁴ **Salary:** regular payment to the PCP for a set number of working hours or sessions per week.

⁵ **Capitation:** payment made to PHCP for each patient for whom care is provided rather than for episodes of care.

Supporting primary health care providers: Current initiatives and recommendations

The strategies above may assist PHCPs to avoid negative outcomes such as burnout, however their sustainability depends on how primary health care is supported and resourced. In the following section we described current programs and strategies that support PHCPs. These are not specific to those working with disadvantaged communities, however may assist in combatting the challenges affecting these PHCPs.

Managing time pressures

Research suggests that lengthening consultation time or intervals between consultations facilitates patient centred care and patient enablement (63) and can reduce stress in PHCPs (66). Evidence also supports dealing with certain health issues in one single visit rather than multiple visits (77). Routinely allowing patient choice of appointment length increases patient empowerment, and improves doctor patient relationships and delivery of health promotion (78). The feasibility of these approaches needs further research.

Group visits have been suggested as a means of managing time pressures, allowing extended time for teaching, discussion and sharing of patient experience (79, 80). Group consultations trialled in diabetes care demonstrated a positive impact on quality of care compared to individual visits (80). Similar results have been reported with group visits for older patients with chronic illness resulting in improved self-management through education, encouragement of self-care, peer and professional support, and attention to psychosocial aspects of living with chronic illnesses (81). Some patients however may feel uncomfortable talking in a group about psychical health or psychosocial concerns (82). Group visits are not supported under the current Australian payment system.

Reconceptualising health care and payment structures

Collaboration between General Practices

In Australia, general practices are private businesses responding to patient demand, with little incentive to work collaboratively. There is evidence that collective action can improve primary health care and health outcomes of SE disadvantaged patients. Thirty-four general practices in inner London, allocated to small geographically based networks, each with a network manager, administrative assistant, and educational budget, reported improvements in blood pressure and cholesterol control. Key contributing factors included engagement in learning, clinical case discussion in multidisciplinary teams and information technology (IT) systems enabling high-quality coded data entry, care pathway support and on-screen prompts (83).

Payment Structures

Australia uses a mostly FFS payment model with many perverse incentives to optimal care of an aging population with many chronic and complex health issues, particularly in disadvantaged populations. Longer consultations and delegation from GPs to other PHCPs are not well supported by FFS payments (84). Practice incentive payments support quality care and improve patient access and health outcomes (31, 85). However these are most effective in practices with strong administration (86) and available only to accredited practices (85).

A recent report recommends a blended payment system with fee-for-service remuneration for acute episodic care, capitation payments for long-term care of complex and chronic illnesses and performance-based payments supporting beneficial services not otherwise remunerated (87) Implementation of such a model would require special consideration of practices with higher SE disadvantaged patient populations with adaptation of targets and provision of resources based on patient need (31).

Strategies to improve cost efficiency include reducing duplication of services (88). Primary health care providers could access pathology requests and results from a secure site (89).

Enhancing roles of PNs and pharmacists in management of chronic illness would allow GPs to better direct their skills (89). There is mounting evidence for cost effectiveness of Patient Centred Medical Home (PCMH) approaches to PHC.

Patient Centred Medical Home

The PCMH is a model for high quality, cost effective patient centred primary health care (90). Initially designed to achieve the Triple Aim of improved patient experience; improved population health and reduced cost (91), it has recently been described as achieving a fourth aim (quadruple aim) - improving work life of PHCPs (92). Although PCMH models vary, they are often based on the Joint Principles of the PCMH - providing patient centred, comprehensive, coordinated, accessible, safe and high quality health care (93).

The PCMH is promoted as addressing failures and inefficiencies in current primary health care (94). Evaluation demonstrates improved patient-reported experience; staff reported reduction in burnout; improved clinical performance; and reduced costs (95, 96). A two-year project examining feasibility of transforming 36 family practices into PCMHs, reports however that the process can be exhausting, risks damaging practices and causing staff burnout (if done too quickly) though staff reported new sense of meaning and purpose (97).

The Patient-Centred Primary Care Collaborative reviewed evidence published between 2012 and 2013, for PCMH and advanced primary care in the United States. Patient Centred Medical Home initiatives produce improvements including: reductions in costs of care and emergency department admissions, improvement in population health and patient satisfaction (98). A 2016 report reviewing 30 publications showed that PCMHs continue to facilitate reduction in health care costs, unnecessary ED visits, and hospital readmissions, with more mature medical home programs demonstrating stronger improvements (99). Generally PCMHs with the most positive outcomes have specific performance measures or incentives relating to quality, service utilisation, patient engagement or cost savings (98).

Patient Centred Medical Homes offer promise for SE disadvantaged patients particularly in addressing challenges PHCPs encounter (31). The PCMH is team-based, involving GPs, nurses, AHPs and usually a practice manager working at the top of their skill set (100) and this enables GPs time to address patients' more complex health and social issues. Australian funding models however provide barriers to implementation with the FFS model failing to support key features of PCMHs including web-based or telephone consultations, multidisciplinary team care, population health care and enhanced connectivity (101).

Conclusion

Social disadvantage is inextricably linked with health disadvantage, which impacts on patients and the PHCPs caring for them, who struggle with workload and time pressures which threaten their ability to provide effective primary health care (31, 35, 102). These challenges increase the risk of burnout (103). Programs such as the Deep End Project (6) and research into PCMHs provide insights into ways that PHCPs can be supported.

It remains unclear however whether these strategies would meet the needs of PHCPs working with disadvantaged populations in Australia and in particular, Western Sydney, where GP teams address health issues in severely disadvantaged communities, with insufficient support (104). Support needs in this context require closer examination of patient needs, as well as improved understandings of the challenges PHCPs encounter, in order to develop strategies to better support these PHCPs to deliver high quality care.

ANALYSIS OF INTERVIEW DATA

The following analysis explores interviewee accounts of working in areas of SE disadvantage. A total of 57 participants from 17 practices participated in one-to-one interviews. These included GPs (16), GP Registrars (5), Reception Staff (8), PNs (7), AHPs (11), and patients (10). Further details can be found in the appendix of this report. Four over-arching themes are presented (see Table 2): ‘Primary health care provider perceptions of the Western Sydney population’; ‘High values, hard work: primary health care provider’s attitudes towards their work’; ‘The structure of general practice’; and ‘Health systems issues’. In this analysis General Practitioners are coded as (GP), GP registrars as (GPR), Allied Health Providers as (AHP), Practice Nurses as (PN), reception staff and practice managers as (PS), patients as (PAT).

Primary Health Care Provider perceptions of the Western Sydney patient population

Interviewees interviewed provided a detailed description of the populations of Western Sydney, particularly the Blacktown-Mt Druitt area (see Table 1).

Table 1: Primary health care provider perceptions of the Western Sydney patient population

Subtheme	Codes and data extracts
Western Sydney: A Cultural Hub Accounts relate to the diversity of the Western Sydney population.	Culturally diverse community > We call this a vibrant, multicultural Western Sydney (GP04) Immigrant and growing refugee populations > We are seeing a lot of newly arrived migrants and refugees and recently we start to see a lot of refugees lately (AHP01) Language and cultural barriers > Patients that do come in that just want to speak Tamil and if they can’t physically get in to see someone that does speak that particular dialect, then it’s a bit of a struggle to try and get across to them and the consultation always blows out (GPR02)
A socio-economically disadvantaged population Accounts relate to Western Sydney SE status.	Socio-economic diversity > Between Blacktown and Mt Druitt is also a mixture of relative middleclass affluence and extreme outer metropolitan disadvantage (GP07) High rates of socio-economic disadvantage > Struggling working class (GP03) > Low SES [socio-economic status] area (AHP02) > A lot of unemployment in the area (GP 11)
Poor Physical and Mental Health Accounts relate to health status in Western Sydney.	Chronic illness > Chronic disease is pretty much prevalent in this area...Western Sydney is a hot spot for diabetes (GP01) Mental health issues > [We] do get a fair amount of mental health, anxiety, depression in the teenagers... In the middle age sort of category, again a lot of anxiety, a lot of stress-related depression (GP06)
Patient understanding and self-management Accounts relate to attitudes and health behaviours in Western Sydney.	A lack of motivation > Some of them can’t be bothered as well because it’s a lot of effort (AHP06) Education and health literacy in health outcomes > A lot of the time... because of the poor education, they ...don’t have the understanding to look after themselves (GPR05) Patients as motivated, health literate and adherent. > You get a lot of them that don’t want to do anything about their condition, but you also get some of them that are actually quite compliant and are really interested to improving their health (AHP02)

High values, hard work: PHCP's attitudes towards their work

PHCPs commented on their role and work, highlighting factors assisting them to provide quality care for patients and manage the impact on their own wellbeing (see Table 2)

Table 2: High values, hard work: PHCP's attitudes towards their work

<p>Upholding a high standard of care Accounts relate to the imperative of providing high quality care. High quality care relates to being ethical, caring for the whole patient, including by providing patients with adequate time to address key health and other issues.</p>	<p>Providing high quality care > I don't think that any of the doctors here or any of us or myself would want to work in a situation where we're actually delivering poorer quality care (GP05)</p> <p>Genuine care and empathy for their patients > You get involved in [patient's] lives, and when something sad happens to them, you get involved as well. And there's a lot of empathy that happens here, and that's what makes a good GP or a primary care physician, is you to have empathise with your patients, you have to understand what they're going through, and only then you can provide that personalised care (GP04)</p> <p>Developing rapport or a trusting relationship with patients > [Patients] will confide in you...that's what you need to build up, that confidence in them... It's really good to get that rapport (PN02)</p> <p>Spending time with and educating patients > You can see a patient very quickly if it's a minor thing and you've got the experience behind you to treat it quickly...but I don't think you can do that sustainably for everybody...People come in with mental health issues and I don't know if you can do that in six minutes...I educate my patients about why they can't have antibiotics for a cold, I take the time to do that (GP06)</p> <p>Patient accounts of 'good' GPs > He's the type of doctor if he thinks there's really something wrong, he'll do everything to find out what it is.... if you're really sick, he will go out of his way to try and fix you up...I like that (PAT04)</p>
<p>Caring for patients: a rewarding experience Accounts relate to positive aspects of PHCP's work and factors that contribute to enjoyment of working in general practice such as genuinely caring for patients, and having a positive impact on patients' lives.</p>	<p>Enjoying the role > I have a lot of professional satisfaction from working here. So I love my job and I love the staff and I love my patients (GP08)</p> <p>Having a positive impact on patient's lives > For me there's a lot of satisfaction...that I have made a change in somebody's wellbeing (AHP04)</p> <p>A preference for working in SE disadvantaged areas > In general, I prefer not to [work] in affluent areas, but that's just my choice, because I don't feel that I'm doing much there. There is disease, don't get me wrong, there are obviously illnesses everywhere, but I do feel a bit more useful in the area that's less affluent (GP14)</p> <p>Valuing their relationships with patients. > They...adopt you into their lives...and they think of you as a sister or a daughter, or a surrogate mother (GP04) > I find it's not difficult to help [my patients] because...they are like my friends (GP16)</p> <p>Not all PHCPs enjoyed their work in SE disadvantage > So I went back to the original clinic that I started, so yes... Well the problem is the current practice is...you can't control even what's inside the clinic, much less the patients (GP10)</p>

<p>The consequences of caring Accounts relate to the negative impact of caring and having an invested interest in patients' lives, also patient expectations of GPs and the impact on the psychological and social wellbeing of PHCPs.</p>	<p>Emotionally and physically exhausting The most challenging thing I would say actually, I mean, dealing with the refugees. We have seen some cases, sometimes I don't go and sleep...sometimes you feel exhausted (GP01)</p> <p>Time consuming work > Mental health - It does eat into your time a lot. They'll come in with a 15 minute appointment, come in and say, Oh I've just come for this, this and this. You go through that and they go, Oh, and. And 20 minutes later you've already eaten up 35 minutes and it makes you late. That does increase my stress (GP06)</p> <p>Patient expectations > I want to see the doctor I know and in the day timing that I want and spend as much time as I want, a big list as I want and pay nothing and after that I'll whinge because I'm late, where your expectation is not correct because if you go outside Sydney you will know that we [patients] are absolutely spoilt here (GP02)</p> <p>PHCPs working beyond the scope of their role > [Patients] probably don't have the finances to go and see a specialist... if this patient won't go in to see them....it keeps you awake at night (GPR04)</p> <p>The risk of burnout > I think it takes its toll... that medicine has one of the highest divorce rates and one of the highest suicide rates out of the professions. Because I think the pressures are there. There are no easy solutions to them. And often it ends up in...burnout...(GP09)</p>
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The structure of general practice

Participants discussed aspects of general practice that both assisted and challenged them in providing effective patient care (see Table 3).

Table 3: The structure of General Practice

<p>Patient needs versus practice structures Accounts relate to patients and PHCP's dissatisfaction with structuring of appointments and patient comments about access to GPs.</p>	<p>Challenges associated with appointment structures > If you give people a longer time and then you give them a 15-minute appointment and they're only in there for five then you're sitting there doing nothing ...it's not an exact science (PS06) > I might be there for an hour before I get seen, but you expect that (PAT07)</p> <p>Dealing with long wait-times or GP unavailability > My husband finds it hard to go to [the doctor] because of his work time and the times that [the doctor] is open and I say....just go to the medical centre (PAT01)</p> <p>Disadvantages of visiting multiple GPs > I go between two different doctors... I've seen so many which makes it hard because then they say, Have you had this vaccination? And I think, I can't remember and it's probably not on your record (PAT02)</p>
<p>The benefits of team-based care Accounts relate to the importance of having a cooperative and functioning</p>	<p>Supportive staff > Having reception who is supportive is very important...because a lot of doctors don't actually know how to manage themselves (GP15) > I like being part of the team...better than working in isolation (AHP04)</p> <p>Top of licence > You need the right support staff, which will actually be able to drive home the message. I'm not a dietician, I'm not a psychologist, I'm</p>

<p>team and the impact of 'in-house' services on coordination of care and patient adherence.</p>	<p>not a physio...I'll use some of those elements of those in my normal day-to-day routine but that's not what I am (GP10)</p> <p>Time efficiency</p> <ul style="list-style-type: none"> > [Patients] basically come in and I do the dressing, they're not sitting out there waiting half an hour for the doctor (PN03) <p>Coordination of care and enhanced patient compliance</p> <ul style="list-style-type: none"> > We actually got better compliance from patients involved in this because...they actually see those practitioners, so the dietician, the exercise physiologist, the pharmacist, as part of the full team (GP05)
<p>The challenges of the solo practitioner Accounts relate to the difficulties of being a solo GP. Among the challenges mentioned were problems associated with accreditation, hiring locums and isolation. Supports were noted including the 'After Hours' service and GP groups.</p>	<p>Issues with accreditation</p> <ul style="list-style-type: none"> > The solo practitioner have a problem with accreditation ... I gave it up because it's so bureaucratic, paperwork ...some of the things that they ask you is so ridiculous sometimes (GP13) <p>Being isolated</p> <ul style="list-style-type: none"> > There's a fair bit of isolation where you work on your own, you don't discuss anything about patient's health and our own health (GP14) <p>Difficulties hiring a locum</p> <ul style="list-style-type: none"> > When you're sick, virtually you have to close the practice, because you can't have somebody else come in. Locums are impossible to find west of Parramatta. They're not interested...you find that the quality of locums that you get is not always what you'd want. I've had occasions where I've had locums in and the receptionist had to dig them out of the local TAB each time a patient came...So in terms of things like holiday breaks...And even for things like study and doing - continuing education. That's a problem as well (GP09) <p>Supports available to solo practitioners</p> <ul style="list-style-type: none"> > We are really lucky to have Mt Druitt association ... that relationship with other doctors and we can talk about things (GP14) > We have an after hours' service now which is reasonably good where after six or seven o'clock at night these people [patients] can ring this service....so that's a bit of a Godsend (PS06) <p>The demise of the solo practitioner</p> <ul style="list-style-type: none"> > Newly qualified doctors find they can't start a solo practice and...the medical centres....that's the way it will go (GP13) <p>Benefits of being a solo practitioner</p> <ul style="list-style-type: none"> > I've known them [my patients] for a long time. I've treated five generations in one family and I go to the house, I do home visits, so nothing escapes me; they can't hide anything from me (GP12)

Health systems issues

Inefficacies within the health system were described by many PHCPs, practice staff and patients (see Table 4).

Table 4: Health Systems Issues

<p>The role of primary health care Accounts relate to the importance of primary care and the poor recognition of this fact by</p>	<p>The importance and cost-effectiveness of primary health care</p> <ul style="list-style-type: none"> > We are trying to do our level best to educate all of them about how important primary care is, and how important it is to prevent rather than treat (GP04) > I reckon that we saved the government about \$50,000 through de-prescribing, reduction in doses and change in medications (GP05) <p>Measuring the impact of primary health</p> <ul style="list-style-type: none"> > Australian ministers for health can promise system change. What they can't promise is system reform because you can't tell if a change is a reform unless you're measuring outcomes (GP07)
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<p>'government'. The challenges in measuring outcomes were noted as well as the inadequacy of current funding models to remunerate PHCPs.</p>	<p>Primary health underappreciated by government</p> <ul style="list-style-type: none"> > I think that governments don't appreciate general practicegovernments just say, ... we'll just turn the screws a little bit, [GPs] won't mind. They'll squeal a little bit, but they really won't do anything about it. They'll just continue to bulk-bill and take it on the chin. And I think that doctors are either silly enough or altruistic enough, just to say, Well, okay, we won't cut our services, we won't go strike... (GP09) <p>PHCP discontent with the current fee-for-service model.</p> <ul style="list-style-type: none"> > ...as a business it is less profitable ...we're seeing more patients to cover for our expenses and make some profit (GP08) <p>Pressure to see more patients</p> <ul style="list-style-type: none"> > The system pays for six minutes. So if you spend more time than six minutes you're not getting paid for that (GP10) <p>A converse view of fee-for-service</p> <ul style="list-style-type: none"> > ...too much about money, I don't feel comfortable...I'm not a rich man but I have enough for me (GP16)
<p>Fragmented care Accounts relate to poor connection, cooperation or communication between general practice, hospitals and some AHPs or specialists.</p>	<p>Poor communication between hospitals and general practice</p> <ul style="list-style-type: none"> > To then try to get any feedback from the hospital...about their management plans was another time-consuming and frustrating process. So there's the hospital's existence, silos, whereas we are trying to do the opposite (GP05) <p>Disjuncture noted between the tertiary and primary sector</p> <ul style="list-style-type: none"> > It is not good enough for individual patients to have isolated experiences of excellent care. They actually need care which is stitched up (GP07) <p>Improving connections between general practice and hospitals</p> <ul style="list-style-type: none"> > We have discharge nurses and nurses who work in the community, whether they play a bigger role in acting as a communicator between these two (AHP04) > The thing about the electronic patient management is that ... I would know that the patient's been in the ED, has been discharged (GP07) <p>The disconnection between general practices</p> <ul style="list-style-type: none"> > [Patients will] go see someone else, and I don't know what's happened... if it was something more serious and I didn't have any communication, all I have is the patient's word on what's happened, and what she thought the doctor did (GP15)
<p>Barriers to accessing health care Accounts relate to barriers patients experience when attempting to access relevant and effective health care. Key issues explored include difficulties navigating and understanding</p>	<p>Complex processes</p> <ul style="list-style-type: none"> > ... and they're in crisis I find it's very, very difficult to get them engaged with the services ... it's a gap in the system - to contact an access team or a mental health crisis team. They've got all of these different red tapes and criterion to get someone into them (PN07) <p>Wait-times</p> <ul style="list-style-type: none"> > I feel sad for people in pain who have to wait interminably for operations which should be done more expeditiously. People with emergencies who have to wait hours....ridiculous (GP09) <p>Patient difficulties navigating the health system</p> <ul style="list-style-type: none"> > I can research and try and find out, but...the health system, it's pretty complex for me to do and I've been working for New South Wales Health for 18 years since I've graduated...So for someone who is not well educated who has lots of pressures, they haven't got a chance really to find out what help there is for them (PN03)

<p>the health system, delays accessing health care, affordability.</p>	<p>Recommendations for easier navigation of the health system</p> <ul style="list-style-type: none"> > It's always good to have computer resources, the health pathways... it's just a challenge having that to be updated (GPR04) > ...it might be an idea to pay up to get yourself an Indigenous nurse there for kids... maybe it would give my people more knowledge on the medical services that are available for them (PAT08) <p>Affordability of health services and healthy living</p> <ul style="list-style-type: none"> > Sometimes the patient wants to take the medication, but ... for diabetes, blood pressure, cholesterol, and it will be like \$100-something a month (GP11) > I'm not doing very well at the moment, we're pretty hard up and every time you've got to go to a specialist appointment... it's something that I can't, yeah, afford (PAT01) <p>PHCPs making health care more affordable</p> <ul style="list-style-type: none"> > Some specialists do accept to bulk bill the patients, we do ring them up and explain the situation (GP14) <p>Patient's appreciation of bulk billing services</p> <ul style="list-style-type: none"> > I just think that if I had to pay every time I went to see a doctor or had to have anything done, especially giving birth and it would just make it so much more difficult. We live - each week - we get by each week sort of thing, so knowing that I can have healthcare for free is a massive, massive thing (PAT02) > I'm not a rich woman...so if I had to pay the doctor every time I had an issue...I probably wouldn't – couldn't see him as much (PAT10)
<p>Supporting primary health care Accounts relate to areas in which PHCPs felt supported, such as support from team members, GP groups and WentWest. Recommendations for improvement within the health care system are also presented.</p>	<p>The support from WentWest</p> <ul style="list-style-type: none"> > They're just so supportive... having that number to ring and say, I don't know... And they were the ones that sort of got me on to a few different programs... sort of got me orientated (PN01) > The ATAPS [Access to Allied Psychological Services] program has been quite helpful because people can't afford ... to go and see private mental health care workers (GP03) <p>Educating GPs on the role of AHPs and specialists</p> <ul style="list-style-type: none"> > Even if there was a little bit more of an emphasis placed on Allied Health and what's new and current for the GPs. Just so that they're aware... Just to say look, dieticians are doing this, exercise physiologists can help with this (AHP07) <p>Referral and prescribing rights for AHPs</p> <ul style="list-style-type: none"> > We've been trying to push for extended scope of practice for prescribing rights... for xRays, ultrasounds, MRIs, for referral rights to specialists... but it's just never eventuated (AHP10) <p>Funding as an area of need</p> <ul style="list-style-type: none"> > I mean, it's a stressful job and when you don't have the resources that you necessarily want or need that becomes stressful as well, you've got to think outside the box (PN07) <p>Lack of Medicare items to cover non-face-to-face activities</p> <ul style="list-style-type: none"> > We need to do a medical case conference where I'm involved...None of the other Allied Health professionals who are involved with the care of a particular patient are reimbursed for their time at all, so that's a bit frustrating from our perspective (AHP08) <p>GP's need for a voice to represent their needs</p> <ul style="list-style-type: none"> > To give .. some sort of voice to general practice... on the more bigger scale then I think general practice can contribute a lot to the health system (GP08)

	<p>> Just try to go and put this research of these things in front of the media as well...Because doctors are very busy, they don't talk. And other people are talking a lot, very loud...we cannot do it (GP11)</p>
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Discussion

In this section, we summarise the research findings and consider the implications in light of the literature.

OVERVIEW OF RESEARCH AIMS AND FINDINGS

The primary aims of our study are to investigate the support needs of PHCPs in socio-economically disadvantaged areas of Western Sydney and to recommend strategies that would address the needs identified.

There is a general consensus among interviewees that although Western Sydney, particularly the Blacktown-Mt Druitt area, is diverse culturally and socio-economically and the community generally is at SE disadvantage with poor physical and mental health. Patient lack of understanding, motivation and self-management of their health were described as challenges for PHCPs working in this region. Those PHCPs interviewed also commented on their commitment to providing high quality, patient centred care and described both rewards of working in these communities and the toll taken. They suggested approaches to primary health care that assist in delivery of high quality patient care and support PHCPs and practice staff. Both PHCPs and patients recommended change in health systems in order to provide better access to health care, improved communication between health sectors, and enhanced support for PHC.

THE WESTERN SYDNEY COMMUNITIES

Our findings suggest that working in areas of SE disadvantage in Western Sydney presents challenges for PHCPs. Congruent with epidemiological data (11, 13, 15, 20), interviewees described the Western Sydney, specifically the Blacktown-Mt Druitt communities in which they worked, as diverse with regards to cultural background, health conditions and SE status but overall, as socio-economically disadvantaged, with a high prevalence of complex health issues, psychological distress and chronic illness.

PHCPs working in practices with a high migrant or refugee patient population encountered communication barriers relating to language and cultural differences. The literature confirms the impact of these barriers, not only on patient access to health services (105) but also their understanding and therefore their adherence to treatment (64). This impacts in the longer term on health disparities experienced by cultural minorities (106). Use of interpreters and bilingual staff have been proposed to assist in overcoming these barriers (107) and were also suggested by our interviewees. There is also evidence that enhancing cultural competence of pharmacists to accommodate patient's cultural preferences may address these challenges (108). Another strategy described in the literature and proposed by interviewees is development of culturally and linguistically sensitive patient resources including those aimed at increasing awareness about services (109).

A key concern expressed by most participants was the high prevalence of complex health issues, especially chronic illness and multi-morbidity including obesity, cardiovascular disease, psychological distress and most notably diabetes (as evidenced by frequent unprompted participant comments). Chronic illness such as diabetes is a growing problem in Western Sydney communities (110), and also for PHCPs. Interviewees described the pressures this places on PHCPs with regards to their workload.

Poor health literacy was another issue highlighted by PHCPs. This was manifest in various ways including misuse of medication; confusion as to the purpose of medications; what constitutes healthy food; limited awareness regarding the roles of various AHPs and specialists and difficulties in understanding their own health conditions and their impact on physical and mental wellbeing. This view aligns with evidence that poor health literacy is associated with poor health outcomes and poor use of services (111-113). The negative

impact of poor health literacy on chronic illnesses such as asthma, diabetes and hypertension has been described in the literature (114, 115), reinforcing the need to develop strategies addressing this problem. Practitioners are advised to adopt communication techniques that check for patient lapses in understanding, explore health beliefs, reinforce and tailor health messages, and promote an open dialogue (116). Local programs such as the 'Western Sydney Diabetes Prevention and Management Initiative' (117), and the state wide 'Healthy Eating and Active Living Strategy' (118) have potential to address patient literacy, however we are yet to see the results of these. Interviewee accounts suggest that use of nurses and AHPs such as dietitians and exercise physiologists can reduce the pressure on GPs to educate their patients. However, educating patients is a time consuming task for any practitioner, and perhaps community-based programs providing patients with support and education to overcome barriers associated with poor health literacy may be helpful.

HEALTH CARE PROVIDERS AND SERVICES

Primary Health Care Providers interviewed in our study set a high priority on quality care, including: addressing patient needs despite lack of available consultation time or financial remuneration for doing so. They prioritised maintenance of an open and trusting relationships with patients and ensured needs beyond physical health were addressed. The importance of having a PHCP who cares and demonstrates that care was evident in both PHCP and patient accounts. These findings are supported by previous consumer engagement in Western Sydney, when consumers expressed dis-satisfaction with GPs exhibiting poor communication skills, inadequate quality of care such as lack of thoroughness, also those rushing appointments and making referrals to health providers that did not meet their needs (119).

Our findings suggest that GPs may be actively compensating for a lack of access to resources (discussed below), by doing more than what might usually be required of a GP, such as working longer hours or working beyond of the scope of the GP role. Undertaking such compensatory behaviours is ultimately not sustainable, particularly in light of challenges identified by our interviewees, such as the rising prevalence of chronic disease and inadequate re-imburement. The sense of being under pressure, exhausted and frustrated expressed by GPs we interviewed provides a picture of emotional exhaustion which has been reported as a significant contributor to stress experienced by doctors (120). This can result in practitioner burnout with negative consequences on the quality of care provided to patients (121, 122).

The majority of interviewees in our study did not however report experiencing burnout, suggesting that some PHCPs are resilient to the stresses described, and in some cases thrive on the challenges. Most GP interviewees described a high degree of job satisfaction, highlighting positive aspects of their work, in particular the rewarding experience of 'making a difference'. This attitude has been similarly observed in other studies of GPs working in areas of disadvantage (34). 'Positive reframing' - perceiving the positive aspects of a situation or event that is usually viewed negatively (123) may be helpful for other struggling PHCPs with few resources and limited capacity to change structures impacting on their practice.

It is evident from our interviews that having a supportive team not only promotes optimal health service delivery but also plays a key role in buffering the risks of stress and burnout. Participants talked positively about sharing ideas and discussing issues with colleagues and the way in which being part of a team made them feel less isolated. Social resources (such as the practice team in this setting) have been suggested to prevent burnout by providing workers with emotional support, new insights and reducing feelings of isolation (122). In addition to the important role of multidisciplinary teams within general practice in terms of promoting emotional wellbeing for PHCPs, these teams were also reported to assist in the provision of comprehensive healthcare to patient.

According to our interviewees, multidisciplinary teams and team-based care assisted in reducing time pressures for GPs, improving patient adherence and delivery of coordinated care. These comments complement existing literature, with research indicating that team-based care, particularly when aligned with the PCMH model of primary health care, is associated with increased coordination of care, more comprehensive care, better access to services, shorter wait times and better resource utilisation (98, 99, 124). Interviewees noted the importance of having team members operating at the 'top of their license' or scope of practice, as this enabled them to focus their skills and knowledge on improving patient outcomes. This team-based approach is a clear shift away from the 'doctor does it all approach' (125), and one which is argued to reduce the GP's workload to enable them to focus on essential tasks such as the assessment of complex problems or discussion of a new diagnosis and treatment options (31). This is likely to address the time and workload pressures identified as key challenges not only by our interviewees, but GPs from the UK Deep End Project (6, 7).

Some barriers were observed by AHPs regarding their role in the practice-based team. For example, some claimed that the role of pharmacists and physiotherapists would be enhanced if they were granted prescribing rights. Similarly some AHPs and GPs observed that lack of payment of AHPs contributing to care plans was a financial disincentive to their involvement. Whilst the GP is gatekeeper to much of the health system (and health care expenditure) in many respects, it has been argued that this scope of practice should be reviewed (126). There is international evidence for prescribing by other PHCPs such as diabetic educators (127) as well as nurses and pharmacists (128). In Australia, the Health Professionals Prescribing Pathway (HPPP) proposed by Health Workforce Australia (HWA) (129) showed promise, as this initiative proposed a nationally consistent approach to the prescribing of medicines by health professionals other than medical practitioners. However since the de-funding of HWA the future direction of that initiative remains unclear.

With the reduction in numbers of solo GPs and growth of larger practices including multidisciplinary teams (130), team-based care is likely to be the future of general practice. However, our findings suggest that there remain a number of solo practitioners who are in great need of support and cannot simply adopt a team-based approach within their practice. These GPs need continuing support particularly in relation to accreditation, locums, and linkage with APHs. Local GP networks were strongly endorsed by GP interviewees as a means of providing relational professional support. An additional consideration, suggested by solo GPs in our study, is the concern that larger medical practices may not be able to provide the same personalised care that solo GPs provide. Such considerations need to inform the development of larger team-based practices.

HEALTH SYSTEMS

There is convincing evidence from a range of sources that timely and affordable access to primary health care is linked to improved health outcomes (particularly equity) and sustainable health care costs (131-133). In spite of the strength of PHC in Australia a number of concerns about access to health care were identified by interviewees. Supporting our findings, recent reports show that people of low SE status and those with chronic health problems experience difficulty managing their health due to fragmented services, complexity in navigating health services, language barriers and inability to afford the out-of-pocket (OOP) costs (109, 134, 135). Out-of-pocket costs in relation to health services and over-the-counter or prescription medicine are growing for patients (136). Our results, in conjunction with patient reports (137) suggest that implications of OOP costs include: patients failing to fill prescriptions, foregoing seeing a non-GP specialist and delaying care (138, 139). Such findings also reinforce claims regarding the deleterious impact of Medicare co-payments (84). GPs clearly describe the stress resulting for them in the attempt to do more for the patients than they feel qualified to provide, and the time taken to seek alternative affordable care options.

A key factor impacting on PHC identified by many PHCPs interviewed was the failure of government to recognise the importance of general practice and primary health care. It is widely acknowledged that general practice has an indispensable role in preventive care and reducing hospitalisations (50, 140). GPs often have detailed knowledge of the population they service and are in an ideal position to educate patients about preventative health care and about their lifestyle choices (130). Although our interviewees were able to provide anecdotal evidence about the impact of primary health on patient outcomes and health service cost reduction, many noted a lack of supportive data and strongly advocated for improved measurement of the impact of primary health care which would assist in providing evidence to justify a shift in allocation of funding away from secondary and tertiary care and towards primary health care.

Whilst the challenges of measurement in this setting have been acknowledged (141), projects using the Patient-Centred Primary Care Collaborative approach (142) mentioned earlier in this report, have demonstrated reductions in health care costs and emergency department admissions and improvements in population health indicators (98, 99, 124). Such initiatives may provide useful outcome measures for primary care. Similarly, a program logic model developed for a health services partnership in Western Sydney between WentWest and the Western Sydney Local Health District, provides a framework for measuring outcomes across primary and secondary/ tertiary health care as well as those related to the integration of health care in this region (143).

Another health systems factor impacting negatively in the view of many of the GPs and some AHPs interviewed is the fee-for service remuneration model. Participants commented that this model of remuneration does not adequately cover the non-face-to-face work undertaken by GPs and encourages quantity over quality. GPs working in areas of SE disadvantage are particularly disadvantaged by this model of remuneration and clearly describe the resulting loss of income. In Australia, there is widespread support for restructuring of primary health care funding models to better reward patient and community focussed, team based, high quality care (144, 145).

Another strategy recommended by GPs in our study to reduce the fragmentation of health care is patient registration or enrolment. This was suggested to facilitate health care coordination and continuity of care as well as reducing costs to the health system. Whilst the literature suggests that patient enrolment can enhance continuity of care, through keeping patient information in the one place, and potentially reduce duplication of tests, it is seen by some to limit patient choice (146). There are strong calls from the professional organisations for the Australian government to implement a trial of voluntary patient enrolment (147). This will be a feature of the Health Care Home trials recently announced by the Australian Health Minister (148) based on the recommendations of the Primary Health Care Advisory Group homes (149). Evaluation of these trials will be important in determining whether patient enrolment can overcome some of the challenges highlighted in this report.

Primary Health Care Providers in our study were also concerned about dysfunctional relationships between general practices, hospitals, non-GP specialists and AHPs, often described as resulting in fragmentation of patient care. Patients in our study also highlighted the challenges of navigating such a disjointed system. These parallels findings from the UK-based GPs at the Deep End study (6) where GPs described a lack of connection between professionals and services, resulting in a lack of information, poor professional relationships, and discontinuity or lack of coordination of care. Interviewees from our study further commented on lack of communication between general practice and hospitals, describing this as time consuming and frustrating, particularly in relation to discharge from hospital. Other studies have reported similar findings and describe the adverse impact on patient care (131, 150) including higher rates of re-admission related to these lapses in communication (151). Conversely, there is strong evidence that coordinated care within and between health care services can reduce hospitalisation (151-153). To address fragmentation, recommendations in the GPs at the Deep End report centred on reinforcing

the general practice as a 'hub', which links to other members of the team, non-medical community resources and the rest of the local health system (7, 154). Such a description resembles that of the 'medical home' (155) and perhaps the 'medical neighbourhood' - a model that links PCMHs with other health care services (156).

Some interviewees suggested an electronic medical record may address this communication issue and there is some evidence suggesting that such technological approaches may facilitate more timely transfer of patient information between GPs, specialists, AHPs and hospitals (150, 157, 158). However, the implementation of such technology has proven challenging and requires time, effort and adequate resourcing (159, 160). Additionally, the impact on fragmented care, particularly between secondary/tertiary and primary care remains unclear with much dependent on the users of the technology (161).

In Australia, 'My Health Record' will provide a personally controlled online summary of consumer health information. At this stage only 11% of the NSW population has registered to this or similar systems, however an opt out option is being currently piloted in the Blue Mountains, Hawkesbury, Lithgow and Penrith areas of Western Sydney (and also North Queensland) from June 2016 (162). As this initiative expands, it will be important to measure its uptake and utility in reducing fragmented care.

Many of the health systems reforms suggested by PHCPs interviewed including payment reform, patient registration, team-based care and an electronic health records align with the 'building blocks' of the PCMH. This model has informed the recently announced Australian trials of the Health Care Home and has been adapted for Western Sydney in a recent discussion paper (163). The proposed local model enables flexibility of practice structures and approaches to team-based care, and a blended payment system including fee for service payments, complexity payments for team-based care which account for SE disadvantage and cultural barriers, performance-based payments to recognise quality and equity of care provided; and capability and capacity-building payments which will be used to support General Practice in their transition to this new model of health care provision. This approach to health care is a key strategy in the Western Sydney Integrated Health Care Program currently being implemented in partnership with the Western Sydney Local Health District with funding and support from the NSW Ministry of Health (164).

LIMITATIONS

This study has provided an in-depth understanding of PHCP and patient experiences of providing health care in an area of SE disadvantage in Western Sydney. As such it is limited to the experience in this geographic location though the similarities with findings of other research, particularly the original GPs at the Deep end work undertaken in Scotland, suggest that this experience may be generalisable to some extent to other locations. Although we interviewed PHCPs who were noted to be most numerous in Western Sydney, due to time and resourcing constraints, interviewees did not include some types of PHCPs such as community nurses, chiropractors, diabetic educators and podiatrists. This was not due to any assumptions about their value to the study nor to the communities in Western Sydney.

Although we sought to interview a wide range of PHCPs working in Western Sydney areas of disadvantage most of those recruited were actively involved in WentWest support activities and therefore may have been less likely to be experiencing burnout or to feel under-resourced, overworked and overwhelmed. It is likely PHCPs experiencing the most disadvantage would be the least likely to take the time to participate in our study. This means that our study may have underestimated the burden and the challenges for PHCPs overall if the support provided to those we interviewed does ameliorate some of the challenges of working in SE disadvantaged areas.

Recommendations

The triple aim for optimising health systems performance - improving patient experience and population health, and reducing costs, has recently been supplemented by a fourth aim to ensure long term sustainability - improving HCP satisfaction. Whilst our research focusses on this fourth aim, we have found that in order to achieve this aim, the original three also require consideration. Hence our recommendations address actions across all four aims and at all levels of system in order to improve the provision of high quality health care.

STRATEGIES IN THE COMMUNITY

- > Community led health literacy programs including information on health issues, healthy lifestyles, roles and expectations of GPs, other HCPs and local services.

STRATEGIES AT GENERAL PRACTICE LEVEL

- > Support for multidisciplinary team based practices and prioritise patient centred, personal approaches to health care in the transition from small general practices to larger group practices
- > Re-inforce the value of HCPs roles in health care provision and in communities in which they work as a means of re-framing the challenges of working in areas of disadvantage
- > Encourage local practice networks and other forms of professional and personal support for those PHCPs working in areas of disadvantage
- > Use of interpreters and employment of bilingual staff and staff cultural competence training, where health care is provided in Indigenous, refugee and other multi-cultural communities, and
- > Support approaches that encourage students and HCPs in training, to consider a career in areas of SE and health disadvantage.

STRATEGIES AT HEALTH SYSTEMS LEVELS

- > Define what we want from health services and measure outcomes to provide evidence for the efficacy of systems changes
- > Develop policies to ensure those at socio-economic disadvantage are provided with access to timely and high quality health services and treatments
- > Continue and enhance strategies aimed at establishment of a Patient Centred Medical Home approach to primary health care
- > Enrolment of patients in general practices to enhance continuity of care and reduce fragmentation
- > Support those working in PHC to work at the top of their licences including review of the Medical and Pharmaceutical Benefits Scheme items currently restricted to GPs
- > Continue to support integration of health services between primary and secondary/tertiary health care including IT facilitators such as shared electronic health records
- > Value primary health care and those who work in this health sector including through remuneration that rewards quality of care as well as throughput and acknowledges the particular challenges of working in areas of SE disadvantage, and
- > Support primary health care organisations such as Primary Health Networks to advance these initiatives.

Conclusions

In this research we examined the challenges experienced by PHCPs working in areas of disadvantage as well as potential strategies to address these. The issues highlighted in this report are not unique to Western Sydney, as our findings align with the national and international evidence including from the Scottish GPs at the Deep End project.

Our findings highlight the need for action at patient/ community, practice and health systems levels. The recommendations presented in this report are grounded in the published research evidence as well as in participant accounts from interviews conducted with a range of PHCPs, practice staff and patients. Implementation of the strategies recommended will require strong and sustained support from the NSW and Australian Governments including for Primary Health Care organisations. The systems change advocated will require leadership and commitment at primary as well as secondary and tertiary levels.

FUTURE RESEARCH

As a result of this research it is clear that further understanding is required across a range of areas including concerning those listed below,

- > health costs for patients in SE and health disadvantaged areas of Australia and the impact of these costs on health service provision and health outcomes
- > approaches to measuring SE and health disadvantage so that these risk factors for poor health outcomes can be built into new PHC models being developed
- > costs for health systems of health inequity
- > strategies that enhance resilience and protect PHCPs from burnout, and
- > sustainable frameworks and processes for measuring health care related costs, processes and outcomes across primary, secondary and tertiary health sectors as well as into other sectors such as education, employment, social services and the justice system.

References

1. Evans W, Wolfe B, Adler N. The SES and Health Gradient: A Brief Review of the Literature. In: Wolfe B, Evans W, Seeman T, editors. *The Biological Consequences of Socioeconomic Inequalities*; 2012.
2. Marmot M. The social pattern of health and disease. In: Blane D, Bruner E, Wilkinson R, editors. *Health and social organisation*. London: Routledge; 1996. p. 42-67.
3. McClelland A, Pirkis J, Willcox S. *Enough to make you sick: how income and environment affect health*: National Health Strategy Unit; 1992.
4. Harris K, Glover J, Tennant S, Watts V. *A Social Health Atlas of Australia*. 2nd ed. Adelaide: Public Health Information Development Unit; 1999.
5. Pappas G, Hadden WC, Kozak LJ, Fisher GF. Potentially avoidable hospitalizations: inequalities in rates between US socioeconomic groups. *Am J Public Health*. 1997;87(5):811-6.
6. Watt G, Deep End Steering Group. GPs at the deep end. *Br J Gen Pract*. 2011;61(582):66-7.
7. Watt G, Brown G, Budd J, Cawston P, Craig M, Jamieson R, et al. General Practitioners at the Deep End: The experience and views of general practitioners working in the most severely deprived areas of Scotland. *Occas Pap R Coll Gen Pract*. 2012(89):1-40.
8. Western Sydney Regional Organisation of Councils Ltd. [Internet]. WSROC Region Estimated Resident Population c2014 [cited 2016 Jan 10]. Available from: <http://profile.id.com.au/wsroc/population?WebID=200>.
9. Australian Bureau of Statistics. Population Distribution, Aboriginal and Torres Strait Islander Australians, cat. no. 4705.0. [Internet]. Canberra ABS; c2007 [updated 2012 June 18; cited 2016 Jan 20]. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4705.0>.
10. Australian Bureau of Statistics. Census of Population and Housing [Internet]. Canberra: ABS; c2015 [updated 2016 March 31; cited 2016 Jan 20]. Available from: <http://www.abs.gov.au/websitedbs/censushome.nsf/home/communityprofiles?opendocument&navpos=230>.
11. Australian Bureau of Statistics. Census of Population and Housing. Blacktown (C) (LGA 10750). B13 Language Spoken at Home [Internet]. Canberra: ABS; c2011 [updated 2016 April 28; cited 2016 April 28]. Available from: http://stat.abs.gov.au/Index.aspx?DataSetCode=ABS_CENSUS2011_B13_LGA.
12. Australian Bureau of Statistics. 2033.0.55.001 - Socio-economic Indexes for Areas (SEIFA) [Internet]. Canberra: ABS; c2011 [updated 2013 March 28; cited 2016 April 28]. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2033.0.55.001main+features100132011>.
13. Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011, 2033.0.55.001 [Internet] Canberra: ABS; c2013 [updated 2013 March 28; cited 2016 Jan 20]. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001>.
14. Australian Bureau of Statistics. 2033.0.55.001 - Socio-economic Indexes for Areas (SEIFA) [Internet]. Canberra: ABS c2006 [updated 2008 March 26; cited 2016 Jan 20]. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2033.0.55.0012006?OpenDocument>.
15. Centre for Epidemiology and Evidence. [Internet] HealthStats NSW Sydney: NSW Ministry of Health; c2015 [cited 2016 Jan 20]. Available from: www.healthstats.nsw.gov.au.
16. Colagiuri R, Thomas M, Buckley A. *Preventing Type 2 Diabetes in Culturally and Linguistically Diverse Communities in NSW*. Sydney: NSW Department of Health, 2007.
17. Australian Statistical Geography Standard. *Social Health Atlas of Australia: New South Wales & Australian Capital Territory. Data by Local Government Area 2015 based on the Australian Bureau of Statistics 2011*. 2015.

18. Essue B, Mirzaei M, Leeder SR, Colagiuri R. Epidemiology of diabetes. The Serious and Continuing Illness Policy and Practice Study (SCIPPS). The Menzies Centre for Health Policy, 2007.
19. Australian Institute of Health and Welfare (AIHW). Multiple causes of death in Australia: an analysis of all natural and selected chronic disease causes of death 1997–2007. AIHW bulletin no. 105. Cat. no. AUS 159. Canberra: AIHW: 2012.
20. Public Health Information Development Unit (PHIDU). Social Health Atlas of Australia. Data by Medicare Locals: [Internet]. Torrens University Australia; c2013 [cited 2016 April 16]. Available from: www.publichealth.gov.au/medicare-locals-portal/product-information.html.
21. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101.
22. Braun V, Clarke V. What can “thematic analysis” offer health and wellbeing researchers? *International journal of qualitative studies on health and well-being*. 2014;9.
23. Ward BM, Buykx PF, Tham R, Kinsman L, JS H. Investing in longitudinal studies of primary healthcare: what can we learn about service performance, sustainability and quality. *Rural and remote health*. 2014;14(3059).
24. Starfield B, Shi L. Policy relevant determinants of health: an international perspective. *Health Policy*. 2002;60(3):201-18.
25. Starfield B. Is primary care essential? *The Lancet*. 1994;344(8930):1129-33.
26. Shi L, Macinko J, Starfield B, Wulu J, Regan J, Politzer R. The relationship between primary care, income inequality, and mortality in US States, 1980–1995. *J Am Board Fam Pract*. 2003;16(5):412-22.
27. Gulliford MC. Availability of primary care doctors and population health in England: is there an association? *J Public Health*. 2002;24(4):252-4.
28. Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. *Int J Health Serv*. 2007;37(1):111-26.
29. Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. *Health Aff*. 2004;23(3):284-97.
30. Wilkinson RG, Marmot MG. Social determinants of health: the solid facts. Denmark: World Health Organization, 2003.
31. Fiscella K, Epstein RM. So much to do, so little time: care for the socially disadvantaged and the 15-minute visit. *Arch Intern Med*. 2008;168(17):1843-52.
32. Australian Bureau of Statistics. Health and socioeconomic disadvantage [Internet]. Canberra: ABS c2010 [updated 2010 March 10: cited 2016 Jan 20]. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features30Mar+2010>.
33. McLachlan R, Gilfillan G, Gordon J. Deep and Persistent Disadvantage in Australia, rev. Canberra: The Productivity Commission, 2013.
34. Stevenson AD, Phillips CB, Anderson KJ. Resilience among doctors who work in challenging areas: a qualitative study. *Br J Gen Pract*. 2011;61(588):e404-10.
35. O'Brien R, Wyke S, Guthrie B, Watt G, Mercer S. An 'endless struggle': a qualitative study of general practitioners' and practice nurses' experiences of managing multimorbidity in socio-economically deprived areas of Scotland. *Chronic illness*. 2011;7(1):45-59.
36. Turrell G, Mathers C. Socioeconomic inequalities in all-cause and specific-cause mortality in Australia: 1985–1987 and 1995–1997. *Int J Epidemiol*. 2001;30(2):231-9.
37. Pamuk E. Health United States 1998: With Socioeconomic Status and Health Chart Book. Maryland: Us Department of Health and Human Services; 1999.
38. Australian Bureau of Statistics. 1996 census of population and housing: Socio-economic indexes for areas, Information Paper, Catalogue No. 2039.0. Commonwealth of Australia, Canberra: 1998.
39. Adler NE, Newman K. Socioeconomic disparities in health: pathways and policies. *Health Affairs*. 2002;21(2):60-76.

40. Melchior M, Moffitt TE, Milne BJ, Poulton R, Caspi A. Why do children from socioeconomically disadvantaged families suffer from poor health when they reach adulthood? A life-course study. *Am J Epidemiol*. 2007;166(8):966-74.
41. Achat HM, Thomas P, Close GR, Moerkerken LR, Harris MF. General health care service utilisation: where, when and by whom in a socioeconomically disadvantaged population. *Aust J Prim Health*. 2010;16(2):132-40.
42. Hyndman JC, Holman CAJ. Accessibility and spatial distribution of general practice services in an Australian city by levels of social disadvantage. *Soc Sci Med*. 2001;53(12):1599-609.
43. Hyndman JC, Holman CAJ, Pritchard DA. The influence of attractiveness factors and distance to general practice surgeries by level of social disadvantage and global access in Perth, Western Australia. *Soc Sci Med*. 2003;56(2):387-403.
44. Wensing M, Jung HP, Mainz J, Olesen F, Grol R. A systematic review of the literature on patient priorities for general practice care. Part 1: Description of the research domain. *Soc Sci Med*. 1998;47(10):1573-88.
45. Grol R, Wensing M, Mainz J, Ferreira P, Hearnshaw H, Hjortdahl P, et al. Patients' priorities with respect to general practice care: an international comparison. *Fam Pract*. 1999;16(1):4-11.
46. Grol R. Quality improvement: an international commodity? *Quality in Health Care*. 1996;5(1):1.
47. Mercer SW, Cawston PG, Bikker AP. Quality in general practice consultations; a qualitative study of the views of patients living in an area of high socio-economic deprivation in Scotland. *BMC Family Practice*. 2007;8(1):22.
48. Watt G. The inverse care law today. *The Lancet*. 2002;360(9328):252-4.
49. Hart JT. The inverse care law. *The Lancet*. 1971;297(7696):405-12.
50. Starfield B, Shi L, Macinko J. Contribution of Primary Care to Health Systems and Health. *Milbank Quarterly*. 2005;83(3):457-502.
51. Overland J, Hayes L, Yue DK. Social disadvantage: its impact on the use of Medicare services related to diabetes in NSW. *Aust N Z J Public Health*. 2002;26(3):262-5.
52. National Health Performance Authority. Australians' experiences with access to health care in 2013-14 [Internet]. NHPA; c2015 [updated 2015 Oct 1; cited 2016 April]. Available from: <http://www.myhealthycommunities.gov.au/our-reports/australians-experiences-with-primary-health-care-updates/october-2015>
53. Belli P, Gotsadze G, Shahriari H. Out-of-pocket and informal payments in health sector: evidence from Georgia. *Health Policy*. 2004;70(1):109-23.
54. Willems S, De Maesschalck S, Deveugele M, Derese A, De Maeseneer J. Socio-economic status of the patient and doctor-patient communication: does it make a difference? *Patient Educ Couns*. 2005;56(2):139-46.
55. Furler JS, Harris E, Chondros P, Powell DP, Harris MF, Young D. The inverse care law revisited: impact of disadvantaged location on accessing longer GP consultation times. *Med J Aust*. 2002;177(2):80-3.
56. Bartlett EE, Grayson M, Barker R, Levine DM, Golden A, Libber S. The effects of physician communications skills on patient satisfaction; recall, and adherence. *J Chronic Dis*. 1984;37(9):755-64.
57. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ*. 1995;152(9):1423.
58. Rosenberg EE, Lussier M-T, Beaudoin C. Lessons for clinicians from physician-patient communication literature. *Arch Fam Med*. 1997;6(3):279.
59. Bakker DA, Fitch MI, Gray R, Reed E, Bennett J. Patient-health care provider communication during chemotherapy treatment: the perspectives of women with breast cancer. *Patient Educ Couns*. 2001;43(1):61-71.
60. Delbanco TL. Enriching the doctor-patient relationship by inviting the patient's perspective. *Ann Intern Med*. 1992;116(5):414-8.
61. Ong LM, De Haes JC, Hoos AM, Lammes FB. Doctor-patient communication: a review of the literature. *Soc Sci Med*. 1995;40(7):903-18.

62. Bernheim SM, Ross JS, Krumholz HM, Bradley EH. Influence of patients' socioeconomic status on clinical management decisions: a qualitative study. *Ann Fam Med.* 2008;6(1):53-9.
63. Mercer SW, Fitzpatrick B, Gourlay G, Vojt G, McConnachie A, Watt GC. More time for complex consultations in a high-deprivation practice is associated with increased patient enablement. *Br. J. Gen. Pract.* 2007;57(545):960-6.
64. Britten N, Stevenson FA, Barry CA, Barber N, Bradley CP. Misunderstandings in prescribing decisions in general practice: qualitative study. *BMJ.* 2000;320(7233):484-8.
65. Stirling AM, Wilson P, McConnachie A. Deprivation, psychological distress, and consultation length in general practice. *Br J Gen Pract.* 2001;51(467):456-60.
66. Wilson A, McDonald P, Hayes L, Cooney J. Longer booking intervals in general practice: effects on doctors' stress and arousal. *Br J Gen Pract.* 1991;41(346):184-7.
67. Freeman GK, Horder JP, Howie JG, Hungin AP, Hill AP, Shah NC, et al. Evolving general practice consultation in Britain: issues of length and context. *BMJ.* 2002;324(7342):880-2.
68. Wilson A, McDonald P, Hayes L, Cooney J. Health promotion in the general practice consultation: a minute makes a difference. *BMJ.* 1992;304(6821):227.
69. Hutton C, Gunn J. Do longer consultations improve the management of psychological problems in general practice? A systematic literature review. *BMC Health Serv Res.* 2007;7(1):71.
70. Gosden T, Forland F, Kristiansen I, Sutton M, Leese B, Giuffrida A, et al. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database Syst Rev.* 2000;3(3).
71. Rogers WA, Veale B. Primary health care and general practice: a scoping report: National Information Service of the General Practice Evaluation Program. BEdfor Park: Department of Evidence-Based Care and General Practice, Flinders University of South Australia; 2000.
72. Schaufeli WB, Maslach C, Marek T. Historical and conceptual development of burnout. In *Professional burnout: Recent developments in theory and research*, Schaufeli, WB, Maslach C, Marek T, editors. 1993:1-16.
73. Goehring C, Gallacchi MB, Kunzi B, Bovier P. Psychosocial and professional characteristics of burnout in Swiss primary care practitioners: A cross-sectional survey. *Swiss Med Wkly.* 2005;135(7-8):101-8.
74. Linzer M, Visser MR, Oort FJ, Smets EM, McMurray JE, de Haes HC, et al. Predicting and preventing physician burnout: results from the United States and the Netherlands. *Am. J. Med.* 2001;111(2):170-5.
75. Vela-Bueno A, Moreno-Jiménez B, Rodríguez-Muñoz A, Olavarrieta-Bernardino S, Fernández-Mendoza J, De la Cruz-Troca JJ, et al. Insomnia and sleep quality among primary care physicians with low and high burnout levels. *J Psychosom Res.* 2008;64(4):435-42.
76. Peterson U, Demerouti E, Bergström G, Samuelsson M, Åsberg M, Nygren Å. Burnout and physical and mental health among Swedish healthcare workers. *J Adv Nurs.* 2008;62(1):84-95.
77. Goodson JD. Unintended consequences of resource-based relative value scale reimbursement. *JAMA.* 2007;298(19):2308-10.
78. Sampson R, O'Rourke J, Hendry R, Heaney D, Holden S, Thain A, et al. Sharing control of appointment length with patients in general practice: a qualitative study. *Br J Gen Pract.* 2013;63(608):e185-e91.
79. Horne M, Khan H, Corrigan P. *People powered health: health for people, by people and with people.* London: Nesta. 2013.
80. Clancy DE, Huang P, Okonofua E, Yeager D, Magruder KM. Group visits: promoting adherence to diabetes guidelines. *J Gen Intern Med.* 2007;22(5):620-4.
81. Beck A, Scott J, Williams P, Robertson B, Jackson D, Gade G, et al. A randomized trial of group outpatient visits for chronically ill older HMO members: the Cooperative Health Care Clinic. *J Am Geriatr Soc.* 1997;45(5):543-9.

82. Kawasaki L, Muntner P, Hyre AD, Hampton K, DeSalvo KB. Willingness to attend group visits for hypertension treatment. *Am J Manag Care*. 2007;13(5):257.
83. Robson J, Hull S, Mathur R, Boomla K. Improving cardiovascular disease using managed networks in general practice: an observational study in inner London. *Br J Gen Pract*. 2014;64(622):e268-e74.
84. Laba T-L, Usherwood T, Leeder S, Yusuf F, Gillespie J, Perkovic V, et al. Co-payments for health care: what is their real cost? *Australian Health Review*. 2015;39(1):33-6.
85. Cashin C, Chi Y-L. *Australia: the Practice Incentives Program (PIP)*. Washington, DC: The World Bank. 2011.
86. Kecmanovic M, Hall JP. The use of financial incentives in Australian general practice. *Med J Aust*. 2015;202(9):488-91.
87. The George Institute for Global Health. *Investing in healthier lives: Pathways to healthcare financing reform in Australia*. Sydney: The George Institute for Global Health, 2015.
88. Hurley E. *The Australian Health Care System: The Potential for Efficiency Gains: a Review of the Literature*. Canberra: National Health and Hospitals Reform Commission, 2009.
89. Duckett S. We need Medicare reform, but co-payment 3.0 is the wrong place to start. [Internet]. The Conversation Media Group Ltd; c2015 [updated 2015 Jan 22; cited 2016 April 22]. Available from: <https://theconversation.com/we-need-medicare-reform-but-co-payment-3-0-is-the-wrong-place-to-start-36508>
90. Rosenthal TC. The medical home: growing evidence to support a new approach to primary care. *J Am Board Fam Med*. 2008;21(5):427-40.
91. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. *Health Affairs*. 2008;27(3):759-69.
92. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. 2014;12(6):573-6.
93. Collaborative P-CPC. *Joint principles of the patient centered medical home*. Washington DC: Patient Centered Primary Care Collaborative. 2007.
94. Rittenhouse DR, Shortell SM. The patient-centered medical home: will it stand the test of health reform? *JAMA*. 2009;301(19):2038-40.
95. Reid RJ, Coleman K, Johnson EA, Fishman PA, Hsu C, Soman MP, et al. The group health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers. *Health Affairs*. 2010;29(5):835-43.
96. Reid RJ, Fishman PA, Yu O, Ross TR, Tufano JT, P. M, et al. *Patient-Centered Medical Home Demonstration: A Prospective, Quasi-Experimental, Before and After Evaluation*. *Am J Manag Care*. 2009;15(9):e71-e87.
97. Nutting PA, Miller WL, Crabtree BF, Jaen CR, Stewart EE, Stange KC. Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. *Ann Fam Med*. 2009;7(3):254-60.
98. Nielsen M, Olayiwola N, Grundy P, Grumbach K. *The Medical Home's Impact on Cost & Quality: An Annual Update of the Evidence, 2012-2013*. North Washington: Patient Centred Primary Care Collaborative, 2014.
99. Nielsen M, Buelt L, Patel K, Nichols LM. *The Medical Home's Impact on Cost & Quality: An Annual Update of the Evidence, 2014-2015*. North Washington: Patient Centred Primary Care Collaborative, 2016.
100. American College of Physicians. *The Advanced Medical Home: A Patient-Centered, Physician-Guided Model of Health Care*. [Monograph on the internet]. Philadelphia: American College of Physicians; c2005 [cited 2016 April 8]. Available from: https://www.acponline.org/acp_policy/policies/adv_medicalhome_patient_centered_model_healthcare_2006.pdf

101. Bailit M, Phillips K, Long A. Paying for the medical home: Payment models to support patient-centered medical home transformation in the safety net. *Safety Net Medical Home Initiative*. 2010; Oct;17:2011.
102. Shi L, Macinko J, Starfield B, Politzer R, Wulu J, Xu J. Primary care, social inequalities, and all-cause, heart disease, and cancer mortality in US counties, 1990. *Am J Public Health*. 2005;95(4):674.
103. Van Dierendonck D, Schaufeli WB, Sixma HJ. Burnout among general practitioners: a perspective from equity theory. *J Soc Clin Psychol*. 1994;13(1):86-100.
104. WentWest Ltd. Western Sydney Population Health and Workforce Needs Assessment Summary. Blacktown: WentWest Ltd; c2010 [updated 2010 Sep, cited 2015 Feb]. Available from: <http://www.wentwest.com.au/images/docs/WSPopulationHealthNeedsandWorkforceAssessmentSummary.pdf>
105. Ahmad WI-U. *Ethnicity, disability and chronic illness*. Buckingham: Open University Press, 2000.
106. Strategy and Resources Division Primary Health Community Partnerships and Chronic Disease Branch. Policy and Implementation Plan for Healthy Culturally Diverse Communities 2012-2016. North Sydney: NSW Ministry of Health, c2012 [updated 2012 Feb, cited 2016 April]. Available from: http://www.health.nsw.gov.au/policies/pd/2012/pdf/PD2012_020.pdf.
107. Timmins CL. The impact of language barriers on the health care of Latinos in the United States: a review of the literature and guidelines for practice. *J Midwifery Women's Health*. 2002;47(2):80-96.
108. Bellamy K, Ostini R, Martini N, Kairuz T. Access to medication and pharmacy services for resettled refugees: a systematic review. *Aust Prim Health*. 2015;21(3):273-8.
109. Erny-Albrecht K, Bywood P. *Expert Plus. Barriers to primary health care access—an update*. Adelaide: Primary Health Care Research & Information Service, 2016.
110. Diabetes Australia. Estimates of known diabetes from National Diabetes Services Scheme and undiagnosed diabetes from Ausdiab survey. 2000. [cited 2016 Jan] Available from: <https://www.ndss.com.au/diabetes-map>
111. Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Crotty K. Low health literacy and health outcomes: an updated systematic review. *Ann Intern Med*. 2011;155(2):97-107.
112. Schillinger D, Grumbach K, Piette J, Wang F, Osmond D, Daher C, et al. Association of health literacy with diabetes outcomes. *JAMA*. 2002;288(4):475-82.
113. Weiss BD, Hart G, McGee DL, D'Estelle S. Health status of illiterate adults: relation between literacy and health status among persons with low literacy skills. *J Am Board Fam Pract*. 1992;5(3):257-64.
114. Williams MV, Baker DW, Parker RM, Nurss JR. Relationship of functional health literacy to patients' knowledge of their chronic disease: a study of patients with hypertension and diabetes. *Arch Intern Med*. 1998;158(2):166-72.
115. Williams MV, Baker DW, Honig EG, Lee TM, Nowlan A. Inadequate literacy is a barrier to asthma knowledge and self-care. *Chest Journal*. 1998;114(4):1008-15.
116. Schillinger D, Piette J, Grumbach K, Wang F, Wilson C, Daher C, et al. Closing the loop: physician communication with diabetic patients who have low health literacy. *Arch Intern Med*. 2003;163(1):83-90.
117. Western Sydney Diabetes Prevention and Management Initiative: Prevention and Management. Western Sydney Local Health District (WSLHD), WentWest, [cited 2016 April]. Available from: <http://www.wentwest.com.au/images/docs/diabetes-prevention-management-initiative.pdf>.
118. Centre for Population Health. *NSW Healthy Eating and Active Living Strategy 2013-2018*. North Sydney: NSW Government Department of Health, 2013.
119. Brooke M. *WSML Consumer Focus Groups: Experiences of Health Care Services in Western Sydney*. Leichhardt, NSW: Outcome Services, 2015.
120. Deckard G, Meterko M, Field D. Physician burnout: an examination of personal, professional, and organizational relationships. *Med Care*. 1994:745-54.

121. Crane M. Why burned-out doctors get sued more often. *Med Econ.* 1998;75(10):210-2, 5-8.
122. Huggard P, Dixon R. Tired of Caring”: the impact of caring on resident doctors. *Aust J Disaster Trauma Stud.* 2011;3:105-12.
123. Moore SA, Varra AA, Michael ST, Simpson TL. Stress-related growth, positive reframing, and emotional processing in the prediction of post-trauma functioning among veterans in mental health treatment. *Psychol Trauma.* 2010;2(2):93.
124. Nielsen M, Gibson A, Buelt L, Grundy P, Grumbach K. The patient-centered Medical Home’s impact on cost and quality: annual review of evidence 2013-2014. Washington DC: Patient Centred Primary Care Collaborative, 2015.
125. Goldberg DG, Beeson T, Kuzel AJ, Love LE, Carver MC. Team-based care: a critical element of primary care practice transformation. *Popul Health Manag.* 2013;16(3):150-6.
126. Nydam K. Gatekeeper, shopkeeper, scientist, coach? *Aust Fam Physician.* 2012;41(7):457.
127. Wilkinson J, Carryer J, Adams J, Channing-Pearce S. Evaluation of the Diabetes Nurse Specialist Prescribing project. [Internet] New Zealand Society for the Study of Diabetes: Nursing Council of New Zealand, c2011, [updated Oct 25 2011; cited April 29]. Available from: <http://www.nzssd.org.nz/documents/dnss/DNS%20prescribing%20%20project%20final%20report%202011.pdf>
128. Nursing Council of New Zealand. Consultation on two proposals for registered nurse prescribing. [Internet] Wellington: New Zealand Nurses Organisation; c2013 [cited 2016 April 10]. Available from: <http://www.nursingcouncil.org.nz/download/314/cons-doc->
129. Health Workforce Australia. Health Professionals Prescribing Pathway (HPPP) Project. Manuka ACT: Consumers Health Forum of Australia. c2012. [updated 2012 Aug; cited 2016 April 29]. Available from: <https://www.chf.org.au/pdfs/chf/info-927-hppp-project.pdf>
130. Britt H, Miller GC, Henderson J, Bayram C, Valenti L, Harrison C, et al. A decade of Australian general practice activity 2004–05 to 2013–14. General Practice series no. 36. Sydney: Sydney University Press, 2014.
131. Schoen C, Osborn R, Doty MM, Squires D, Peugh J, Applebaum S. A survey of primary care physicians in eleven countries, 2009: perspectives on care, costs, and experiences. *Health Affairs.* 2009;28(6):w1171-w83.
132. Shi L, Starfield B. Primary care, income inequality, and self-rated health in the United States: a mixed-level analysis. *Int J Health Serv.* 2000;30(3):541-55.
133. Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and Development (OECD) countries, 1970–1998. *Health Serv R.* 2003;38(3):831-65.
134. Jeon Y-H, Jowsey T, Yen L, Glasgow NJ, Essue B, Kljakovic M, et al. Achieving a balanced life in the face of chronic illness. *Aust J Prim Health.* 2010;16(1):66-74.
135. Yen L, Gillespie J, Kljakovic M, Brien Ja, Jan S, Lehnbohm E, et al. Health professionals, patients and chronic illness policy: a qualitative study. *Health Expectations.* 2011;14(1):10-20.
136. Senate Reference Committee on Community Affairs. Out-of-pocket costs in Australian healthcare. c2014. [updated 2014 Aug; cited April 10]. Available from: http://www.aph.gov.au/parliamentary_business/committees/senate/community_affairs/australian_healthcare/~/_media/committees/clac_ctte/australian_healthcare/report.pdf
137. Australian Bureau of Statistics. 4839.0.55.001 - Health Services: Patient Experiences in Australia, [Internet]. c2009 Canberra: ABS; 2012 [updated 2011, Oct 11; cited 2016 Feb 10]. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4839.0.55.001Chapter102009>.
138. Beaton A, Usherwood T, Leeder S, Russell L. Perceptions of economic hardship and implications for illness management: a survey of general practitioners in Western Sydney. University of Sydney: Menzies Centre for Health Policy, 2011.

139. Essue BM, Jowsey T, Jeon Y-H, Mirzaei M, Pearce-Brown CL, Aspin C, et al. Informal care and the self-management partnership: Implications for Australian health policy and practice. *Aust Health Rev.* 2010;34(4):414-22.
140. Rizza P, Bianco A, Pavia M, Angelillo IF. Preventable hospitalization and access to primary health care in an area of Southern Italy. *BMC Health Serv Res.* 2007;7(1):1.
141. Appleby J, Ham C, Imison C, Jennings M. Improving NHS productivity: More with the same not more of the same. London: The King's Fund. 2010.
142. Patient-Centred Primary Care Collaborative. Patient-Centred Primary Care Collaborative [internet] c2015 [updated 2015; cited 2016 March]. Available from: <https://www.pcpcc.org/>
143. Reath J, Burns P, Brooker R, Abbott P, Renshaw B, Usherwood T. Partnership Evaluation of Western Sydney Medicare Local and Western Sydney Local Health District. Sydney: University of Western Sydney, 2014.
144. Australian Medical Association. A medical home – what you've told us. [Internet]. Barton: Australian Medicine c2013 [updated 2013 Aug 12; cited 2016, Feb]. Available from: <https://ama.com.au/ausmed/medical-home---what-you've-told-us>.
145. Sivey P. New funding models are a long-term alternative to Medicare co-payments. [Internet]. c2010–2016, The Conversation Media Group Ltd [updated 2015 Jan 15; cited 2016 Feb 12]. Available from: <http://theconversation.com/new-funding-models-are-a-long-term-alternative-to-medicare-co-payments-35382>.
146. Kalucy L, Katterl R, Jackson-Bowers E, Hordacre A-L. Models of patient enrolment. PHCRIS Policy Issue Review. Adelaide: Primary Health Care Research & Information Service, 2009.
147. Oliver-Baxter J. Patient enrolment in Australian primary health care. Primary Health Care Research and Information Service. Adelaide: Primary Health Care Research & Information Service, 2014(36).
148. The Hon Sussan Ley MP. Health Care Homes to keep chronically-ill out-of-hospital: The Hon Sussan Ley MP; [Internet]. Commonwealth of Australia; c2016 [updated 2016 March 31; cited 2016 April]. Available from: <https://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2016-ley024.htm>.
149. The Australian Government Department of Health. Primary Health Care Advisory Group: The Australian Government Department of Health; c2016 [updated 2016 March 31; cited 2016, April 10]. Available from: <http://www.health.gov.au/internet/main/publishing.nsf/Content/primaryHealthCareAdvisoryGroup-1>.
150. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA* 2007;297(8):831-41.
151. Moore C, Wisnivesky J, Williams S, McGinn T. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. *J. Gen. Intern. Med.* 2003;18(8):646-51.
152. Coleman EA, Min Sj, Chomiak A, Kramer AM. Posthospital care transitions: patterns, complications, and risk identification. *Health Serv Res.* 2004;39(5):1449-66.
153. Van Walraven C, Mamdani M, Fang J, Austin PC. Continuity of care and patient outcomes after hospital discharge. *Journal of general internal medicine.* 2004;19(6):624-31.
154. Watt G. A landmark study of collective action by general practices. *Br J Gen Pract* 2014;64(622):218-9.
155. American Academy of Family Physicians AAoP, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home . Washington, DC: American College of Physicians, 2007.
156. Fisher ES. Building a medical neighborhood for the medical home. *N Engl J Med.* 2008;359(12):1202-5.

157. Marchibroda JM. The impact of health information technology on collaborative chronic care management. *J Manag Care Pharm.* 2008;14(2 Suppl):S3-11.
158. Chaudhry B, Wang J, Wu S, Maglione M, Mojica W, Roth E, et al. Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. *Ann Intern Med.* 2006;144(10):742-52.
159. Jaén CR, Ferrer RL, Miller WL, Palmer RF, Wood R, Davila M, et al. Patient outcomes at 26 months in the patient-centered medical home National Demonstration Project. *Ann Fam Med.* 2010;8(Suppl 1):S57-S67.
160. Wise CG, Alexander JA, Green LA, Cohen GR, Koster CR. Journey toward a Patient-Centered Medical Home: Readiness for Change in Primary Care Practices. *Milbank Quarterly.* 2011;89(3):399-424.
161. Meyers D, Quinn M, Clancy CM. Health information technology: turning the patient-centered medical home from concept to reality. *Am J Med Qual.* 2011;26(2):154.
162. O'Hare S. My Health Record Sydney: Wentworth Healthcare. [Internet] 2016 [updated 2016 April; cited January 2016]. Available from: <http://www.nbmphn.com.au/General-Practice/My-Health-Record.aspx>.
163. Ernst and Young. WentWest Limited, Menzies Centre for Health Policy. A model for Australian General Practice: the Australian Person Centred Medical Home. Sydney: Ernst & Young, 2015.
164. NSW Government Health. Integrated Care Demonstrators: NSW Government Health; 2015 [updated 2015 Nov 18; cited 2016]. Available from: <http://www.health.nsw.gov.au/wohp/Pages/demonstrators.aspx>.

Appendix – Analysis of Interview Data

The following analysis explores the first-hand accounts of GPs, GP registrars, PNs, practice staff and Allied Health working in areas of socio-economic disadvantage as well as the accounts of patients.

PARTICIPANT AND PRACTICE INFORMATION

We interviewed 57 participants from 17 practices comprising GPs (16), GP Registrars (5), Reception Staff (8), PNs (7), AHPs (11), and patients (10) as detailed in Table 1 below.

Table 1 Research Participants

Practice number	Participant Type	Practice size	Allied Health	Postcode
1	2 GPs, 2 GPRs, 1 PS, 1 PN, 2 CON, 2 AHP	Group Practice	Yes	2146
2	1 GP, 2 AHPs, 3 CON, 1 GPR, 1 PN, 1 PS	Group Practice	Yes	2761
3	2 GPs, 1 AHPs, 1 PN	Medical Centre	Yes	2148
4	2 GPs, 1 GPR, 1 PN, 1 CON, 3 AHPs	Group Practice	Yes	2770
5	1 GP	Group Practice	Yes	2148
6	1 GP, 1 GPR, 1 PS, 1 PN	Group practice	Yes	2770
7	1 GP, 2 PS, 2 CON	Solo practice	No	2770
8	1 GP	Group Practice	Yes	2770
9	1 GP, 1 PS, 1 CON	Solo Practice	No	2761
10	1 GP, 1 AHP	Solo Practice	Yes	2770
11	1 GP	Solo Practice	Yes	2766
12	1 GP	Solo Practice	Yes	2770
13	1 GP, 2 PS	Solo Practice	Yes	2770
14	1 PN, 1 CON	Group Practice	Yes	2147
15	1 PN	Group Practice	Yes	2766
16	1 AHP	Private AHP practice	N/A	2770
17	1 AHP	Private AHP	N/A	2770

Health professionals interviewed had been in practice for an average of 16 years, ranging from six months to 50 years, and working in an area of disadvantage for an average of 13 years, ranging from six months to 40 years.

QUALITATIVE ANALYSIS OF FINDINGS

The following analysis highlights key challenges and barriers as identified by interviewees, as well as areas for support. Four major themes were identified: 'Primary health care provider perceptions of the Western Sydney population', 'High values, hard work: primary health care provider's attitudes towards their work', 'The structure of general practice', and 'Health systems issues'.

Primary health care provider perceptions of the Western Sydney patient population

Interviewees provided a detailed description of their perceptions of the populations of Western Sydney, particularly in the Blacktown-Mt DrUITT area. Their descriptions are reported under the following subthemes: 'Western Sydney as a Cultural Hub', 'A Socio-economically Disadvantaged Population', 'Poor Physical and Mental Health', 'Patient Understanding and Self-Management'. It is important to note that the majority of Interviewees expressed a reluctance to make generalisations about the population, conveying an awareness of the great diversity within Western Sydney.

Western Sydney: A Cultural Hub

Interviewees described a culturally diverse community with high immigrant and growing refugee populations.

We are seeing a lot of newly arrived migrants and refugees and recently we start to see a lot of refugees lately (AHP01)

Nearly all interviewees referred to the range of cultures in Western Sydney, 'we call this a vibrant, multicultural Western Sydney' (GP04)

A wide range of cultural backgrounds were identified including Pacific Islanders, Nepali, Bangladeshi, Shri Lankan, Turkish and Lebanese. The implications of such cultural diversity regarding the provision of health care were noted, 'their cultural beliefs ... also influence how they view their health' (GPR05). Interviewees also reported language barriers.

A few fair patients that do come in that just want to speak Tamil and if they can't physically get in to see someone that does speak that particular dialect, then it's a bit of a struggle to try and get across to them and the consultation always blows out from a time point of view (GPR02)

A socio-economically disadvantaged population

Interviewees frequently commented on Western Sydney's socio-economic status. Key issues highlighted by Interviewees included, financial hardship and its impact on affordability of medicines and treatment including uptake of healthy lifestyles. Interviewees used phrases such as, 'struggling working class' (GP03), 'low SES [socio-economic status] area' (AHP02) and 'poorer area' (GPR04) to describe a population generally perceived to be socio-economically disadvantaged. Related factors noted included low income, high rates of unemployment 'a lot of unemployment in the area' (GP 11), the use of public housing and receipt of disability and other government benefits, 'we would have a lot of patients who had the pension card' (GP10). However, interviewees were also clear that not all areas of Western Sydney were socially disadvantaged.

Between Blacktown and Mt DrUITT is also a mixture of relative middleclass affluence and extreme outer metropolitan disadvantage (GP07).

Poor Physical and Mental Health

Interviewees commented frequently on overall health status of the Western Sydney population. Key issues described include the high rate of chronic illness, multimorbidity, obesity as well as psychological distress. Interviewees referred to a high prevalence of particular chronic diseases such as asthma, high blood pressure, heart disease and in particular diabetes, 'my work load actually is a huge amount of diabetes' (PN03). Poor mental health was also highlighted as a major problem by some Interviewees.

[We] do get a fair amount of mental health, anxiety, depression in the teenagers... In the middle age sort of category, again a lot of anxiety, a lot of stress-related depression (GP06)

Interviewees working with refugee communities commented that post-traumatic stress disorder (PTSD) was quite prevalent among patients in their practice, 'PTSD is a very common thing here', (GP01) 'especially with Iraqi migrants there is a lot of post-traumatic stress disorder' (GP08).

Patient understanding and self-management

Some PHCPs commented on the contribution of patient behaviours and attitudes to their illnesses. A lack of motivation was seen to be a key barrier to being healthy, 'so some of them can't be bothered as well because it's a lot of effort' (AHP06). Similarly, some noted prioritisation of other matters over health, '[patients] can afford to spend money on the cigarettes but ... have no money to spend on medications' (GP12).

Interviewees also highlighted the role of education and health literacy in health outcomes and patient adherence, commenting on the link between poor education and poor health.

A lot of the time... because of the poor education, they haven't really - they don't have the understanding to look after themselves (GPR05)

We do have patient coming in for asthma clinic, for instance, they've been using the Ventolin puffer like perfume spray on their neck. (PN06)

Poor health literacy was sometimes related to patients' lack of empowerment, with the suggestion made that poor health literacy reduces patient confidence in taking an active role in their own health management.

When they [patients] know about their medicines they are going to be empowered to ... grab hold of their own situation. I find that when they don't know what they're taking things for... they're like they're lost. They're just taking things but they're not taking responsibility for their own health (AHP04)

Again PHCPs made it clear that not all Western Sydney patients failed to engage in managing their own health with some observed to be health conscious, motivated, health literate and compliant.

Of course, you get a lot of them that don't want to do anything about their condition, but you also get some of them that are actually quite compliant and are really interested to improving their health (AHP02)

High values, hard work: PHCP's attitudes towards their work

Primary Health Care Providers commented on their roles and the work they undertake, highlighting the factors that assist them to provide high quality health care for their patients, as well as the impact on their own wellbeing. Subthemes explored below are: 'Upholding a high standard of care', 'Caring for patients: a rewarding experience' and 'The consequences of caring'.

Upholding a high standard of care

Most of the PHCPs interviewed, commented on the importance of providing high quality care for their patients.

I don't think that any of the doctors here or any of us or myself would want to work in a situation where we're actually delivering poorer quality care (GP05)

For some PHCPs this was expressed as an ethical imperative, 'Myself as a doctor, I consider myself to be fairly ethical ... I'm going to do things properly' (GP06). Others noted the importance of developing a deep understanding of patients' lives.

Patients respond differently and that might be just a cultural thing...So understanding their family life and their work ... I think is crucial (GPR02)

Most Interviewees conveyed genuine care and empathy for their patients, as well as a willingness to help their patients manage their health.

You get involved in [patient's] lives, and when something sad happens to them, you get involved as well. And there's a lot of empathy that happens here, and that's what makes a good GP or a primary care physician, is you to have empathise with your patients, you have to understand what they're going through, and only then you can provide that personalised care (GP04)

PHCPs often observed that developing rapport and a trusting relationship with patients was essential, as it assisted patients to feel more comfortable and enabled them to disclose more information during a consultation.

[Patients] will confide in you...that's what you need to build up, that confidence in them... It's really good to get that rapport (PN02)

Some PHCPs emphasised the value of a trusting, open and mutually respectful relationship in supporting patients to understand and participate in their own health management.

You kind of have to relate to them really and explain to them why from a medical perspective X, Y, Z is indicated or not indicated, and ask why they believe what they believe, and then if they tell you, then you can discuss it. But if they don't feel that they can relate to you and tell you why they think or do what they do or think, or if the connection or relationship is not there, then the trust and therapeutic relationship is not working (GP15)

Most PHCPs described the importance of spending time with patients to address key health issues, with a small portion conveying pride in the fact that they 'don't do 'six minute' medicine' (GP06). One GP elaborated, 'I don't believe in...throwing people out after ... their little timer rings. So whatever needs to be sorted out has to be sorted out' (GP09). PHCPs listed several activities that they perceived to be time-consuming during a consultation but necessary for their patient's wellbeing such as providing preventative health care and education, making sure patients have understood the consultation, addressing psychological issues or health barriers.

You can see a patient very quickly if it's a minor thing and you've got the experience behind you to treat it quickly...but I don't think you can do that sustainably for everybody...People come in with mental health issues and I don't know if you can do that in six minutes...I educate my patients about why they can't have antibiotics for a cold, I take the time to do that (GP06)

Some GPs contrasted this provision of time in the consultation with the approach they perceived as adopted by 'Medical Centres', 'I think medical centres just want you in and out' (PS07). Similarly, the perceived level of rapport and personalised care in 'Medical Centres' was sometimes criticised.

I know the patient when they walk in my room we don't start straight with, 'What's wrong with you?' Now, this doesn't happen in medical centre ... the doctor has no clue what's happening to your family (GP13)

The PHCP descriptions of strong health care were supported by patient accounts, with patients describing similar factors believed to be essential for strong health care, such as a caring and trusting relationship, personalised care and having a GP who tends to their health issues, despite the time.

If [GPs are] caring about you and they're caring about your family, they're not going to be so carefree with how they treat you (PAT02)

He's the type of doctor if he thinks there's really something wrong, he'll do everything to find out what it is.... if you're really sick, he will go out of his way to try and fix you up...I like that (PAT04)

Caring for patients: a rewarding experience

Although most PHCPs and practice staff described challenges associated with their work in Western Sydney, few expressed a dislike of their role, or suggested that they were experiencing burnout. In fact, most interviewees expressed an enjoyment of their role, 'Every day is a challenge...No, I enjoy my job. No two days are the same' (PS06).

I have a lot of professional satisfaction from working here. So I love my job and I love the staff and I love my patients (GP08)

According to PHCPs, part of their enjoyment was the fact that they could see improvements in patients or the positive role they play in many patient's lives, as one nurse explained: 'I just I enjoy the fact that the things that we're implementing actually make a change and this person manages their health, they don't end up going to hospital every other week' (PN03). Similarly, AHP04 stated, 'for me there's a lot of satisfaction...that I have made a change in somebody's wellbeing'.

Although some commented about challenges related to working in areas of disadvantage, others expressed a preference for working in disadvantaged areas compared to more affluent areas. GP05 explained that such challenges made his work more interesting, 'this is a good place to work...it has interesting challenges...they're actually part of what makes it all worthwhile working here...I don't think I'd want to work in a boring practice' while, GP14 conveyed a belief that her services were better used in areas of disadvantage.

In general, I prefer not to [work] in affluent areas, but that's just my choice, because I don't feel that I'm doing much there. There is disease, don't get me wrong, there are obviously illnesses everywhere, but I do feel a bit more useful in the area that's less affluent (GP14)

Interviewees also reported valuing their relationships with their patients, 'I find it's not difficult to help [my patients] because...they are like my friends' (GP16).

So they...adopt you into their lives and you become part of their lives...and they think of you as a sister or a daughter, or a surrogate mother (GP04)

However not all GPs reported that they enjoyed working in this area. One GP explained that he left his Mt Druitt practice due to the limited resources and lack of patient compliance.

So I went back to the original clinic that I started, so yes... Well the problem is the current practice is...you can't control even what's inside the clinic, much less the patients (GP10)

The consequences of caring

Although the interviewee accounts above suggest that working in general practice in Western Sydney can be a rewarding experience, interviewees also noted the costs of caring and having an invested interest in patients' lives. Some PHCPs and reception staff stated that their work could be emotionally and physically exhausting.

The most challenging thing I would say actually, I mean, dealing with the refugees. We have seen some cases, sometimes I don't go and sleep...sometimes you feel exhausted (GP01)

It's exhausting and it's one of those jobs that you're working pretty much from the minute you get out of bed until the minute you go back to bed at night (PS02)

Many PHCPs commented on the time consuming nature of their work often cutting into leisure time.

So I'm spending more hours here in the surgery, but I think I'm producing more results...I don't finish, usually, until 7 o'clock every day because I used to play golf on a Wednesday morning; I don't anymore, and I spend all morning doing paperwork (GP12)

Many GPs described the challenges of trying to strike a balance between addressing patients' needs and finishing on time.

We don't have enough time to give to the patient to really go deeply into the problems... putting band aids on it, which I don't like (GP11)

Some GPs described the difficulty of addressing mental health issues within a limited timeframe.

Mental health - It does eat into your time a lot. They'll come in with a 15 minute appointment, come in and say, 'Oh I've just come for this, this and this.' You go through that and they go, 'Oh, and....' And 20 minutes later you've already eaten up 35 minutes and it makes you late. That does increase my stress. (GP06)

Whilst some PHCPs and practice staff stated that most patients accepted the delays and wait times, this was not always the case, as PS05 stated, 'patients just don't realise that he's only one doctor and there's just not enough time... then comes in abusive patients'. Other PHCPs expressed frustration in relation to lack of appreciation some patients have shown for the quality care they receive.

So the expectation that, for example, in general practice 'I want to see the doctor I know and in the day timing that I want and spend as much time as I want, a big list as I want and pay nothing and after that I'll whinge because I'm late', where your expectation is not correct because if you go outside Sydney you will know that we [patients] are absolutely spoiled here (GP02)

Other PHCPs described feeling disheartened when they do not see evidence of improvement in patients, when patients are non-compliant or when they see the health of their patient population decline. Diabetes was often highlighted as a major issue in Western Sydney.

There was a time when I had one [diabetic diagnosis] a week, it was really depressing. And it is really, really awful because you're just like, oh my God. Because it's a lot of work to explain to someone that they have diabetes and ... it's time consuming, it really is (GP06)

Almost all PHCPs commented on the load of having some patients reliant on them to address a range of physical, psychological, and social issues. Some explained that this required them to expand their role to that of a counsellor, social worker or financial advisor, 'Sometimes like you're involved with their electricity bill' (GP08).

Although some claimed that they did not mind taking on this role, most suggested that it was time-consuming and increased their workload.

You get somebody with divorce problem or family problem, which needed a lot of time and I cannot give them enough time (GP11)

Many GPs described instances in which they had to take on the role of the specialist because their patients could not afford to visit a specialist. They highlighted the pressure this places on GPs.

[Patients] probably don't have the finances to go and see a specialist... you'd like to think that there's a specialist who can help you take care of the patient....but if this patient won't go in to see them....it keeps you awake at night (GPR04)

The impact on time, emotional wellbeing, personal life and energy levels was noted to be a risk for burnout.

I think it takes its toll... that medicine has one of the highest divorce rates and one of the highest suicide rates out of the professions. Because I think the pressures are there. There are no easy solutions to them. And often it ends up in situations where

there's either a burnout, where you, sort of - people just can't, sort of, cope with that (GP09)

The structure of general practice

Interviewees described challenges encountered by PHCPs and practice staff in the work place, and approaches that facilitated a positive and functional work environment, as well as improving patient access to health care. These are presented under the following sub-themes: 'Patient needs versus practice structures', 'The advantages of team-based care' and 'The challenges of the solo practitioner'.

Patient needs versus practice structures

Primary Health Care Providers identified the difficulties of addressing patients' needs whilst minimising wait times for others. Accordingly, practice staff, PHCPs and patients expressed dissatisfaction with the structuring of appointments and struggled to find better approaches.

[Appointment structures] doesn't work because then if you give people a longer time and then you give them a 15-minute appointment and they're only in there for five then you're sitting there doing nothing so we sort of tried that. I mean you cop abuse all the time. 'Why don't you lengthen your appointments' but it's different when you're sitting on the other end. Like I said it's not an exact science (PS06)

Some patients expressed annoyance regarding long wait times, 'It's frustrating... someone might go for a standard... consultation but they take up a lot more time than that' (PAT09), others accepted it as a normal part of seeing the GP, 'So I might be there for an hour before I get seen, but you expect that' (PAT07). As a means of dealing with long wait-times or unavailability of their preferred GP, some interviewees stated that they visited a different practice, usually a medical centre, for minor medical needs, 'my husband finds it hard to go to [the doctor] because of his work time and the times that [the Doctor] is open and I say, '....just go to the medical centre' (PAT01). Others highlighted the disadvantages of visiting multiple GPs such as access to medical information.

So I sort of - which isn't good but I go between two different doctors. I know I've seen so many which makes it hard because then they say, 'Have you had this vaccination?' And I think, I can't remember and it's probably not on your record (PAT02)

GPs also struggled with the multiple provider issue and the impact on workload.

Sometimes what they do is if they don't see a particular person here, they will go to another practice somewhere else, and then assume that whatever that doctor did there, is transferred back to us. And then come in and try and pick up the threads (GP04)

The benefits of team-based care

PHCPs and practice staff emphasised the importance of having a cooperative and functioning practice team. GPs particularly noted the crucial and supportive role practice staff played.

Having reception who is supportive is very important...because a lot of doctors don't actually know how to manage themselves well (GP15)

The reception staff...make the day go more easily, in terms of structure and function. First of all, by just running the appointment system...Or I ask them to, sort of, follow certain things up and ring patients (GP09)

All of the PHCPs who worked in a group practice or medical centre described the advantages of being in a practice with other GPs, PNs, AHPs and other health care providers. Many explained how they personally enjoyed being part of a team, as it enabled

them to feel supported and prevented them from feeling isolated, 'I like being part of the team. It's better than working in isolation' (AHP04). One GP described a protective function of team based care.

This [medical centre] somehow protects people from that because there's collegiality and multiple people and you're not having to carry any one person totally on your own (GP03)

So there is elements of burnout but not much to be honest, not probably. I think general practice changing and I mean it's different than the solo GP who's in on his own, and like, he has to see a lot of people every day. It's more now few people working together (GP08)

Some PHCPs explained that having GPs, nurses or AHPs 'in-house' enables easy access to specialised knowledge, 'we learn a lot about other interventions from allied health' (GP05). One AHP for instance described this.

It's a multidisciplinary practice...that means I get to ask them [team members] when I need to...I can ask John about exercise, we can discuss patients (AHP02)

Many Interviewees described how AHPs and nurses assisted in making the practice run more efficiently. Some attributed this efficiency to enabling AHPs and nurses to work at the top of their skill set, addressing the aspects of a patient's health relevant to their skills or knowledge base.

With any clinic you need the right support staff, which will actually be able to drive home the message. I'm not a dietician, I'm not a psychologist, I'm not a physio...I'll use some of those elements of those in my normal day-to-day routine but that's not what I am (GP10)

Health Care Providers explained that by enabling nurses and AHPs to carry out tasks including immunisations, dressing wounds or taking patient's medical history, it not only reduced wait-times '[patients] basically come in and I do the dressing, they're not sitting out there waiting half an hour for the doctor' (PN03), but also freed up GP time to focus on other patients or other aspects of their health.

We have to release the doctor's time and delegate it to other people who could do a better job. Like if you have all the time, like an hour, to discuss diet or how to stop smoking it's not like I have 15 minutes to finish all your consultation (GP02)

Some interviewees noted that having 'in-house' access to a multidisciplinary team assisted in coordination of care and enhanced compliance.

We actually got better compliance from patients involved in this because...they actually see those practitioners, so the dietician, the exercise physiologist, the pharmacist, as part of the full team...I suspect that one of the reasons why some other trials have not been successful is that a lot of the interventions were not conducted in the same place, they're actually conducted at various settings... there wasn't that coordination of care (GP05)

The challenges of the solo practitioner

Whilst all of the solo GPs spoke positively about their experiences in general practice, most commented on the difficulties of being a solo GP. Among the challenges mentioned were issues of being isolated.

There's a fair bit of isolation where you work on your own, you don't discuss anything much about patient's health and our own health as well (GP14)

Although some GPs expressed a desire to have an additional GP or a locum, this could be difficult or problematic.

When you're sick, virtually you have to close the practice, because you can't have somebody else come in. Locums are impossible to find west of Parramatta. They're not interested...you find that the quality of locums that you get is not always what you'd want. I've had occasions where I've had locums in and the receptionist had to dig them out of the local TAB each time a patient came...So in terms of things like holiday breaks....And even for things like study and doing - continuing education. That's a problem as well (GP09)

Problems with accreditation were also noted. One Interviewee expressed frustration with the bureaucracy involved, 'the solo practitioner have a problem with accreditation, ... I gave it up because it's so bureaucratic, paperwork ... some of the things that they ask you is so ridiculous sometimes' (GP13). Another emphasised the financial cost, 'to be accredited it's like 10 Grand to get set up to be accredited so it's not worth it' (PS06).

Some interviewees noted the supports available to solo practitioners such as local GP associations, 'We are really lucky to have Mt Druitt association ... that relationship with other doctors and we can talk about things' (GP14), and the After Hours Service.

We have an after hours' service now which is reasonably good where after six or seven o'clock at night these people [patients] can ring this service....so that's a bit of a Godsend (PS06)

The majority of the solo GPs suggested that 'solo practitioners are a dying breed' and predicted that solo practices will be replaced with medical centres, 'Newly qualified doctors find they can't start a solo practice and... the medical centres....that's the way it will go' (GP13). Some GPs attributed the demise of the solo practitioner to the changing needs of patients.

I think the sole practitioner model was, for many reasons, inefficient, and not conducive to maintaining standards and not conducive to integrated holistic multi-professional care which many of these people now need (GP03)

However, these GP's expressed that being the sole provider in the practice helped them to provide personalised care to each of their patients, sometimes generations of patients.

I've known them [my patients] for a long time. I've treated five generations in one family and I go to the house, I do home visits, so nothing escapes me; they can't hide anything from me (GP12)

Health systems issues

Inefficacies within the health system were described by many PHCPs, practice staff and patients. The 'health system' in this instance refers to structures and protocols within general practice, specialist care and hospitals. Issues highlighted included access to health care, communication between sectors, as well as funding and remuneration models. These are discussed below in the following subthemes: 'The role of primary health care', 'Fragmented care', 'Barriers to accessing health care' and 'Supporting primary health care'.

The role of primary health care

The majority of Interviewees emphasised the importance of preventive care and identified general practice as fundamental to preventing serious illness and hospitalisation.

We are trying to do our level best to educate all of them about how important primary care is, and how important it is to prevent rather than treat (GP04)

Noteworthy in several Interviewees' accounts was a belief that primary care could save the government money and that it is ultimately more cost effective than tertiary care.

I reckon that we saved the government about \$50,000 on what we did, and that's just purely through de-prescribing, reduction in doses and change in medications (GP05)

However, PHCPs also commented on the difficulties in providing evidence for this argument, 'It's just a subjective thing ... we prevented [a patient] from going to the hospital but you can't measure that really in this sort of environment' (AHP04). The importance of this evidence was highlighted by one interviewee.

Australian ministers for health can promise system change. What they can't promise is system reform because you can't tell if a change is a reform unless you're measuring outcomes (GP07)

Some suggestions were made as to how such impacts could be measured. One GP suggested a pilot study be conducted to demonstrate the savings primary care makes, whilst another suggested that data collection was key to measuring outcomes, and referred to a current project to demonstrate this point.

There are two new data bundles and one is called the Patient Reported Outcome Measures and Patient Reported Experience Measures... So that will allow you to see longitudinally for any one patient and longitudinally for a population of patients, how they view their outcomes, how they view their experience. So that's a big impact (GP07)

...things that you aim for with the healthcare system. So the best outcome for a patient, the best outcome for the population at the best per capita cost... [and] the best provider satisfaction (GP05)

In spite of this many GPs and some AHPs interviewed claimed that the important role of primary health was not entirely recognised or appreciated by 'the government'.

I think that governments don't appreciate general practice ... governments just say, '... we'll just turn the screws a little bit, [GPs] won't mind. They'll squeal a little bit, but they really won't do anything about it. They'll just continue to bulk-bill and take it on the chin.' And I think that doctors are either silly enough or altruistic enough, just to say, 'Well, okay, we won't cut our services, we won't go strike... ' (GP09)

Whilst many argued that giving patients access to bulk billed services was necessary, 'cause it's such a low socio-economic area, it's a very high reliance on Medicare' (AHP03), nearly all GPs expressed discontent with the current fee-for-service model. These GPs argued that this model was insufficient to adequately remunerate GPs for the work they carry out on a daily basis.

I see patients around every ten minutes or 15 minutes.... I need to process information... I need to put a plan and I need to make a decision. Probably sometimes two or three decisions in the same consultation.... give me another profession who... has to make a decision every ten minutes? ... all your decisions has medical and has legal consequences. So it is hard and now if you tell me for your consultation you're going to get \$35 and you pay at least 40% overheads. So that's like leave you with around \$20. Then you pay for 8% tax, that's \$10. So you study 13 years, you make a lot of decisions.... for ten bucks. Not fair I think (GP08)

In addition to the sense of injustice illustrated in the above quotation, GP08 detailed the financial difficulties in keeping a business/practice running.

So it is, as a business it is less profitable, less and less. ... So I think we're seeing more patients to cover for our expenses and make some profit (GP08)

Similarly, other GPs described feeling pressured to see more patients to cover their expenses.

The fee for service is great but it encourages six minutes. So six minutes would get more. Even if you do one long, your money will go down (GP02)

So the GP model is a - the system pays for six minutes. So if you spend more time than six minutes you're not getting paid for that (GP10)

However not all GPs had negative comments regarding their income.

From the point of view of economic sense... to me...too much about money, I don't feel comfortable...I'm not a rich man but I have enough for me (GP16)

Some interviewees highlighted the difficulty in funding reform, with disjuncture in funding bodies, 'The funding system is you have the Federal who looking after Medicare and you have State who looking after hospital... a lot of improvement needs to be done' (GP08), with GP13 suggesting, 'where I'm concerned is health should be funded by one body. It doesn't matter who'.

Fragmented care

Many Interviewees described the poor connection, cooperation or communication between general practice, the hospital system, and some AHPs and specialists. Some Interviewees gave accounts of their interaction with hospitals, however few recounted positive experiences. The majority of these Interviewees made clear their disappointment or frustration regarding the hospital's lack of communication or the difficulty obtaining information, 'there's a lot of gap in information that GPs receive and the hospital's receiving at the moment' (AHP04). This concern was expressed particularly in relation to patient admission/discharge from hospital and often described failure to communicate about medications and test results.

Trying to get blood test results from the hospital was a time-consuming and quite honestly frustrating process. To then try to get any feedback from the hospital...about their management plans was another time-consuming and frustrating process. So there's the hospital's existence, silos, whereas we are trying to do the opposite (GP05)

Presenting a solution to this disjuncture noted between the tertiary and primary sector, interviewees called for sectors to work together in order to improve the provision of health care.

It is not good enough for individual patients to have isolated experiences of excellent care. They actually need care which is stitched up (GP07)

Some interviewees stated that electronic record keeping or an electronic database or an intermediary would improve the link between the two sectors.

The thing about the electronic patient management is that it provides and displays data in a way which encourages patients to make healthy changes ... So instead of my patient being discharged from the ED [emergency department] with a note saying follow up by usual neurologist I would know that the patient's been in the ED, has been discharged and I could have a layperson ringing her up to say well...when are you going to see them? (GP07)

If there was maybe a hospital GP liaison or whoever, who was expecting calls or something like that, maybe that would be a good idea (GPR03)

We have discharge nurses and nurses who work in the community, whether they play a bigger role in acting as a communicator between these two (AHP04)

A few GPs endorsed the role of GP liaison nurses in improving the connection between general practice and hospitals, 'I use the GP liaison nurses a lot for those people that do need that extra connection in care'. (GP06)

The lack of connection between individual general practices was also described along with the problems arising for patient care.

[patients will] go see someone else, and I don't know what's happened... if it was something more serious and I didn't have any communication, all I have is the patient's word on what's happened, and what she thought the doctor did (GP15)

Whilst all of the GPs identifying this problem supported the idea of patient registration, or staying with the one GP, 'so when they walk through that door, we know exactly who they are, why they are coming for' (GP04), one patient suggested that an electronic database would be useful.

If you're in a certain catchment area, all the doctors in the area could - should have access to your medical history and diagnosis history if you give them permission...it would make so much more sense and it would mean that doctors aren't over prescribing drugs and you would - if you needed to see someone quick about an issue, it would still be all on your record (PAT02)

In order to make certain aspects of testing and treatment a smoother process for PHCPs and patients, some AHPs advocated for referral and prescribing rights,

We've been trying to push for extended scope of practice for prescribing rights, for referral rights for xRays, ultrasounds, MRIs, for referral rights to specialists and things like that but it's just never eventuated (AHP10)

At the moment pharmacists can't prescribe...but in the UK when we spoke to one of the pharmacists there he actually does the repeat prescriptions...It's going to save time for the GPs. They're going to have more time to devote to patients, complex, chronic disease patients (AHP04)

Barriers to accessing health care

Patients and PHCPs described a number of barriers to accessing relevant and effective health care. One interviewee identified 'red tape' as a key barrier.

If we get someone ... and they're in crisis I find it's very, very difficult to get them engaged with the services ... it's a gap in the system - to contact an access team or a mental health crisis team. They've got all of these different red tapes and criterion to get someone into them (PN07)

A key barrier identified was wait times particularly for specialist services, 'Specialist services is extremely hard. Like some people now they've got to wait up until February' (PS06). Access to hospital and public health services was also identified as major problem.

You've got to wait one year to go to the Westmead Eye Clinic even just to get a consultation. So that's the problem, and patients with gallbladder at hospitals awaiting surgery, they're waiting six to 12 months (GP11)

Patients had similar accounts.

I had several skin cancers that needed to be cut out...and I had to wait a month just to do the consultation with the specialist, a few months more for the surgery...That was through the public hospital system' (PAT07)

Similarly, PHCPs expressed concern for patients.

I feel sad for people in pain who have to wait interminably for operations which should be done more expeditiously. People with emergencies who have to wait hours....ridiculous (GP09)

Another key barrier identified by interviewees was the difficulty navigating or understanding the health system. One patient described her initial struggles to understand the concept of bulk billing and the role of Medicare.

I have been to a non-bulk billing one, which I didn't know at the time and the receptionist said, 'That's \$25,' and I was like, 'What, [laughs]?' Honestly, I was a little bit shocked and I was like, 'I don't understand this,' and she was like, 'You can get it back on Medicare.' And I said, 'What the hell is Medicare? I know it's a card that I give you but I thought that was just ID.' (PAT09)

The difficulty navigating the health system was noted supported by PHCP interviewees. One GP registrar described the time consuming process of determining what services were available.

...looking at the hospital web site and it's got that switchboard number and you're not sure what services they offer...do they have at burns unit? ...I can't say I know ... (GPR04)

Similarly, a PN explained how difficult it was her to find information despite her years of experience in the health sector.

I can research and try and find out, but...the health system, it's pretty complex for me to do and I've been working for New South Wales Health for 18 years since I've graduated...So for someone who is not well educated who has lots of pressures, they haven't got a chance really to find out what help there is for them (PN03)

An electronic database containing information about services and who bulk bills was suggested as a means of addressing this problem. However the challenges of maintaining such a database were also noted.

It's always good to have computer resources, the health pathways...but it's just a challenge having that to be updated (GPR04)

A patient indicated that more culturally appropriate health care or staff should be implemented.

I think it might be an idea to pay up to get yourself an Indigenous nurse there for kids...I understand that it doesn't make my people special to have what the white fella don't have, but I just feel maybe it would give my people more knowledge on the medical services that are available for them (PAT08)

Above all, affordability was identified by patients and PHCP as the greatest barrier not only to accessing health care, but to being healthy in general.

I just find it very difficult to lose [weight]...we can't afford to buy the proper diet (PAT03)

Sometimes the patient wants to take the medication, but ... for diabetes, blood pressure, cholesterol, and it will be like \$100-something a month (GP11)

The financial costs associated with accessing specialist services was often mentioned.

I'm not doing very well at the moment, we're pretty hard up and every time you've got to go to a specialist appointment... it's something that I can't, yeah, afford (PAT01)

Patients, financially they can't afford all of the recommendations that I give them. For example, if sometimes they can't afford medication, they have no transport, they have no money for fuel even when they have a car or it's not registered or when I refer them to see a specialist or to other health professionals they can't afford to pay (GP12)

I just think that if I had to pay every time I went to see a doctor or had to have anything done, especially giving birth and it would just make it so much more difficult. We live - each week - we get by each week sort of thing, so knowing that I can have healthcare for free is a massive, massive thing (PAT02)

According to PHCPs, these affordability issues meant more work for them, as they often needed to consider the affordability of certain services when developing a patient's treatment plan, as well as to find more cost effective and affordable treatments, 'Some specialists do accept to bulk bill the patients, we do ring them up and explain the situation'. (GP14)

Conversely some patients expressed gratitude for the bulk billed services that they did have access to.

It's a relief because I know that he's, like, \$645 an hour. I couldn't afford that, if I had to wait *via* the hospital? Yeah, I'd be pulling my hair out (PAT08)

With the heart specialist I don't actually have to pay any money. I'm not sure exactly how...it does save you some strife being free though (PAT09)

I'm not a rich woman...so if I had to pay the doctor every time I had an issue...I probably wouldn't – couldn't see him as much (PAT10)

Supporting primary health care

Most PHCPs when asked were able to identify at least one area in which they felt supported, whether it was through team members within the practice, GP groups or through organisations such as WentWest (Western Sydney PHN). WentWest was often described by interviewees as a key source of support, including provision of IT/computer software, medical equipment such as immunisation fridges, and training.

WentWest is pretty supportive...We get a lot of teaching every second week and there's the online modules (GPR03)

Practice nurses particularly appreciated the support provided by WentWest, 'WentWest is really good with giving education to nurses...every month they have something' (PN05).

They're just so supportive... having that number to ring and say, 'I don't know,' particularly in the very early days, like I just had no idea what I'm supposed to do... And they were the ones that sort of got me on to a few different programs....they were the ones that sort of got me orientated (PN01)

Some GPs valued the 'Access to Allied Psychological Services' (ATAPS) program and the access it provided for patients to bulk billed psychological services.

The ATAPS program has been quite helpful because people can't afford ... to go and see private mental health care workers (GP03)

Other GPs commented on Wentwest's support for the PCMH model of care and for involving them in the pilot study.

And these are exciting times for us because WentWest...have brought a new concept ... called Patient Centred Medical Home. So now we are one of the very few - one of the 15 practices enrolled in this pilot study, and we faithfully go once a month to attend these workshops (GP04)

While interviewees identified areas of support, some also identified areas of need. Some AHPs working within and outside of general practice suggested that some GPs may need better training or education to better understand how different AHPs can be utilised.

Their first point of call will be their doctor. The doctor needs to be informed. I mean if the doctor feels like they know it all sort of thing they're more likely to put them on anti-depressant before they've even considered psychological counselling (AHP10)

Even if there was a little bit more of an emphasis placed on Allied Health and what's new and current for the GPs. Just so that they're aware... Just to say look, dieticians are doing this, exercise physiologists can help with this (AHP07)

Interviewees described the negative impact that limited funding had on the running of the practice, quality of care they were able to deliver to their patients and their emotional wellbeing,

I mean, it's a stressful job and when you don't have the resources that you necessarily want or need that becomes stressful as well, you've got to think outside the box (PN07)

One GP noted financial barriers to hiring additional staff such as a PN, 'If you're paying out all the profit to pay for the nurse then it doesn't become a cost benefit, does it?' (GP05). Similar concerns about financial viability were expressed concerning multidisciplinary team care, case conferences and meetings to share knowledge and ideas. The lack of Medicare items, and particularly access for AHPs to Medicare items covering many of these activities, prompted talk of PHCPs 'donating their' time.

You find that doctors are often quite willing to donate a bit of time but especially when we're talking about, say, dieticians, exercise physiologists, their hourly rate is not actually that high so it is quite a big ask to ask them to donate more time (GP05)

We need to do a medical case conference where I'm involved...None of the other Allied Health professionals who are involved with the care of a particular patient are reimbursed for their time at all, so that's a bit frustrating from our perspective (AHP08)

Finally, it was evident from some GP accounts that they needed a voice or someone to represent them and fight for their needs.

WentWest did very well, is to give this side some sort of voice to general practice. So if we have that on the more bigger scale then I think general practice can contribute a lot to the health system (GP08)

Just try to go and put this research of these things in front of the media as well...Because doctors are very busy, they don't talk. And other people are talking a lot, very loud...we cannot do it (GP11)