

BMJ Open

Determinants of access to chronic illness care – a mixed-methods evaluation of a national multifaceted chronic disease package for Indigenous Australians

Journal:	<i>BMJ Open</i>
Manuscript ID:	bmjopen-2015-008103
Article Type:	Research
Date Submitted by the Author:	04-Mar-2015
Complete List of Authors:	Bailie, Jodie; Menzies School of Health Research, Centre for Primary Health Care Systems Schierhout, Gill; Menzies School of Health Research, Centre for Primary Health Care Systems Laycock, Alison; Menzies School of Health Research, Centre for Primary Health Care Systems Kelaher, Margaret; The University of Melbourne, Centre for Health Policy Percival, Nikki; Menzies School of Health Research, Centre for Primary Health Care Systems O'Donoghue, Lynette; Menzies School of Health Research, Centre for Primary Health Care Systems McNeair, Tracy; Menzies School of Health Research, Centre for Primary Health Care Systems Bailie, Ross; Menzies School of Health Research, Centre for Primary Health Care Systems
Primary Subject Heading:	Health services research
Secondary Subject Heading:	Health policy, Public health
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PRIMARY CARE, PUBLIC HEALTH

SCHOLARONE™
Manuscripts

Determinants of access to chronic illness care – a mixed-
methods evaluation of a national multifaceted chronic disease
package for Indigenous Australians

Jodie Bailie¹, Gill Schierhout¹ Alison Laycock¹, Margaret Kelaher², Nikki Percival¹,
Lynette O'Donoghue¹, Tracy McNeair¹, Ross Bailie¹

¹ Centre for Primary Health Care Systems, Menzies School of Health Research,
Brisbane, Australia

² Centre for Health Policy, The University of Melbourne, Melbourne, Australia

Corresponding author:

Ms Jodie Bailie
PO Box 10639, Adelaide Street
Brisbane QLD 4000
Phone: 0428 601 559
Email: jodie.bailie@menzies.edu.au

Key Words

Aboriginal and Torres Strait Islander health, Indigenous health, access to health,
Closing the Gap, determinants of access

Word Count: 5965

ABSTRACT

Objectives

Indigenous Australians are known to have a disproportionately high burden of chronic illness, and to have relatively poor access to healthcare. This paper examines how a national multi-component program aimed at improving prevention and management of chronic disease amongst Australian Indigenous people has addressed various dimensions of access to chronic illness care.

Design

Data from a prospective place-based, mixed-methods formative evaluation were analysed against a framework that defines supply and demand-side dimensions to access. The evaluation included 24 ‘sentinel sites’, defined by geographic boundaries to include a range of primary care service organisations, and drew on administrative data on service utilisation and focus group and interview data on community members’ and service providers’ perceptions of services related to chronic illness care between 2010-2013.

Setting

Urban, regional and remote areas of Australia that have relatively large Indigenous populations.

Participants

Across the 24 sites a total of 670 community members participated in focus groups; and 374 practitioners and representatives of regional primary care support organisations participated in in-depth interviews.

Results

The program largely addressed supply-side dimensions of access with relatively lesser focus or impact on demand-side dimensions. Application of the access framework

highlighted the complex inter-relationships between dimensions of access. Key ongoing challenges are achieving general population coverage through a national program, and reaching high-need groups.

Conclusions

Strategies to improve access to chronic illness care for this population needs to be tailored to local circumstances and address the range of dimensions of access on both the demand and supply-side.

STRENGTHS AND LIMITATIONS

Strengths and limitations

- the mixed-methods approach, with a large number and diverse range of interviewees, and long term repeated engagement with stakeholders, including feedback and member-checking of data and interpretation
- the wide geographic scope and diversity of study sites, reflecting a broad range of sites with relatively early and intense investment, but not necessarily representative of service settings across Australia
- the use of a widely cited framework to gain a broad understanding across various dimensions of access to care, with sensitivity to the possibility of the access framework being overly Western-centric
- the identification of the priority need for further work to address demand side barriers to access while continuing to address supply side barriers
- the high relevance of the evaluation process and findings for local service improvement and for policy.

INTRODUCTION

Minority groups around the world experience profound barriers to access to healthcare¹ as do Aboriginal and Torres Strait Islander peoples in Australia (respectfully referred to hereafter as Indigenous Australians). Similar to the indigenous populations of other colonised countries, chronic disease contributes to two-thirds of the health gap between Indigenous and other Australians,[1,2,3] with the requirements of good quality chronic illness care making access to such care especially difficult.[1,3-7]

In recent years a number of Australian Government policy initiatives have been directed at addressing access and improving care for Indigenous Australians, including the unprecedented funding of \$A805.5 million for the multifaceted Indigenous Chronic Disease Package (ICDP) from 2009 – 2013.[8-10] However, there is a general lack of research into, and evaluations of, interventions that aim to improve access to healthcare on which such interventions can be based.[11] The gap in such evidence relating to populations at high-risk of chronic illness, such as Indigenous Australians, has been highlighted in recent publications.[4,7]

Defining access to health care

Internationally, there is an ongoing debate about how to define access to health care and the factors that influence access.[11-13] A recent review has defined access as ‘the opportunity to have health care needs fulfilled.’[11] A number of authors point to access being reliant on how well healthcare resources (supply-side) interact with a patient’s ability to seek and obtain care (demand-side).[4,11-15]

Levesque et al. have recently proposed a framework that identifies determinants of access. In this framework, access is achieved through an interaction between five corresponding dimensions identified on the supply (service providers) and demand (service seeking) sides (Figure 1). It is the interactions between patients and providers that enables access to healthcare. This comprehensive conceptualisation of access is consistent with recent literature that emphasises the need to take an ecological approach to Indigenous health¹⁶ and a people-centred approach to healthcare.[17]

Delivery of primary health care to Indigenous Australians – the Australian context

Inequitable access to healthcare for Indigenous Australians occurs despite all Australians having access to a universal health insurance scheme, Medicare.[3,5,18] In Australia, Indigenous peoples access primary healthcare through private general practice and primary health services specifically established to meet the needs of Indigenous Australians – both community-controlled comprehensive primary healthcare services and government-managed Indigenous-specific services.[3,19] Barriers to access to primary healthcare by Indigenous Australians include factors such as economic considerations, transport, cultural attitudes or beliefs, the cultural appropriateness of services and paucity of Indigenous staff.[5,7,8,19,20]

Intervention to improve access for Indigenous Australians to primary health care

The ICDP was a national, multi-faceted and complex intervention, implemented across Australia through regional primary healthcare support organisations such as Divisions of General Practice and Medicare Locals, private general practices, and

both community-controlled and government-managed Indigenous primary healthcare services (here-in referred to as Indigenous Health Services).[8-10] Importantly, the ICDP included mainstream services that in many cases have not been proactive in providing primary healthcare to Indigenous Australians. This is an important issue in Australia, as not all Indigenous people are able, or choose, to access Indigenous-specific services.[20] A key aim of the ICDP was to improve access to chronic illness care and funding was provided for a new workforce to enhance the capacity of primary healthcare services to more effectively prevent and manage chronic disease (Table 1). Key strategies to improve access were the employment of Outreach Workers (OWs) and Indigenous Health Project Officers (IHPOs), whose role was to promote and facilitate the use of primary healthcare services.[9]

<i>Table 1: Overview of the Indigenous Chronic Disease Package</i> Priority area: Tackling chronic disease risk factors	Priority area: Improving chronic disease management	Priority area: Workforce expansion and support
Measures/strategies to: - Reduce smoking by improving access to smoking cessation services through a new tobacco workforce and tobacco campaigns. - Encourage healthy lifestyles through a new healthy lifestyle workforce and improved access to healthy lifestyle programs - Increase health promotion activities	Measures/strategies to: - Provide access to free or subsidised medications - Increase health assessments and follow-up from health assessments - Improve coordination of care through patient registration at health services and dedicated positions - Delivery of training in self management of chronic disease - Increase access to specialist and multidisciplinary team care	Measures/strategies to: - Increase workforce support, education and training - Expand the outreach and service capacity of Indigenous Health Services through employment of Outreach Workers - Improve access to mainstream primary care through employment of Indigenous Health Project Officers and Outreach Workers

Source: Department of Health, 2010.

This paper assists in addressing the gap in research and evaluation of interventions to improve access to healthcare through providing an analysis of the ICDP against a framework that defines various dimensions of access.[11] We describe how aspects of the ICDP have been operationalised in relation to improving access to chronic illness care, and identify key gaps in how determinants of access have been addressed.

METHODS

For this paper we draw on the mixed-methods Sentinel Sites Evaluation (SSE) of the ICDP. The SSE methods are described in detail elsewhere,[8] and are briefly summarised here. The SSE was a multi-site, place-based, formative evaluation spanning 24 urban, regional and remote locations in all Australian States and Territories. The evaluation was intended to inform ongoing implementation of the ICDP. Data were collected, analysed and reported in 6-monthly intervals over five evaluation cycles between 2010 and 2013.

Administrative data

Administrative billing data on uptake of specific government subsidised items of health care (Pharmaceutical Benefits Scheme (PBS) Co-payment, Practice Incentives Program (PIP) Indigenous Health Incentive and Indigenous –specific health assessments billing data) were provided by the Commonwealth Government Department of Health (‘the Department’) from May 2009 to May 2012.

The PBS Co-payment initiative to reduce cost of medications for eligible Indigenous people living with, or at risk of, chronic disease was introduced in May 2010. The PIP Indigenous Health Incentive to support accredited health services to provide

1
2
3 better health care for Indigenous Australians was also introduced in May 2010. The
4
5 PIP Indigenous Health Incentive has types of annual care payments including
6
7 payment for registering new patients, providing target levels of care (Tier 1) and
8
9 providing the majority of care (Tier 2). Indigenous-specific health assessments
10
11 predate the ICDP and have been progressively introduced in Australia to improve
12
13 preventive health opportunities. The ICDP workforce aimed to increase the number of
14
15 health assessments being undertaken (Department, 2010). The period May 2009 to
16
17 April 2010 was used as a 'baseline' period for health assessments due to them being
18
19 introduced before the ICDP
20
21
22
23

24
25 Data are presented as uptake per 100 Indigenous Australians aged 15 years or over.
26
27 Population data are based on Australian Bureau of Statistics projections from the 2006
28
29 Census according to the statistical boundaries used to define the sites.
30
31
32
33

34 Program reports (March 2010 to October 2012) on progress with implementation of
35
36 the ICDP were provided by the Department.
37
38
39

40 41 **Qualitative data**

42
43 Qualitative data on access to healthcare were obtained from community focus groups
44
45 and individual or group interviews with a range of key informants from Indigenous
46
47 Health Services and the private general practice sector - including employees of
48
49 Medicare Locals and general practices (Table 2). Key informants were purposively
50
51 sampled for their knowledge and experience with the ICDP, and included general
52
53 practitioners, nursing staff, practice managers, ICDP-funded staff such as OWs,
54
55 program managers, management staff, and pharmacists. Repeated 6-monthly cycles of
56
57
58
59
60

interviews and feedback of data between November 2010 and December 2012 allowed review and refinement of our understanding of issues in accessing primary healthcare. Some individuals were interviewed in more than one cycle. Also, to gain a deeper understanding of information provided at initial interview – or through other interviewees - follow-up interviews were conducted with some interviewees in the same evaluation cycle.

Community focus groups were conducted to explore consumer and community perceptions of change in accessibility and quality of services related to the management and prevention of chronic disease, and the extent to which any change may have been due to the ICDP. The aim was to include people from different groups within the local Indigenous community, ensuring that people with experience of chronic illness were included in at least one of the groups in each site in each cycle. Key stakeholder organisations assisted with the organisation of these groups.

Areas of special focus for interviews and community focus groups in each cycle were based on the state of implementation of the ICDP at site level, as reflected in the Department’s program data reports.

Data analysis

For the purpose of this paper, we analysed the SSE qualitative data using a conceptual framework of access to health care(Figure 1).[11] Data extraction was conducted through a staged process. In the first stage, previously coded data relating to access to chronic illness care, including supporting quotes and examples, were extracted by the lead author (JB) from NVIVO 9,[21] a qualitative data software management system.

The extracted data were categorised by JB according to the dimensions of access as defined in the access framework[11] (Figure 1) and by the ICDP measures (Table 1).

In order to ensure the quality of results, three authors (JB, AL, TM) individually reviewed and then conferred on the extracted data and its categorisation. Any differences in categorisation or perceptions of the relevance of extracted data were discussed and resolved. In the second stage of analysis the same three authors (JB, AL and TM) reviewed the full SSE Final Report[8] in order to identify any additional information relating to access to primary health care, including quantitative measures previously reported that relate to access. This information was reviewed by these authors and where relevant was also categorised within the access framework.

Emergent themes not encompassed in the Levesque framework were also identified through this iterative process. For each dimension, we considered the ways in which the ICDP influenced (or failed to influence) the fit between the features of the health service, and features of communities and people with or at risk of chronic disease, to improve access.

The results of the above process were then reviewed by all authors to check for consistency with their perceptions and understanding, based on their experience of working on the SSE team. This process resulted in some minor adjustments to the categorisation and interpretation of the findings. There was good concordance between all authors in the analysis and interpretation of the data.

This paper focuses on those aspects of the ICDP that were more strongly orientated to improving access to health services (rather than detailing all aspects with any relevance to access). In conducting the analysis it was apparent that the identified dimensions to access are not independent of each other; some findings could be interpreted as relevant to more than one access dimension. We have therefore described the ICDP programs of work according to the predominant dimension of access and the most important influence.

Ethical approval

Ethical approval for the SSE was granted through the Department of Health Ethics Committee, project number 10/2012.

RESULTS

In total 374 key informants participated in individual or group interviews through the SSE. Many participated in multiple evaluation cycles that aimed to assess changes in perceptions and experiences over time (Table 2). Interviewees represented a broad cross-section of health service sectors, settings and roles, including clinicians, ICDP-funded workforce, program managers and practice managers from both the general practice and Indigenous health sector and across urban, regional and remote locations. The 72 community focus groups involved 670 participants from urban, regional and remote settings (Table 2).

Table 2: Individual interview participant characteristics by interview type, rurality, sector and position; community focus group characteristics by rurality and gender

	Urban	Regional	Remote	Total
Interviews				
Participants*	138	157	79	374
• Individual Interview	123	108	65	296
• Individuals participating in a group interview	15	49	14	78
Sector+				
• Indigenous Health	67	64	55	186
• General Practice	56	74	20	150
Position				
• Clinician (GP)	32 (21)	37 (14)	19 (8)	88 (43)
• Managers	35	42	30	107
• Practice Managers	13	23	7	43
• ICDP-funded workforce	43	35	19	97
• Pharmacist	15	20	4	39
Community Focus Groups				
Participants	261	259	150	670 (31% male; 69% female)

* Interviewees may have been interviewed more than once through out the evaluation period. This represents the number of individuals interviewed or contributed to a group session at least once during the evaluation period.

+ Sector numbers do not add up with the interview numbers as it excludes pharmacists not employed by IHS and workforce agency interviews

Note:

Indigenous Health sector includes: Indigenous Health Services & NACCHO State & Territory Affiliates

General Practice sector includes: General Practice, Medicare Locals, Divisions of General Practice, State-Based Organisations

General Practitioner (GP)

Manager category includes interviews with program managers, program officers and CEOs.

ICDP funded category includes interviews with ICDP funded positions such as Indigenous Health Project Officer, Care Coordinator and Outreach Worker.

Clinician category includes interviews with GPs, Nurses, Aboriginal Health Workers and allied health professionals.

Implementation of the ICDP was slower than anticipated, but health services, particularly those with a prior history of providing primary healthcare to significant numbers of Indigenous people, welcomed the opportunity provided by the ICDP to obtain additional resources to improve services.

We present the findings below according to the corresponding dimensions of access proposed by Lévesque et al.[11] Example quotes to illustrate the findings are presented in Table 3. Supplementary Files (Table 1) 4 details an assessment of all of the ICDP measures against the framework.

Table 3: Dimensions of access framework (as per the Levesque framework (Levesque et al., 2013), with illustrative quotes.

Dimensions of access (Levesque et al., 2013)	Example quotes
‘Approachability’ and ‘ability to perceive’	<p>The IHPO and OW have been very active in community engagement and letting community know about the initiatives available at health services. They have done this by attending lots of community events and Aboriginal organisations. (Group discussion, regional site)</p> <p>[Outreach Worker name] also does one-on-one ‘yarn’ with patients when waiting at Doctor’s or in car or in any other appointments about their health issues and gives them some options to think about their change. The direct assistance to patients attending appointment helps in maintaining regular attendance at the health services. (IHPO, urban site)</p>
‘Acceptability’ and ‘ability to seek’	<p>IHPO and Outreach Worker have assisted with cultural awareness. Staff now ask all clients if they are asked if they are Aboriginal and Torres Strait Islander and not questioning Aboriginality or ‘looking at the colour....sometimes they may be white’ (Practice nurse, urban site)</p> <p>We absolutely flooded any community event we could find and any community service with information about what is a MBS 715 [health assessment] and how to ask for one at a health service. We are working to get the community to advocate themselves for one. (IHPO, urban site)</p>
‘Availability and accommodation’ and ‘ability to reach’	<p>The community often have no fixed address, no phone or changing numbers or no credit card, so the outreach worker [will] go and find that person and get them. (General</p>

	<p>Practitioner, remote site)</p> <p><i>[The OW] will even bring the patients down for us. If there is a new person in the area that wants to see a doctor they will bring them down to the surgery. If I say I have got a patient I have been trying to get a hold of and can't get them [the OW] will even try for me too and with their contacts they know a lot of the family groups and they [are able to] help out. (Practice nurse, urban site)</i></p>
'Affordability' and 'ability to pay'	<p><i>There has been increased attendance at [name of health service] as patients coming back for medications as they know they can afford them. (General Practitioner, regional site)</i></p> <p><i>Too expensive to see a doctor [specialist], costs about \$90, that's a lot of money, a lot of doctors want the money up front and some do bulk bill some don't. Some say they are booked out and don't take on any more patients around town. (Community focus group, regional site)</i></p>
'Appropriateness' and 'ability to engage'	<p><i>We have patients with a lot of chronic diseases who live a bit far away. [Name of OW] has been fantastic to coordinate all appointments and actually transporting patients to make sure the appointments are attended. (General Practitioner, regional site)</i></p> <p><i>We have linked community members with services and facilitated client access, patient registration for PIP Indigenous Health Incentive and provided client follow-up services. We have helped develop relationships between Aboriginal and Torres Strait Islander clients and staff within various mainstream general practices. This has resulted in staff and clients being more comfortable talking to each other which then results in clients attending the services more often and more regularly. (Outreach Worker, urban site)</i></p>

Notes: Outreach Worker (OW): Indigenous Health Project Officer (IHPO)

‘Approachability’ and ‘ability to perceive’

The ICDP enhanced the interaction between health service ‘approachability’ and the corresponding abilities of communities and individuals to ‘perceive the need for care’. There was a strong focus within the ICDP on improving the ‘approachability’ of health services – ensuring that chronic illness services could be identified by both health service providers and Indigenous Australians.

The services offered by Indigenous Health Services tended to be known in Indigenous communities prior to the ICDP; therefore the ICDP had a limited role in promoting community awareness about existing services. Several new and expanded services became available through the ICDP (the availability of subsidised or free medications, nicotine patches to support smoking cessation, and increased availability of health assessments). Interviewees from all types of health services highlighted the role of the ICDP workforce in conveying information about these new service items to communities and promoting their uptake; community perception of the benefit of a new service item also played a role in the extent of its uptake. This new workforce, particularly IHPOs, appeared to have a fairly strong role in bridging the gap between communities and those health services in the private general practice sector not specifically set up to meet the needs of Indigenous communities. Effective strategies used by IHPOs (who were employed in Divisions of General Practice/Medicare Locals in the general practice sector) included development and community distribution, through OWs, of lists of general practices participating in the ICDP - including those willing to provide services at no direct cost to patients. Initial tensions over whether the IHPOs should focus on supporting health services to improve approachability, or on increasing community knowledge of the need and ways to

access services were overcome by adapting approaches according to local contexts. Where IHPOs identified as Indigenous, they tended to work more at community level or used a combination of health service and community level approaches. Community focus group data indicated that negative past experiences of accessing health services negatively influenced community members' willingness to seek care for chronic illness. In some sites, OWs acted as cultural brokers to support positive healthcare encounters, building relationships of trust.

In some of our study sites, the ICDP workforce provided information to health services, about other services to which they could confidently refer Indigenous patients.

Program design had anticipated that OW positions would be entry-level positions, with the intent that OWs would be people from local Indigenous communities, thus having potential to improve the 'fit' between health services and clients. However, health services utilised the resources available for OWs differently in different contexts, and in many cases, the OWs were qualified and experienced health professionals. This related, in part, to concerns from some health providers that the OW role involved supporting and transporting people with complex medical problems, and that a higher level of skill than 'entry-level' was required.

‘Acceptability’ and ‘ability to seek’

The fit or interaction between the dimension of ‘acceptability’ of the service and the ‘ability of individuals to seek care’ were enhanced through the ICDP. There was a strong focus on improving cultural acceptability of health services and improving knowledge of the health care options and choice of services by patients.

ICDP-funded workers assisted general practices and related support organisations to be more accessible by working to address ‘acceptability’ of the service – making the service more culturally appropriate for Indigenous Australians. This was through organising and/or delivering formal and informal cultural awareness training sessions and one-on-one discussions between OWs and health care staff to facilitate cultural safety. It was reported that many health service staff valued these one-on-one interactions, which often focused on measures such as creating more welcoming reception areas using Indigenous art and targeted reading matter. Community focus groups reported a positive change in service delivery as a result of the general practice staff attending cultural awareness training. These changes were not seen to be required in Indigenous Health Services, which were already established as culturally appropriate services. Despite the focus on cultural awareness training some community focus groups reported perceptions and experiences of racism when accessing some services, particularly specialist reception rooms and pharmacies. Specialist and pharmacy staff were not a specified target group for cultural awareness training.

Indigenous people employed in OW positions often acted as cultural brokers, thereby making services more ‘acceptable’ and assisting with access to health care. They

provided a fit between 'acceptability' and 'ability to seek'. Ability of patients to seek care appeared to improve as the ICDP progressed. This was reflected in interview data from ICDP-funded workers who took an advocacy or cultural brokerage role, and community focus group data related to this support, and about positive encounters with general practitioners and medical specialists.

ICDP-funded staff worked with general practices to increase identification of Indigenous patients. Over the course of the evaluation, health services demonstrated an increase in numbers of patients identified as Indigenous. Prior to the ICDP, many general practices and Indigenous Health Services did not have systematic approaches to identify which of their patients were Indigenous. These needed to be enhanced.

The PIP Indigenous Health Incentive was intended to bring about systematic changes in service delivery such as encouraging continuing improvements in quality chronic illness care, enhancing capacity and improving access and health outcomes for patients through culturally appropriate and coordinated care (Table 1). Patients were only able to access some of the ICDP incentives such as PBS Co-payment and Supplementary Services (discussed further below) if the health service was registered for the PIP Indigenous Health Incentive. The number of health services registered with the PIP Indigenous Health Incentive per 1000 people is to some extent an indicator of accessibility (and therefore 'acceptability'), or at least provider choice for Indigenous people. By November 2011, 40% of health services registered for the incentive had not yet registered any patients; many general practices had few or no Indigenous patients. A relatively small proportion of general practices across Australia had significant numbers of registered patients, and appeared to be genuinely

interested in or committed to participating in the ICDP. As of May 2012, the number of services signed up for the PIP Indigenous Health Incentive per 1000 Indigenous people in Sentinel Sites was 19: 13 in urban areas, five in regional areas and one in a remote area. Corresponding figures for the rest of Australia were 17, nine and one health service per 1000 Indigenous people (total of 27) (Figure 2). These numbers suggest that provider choice for PIP Indigenous Health Incentive providers was greater in urban locations; however, the more complex provider environment in urban locations may have made it more difficult for urban residents to identify participating health services.

Given that patients registered for the PIP Indigenous Health Incentive were expected to have a diagnosed chronic disease (as per the guidelines on eligibility), it is notable that additional payments reflecting continuity of care and planned review (referred to as Tier 1 nor Tier 2 payments) were not triggered for around 30% of patients (Figure 3). This indicates a substantial proportion of patients registered for the PIP Indigenous Health Incentive were not attending health services sufficiently regularly, or health services were not billing for care in a way that triggered payments. Given that patients with a chronic illness require regular follow-up at primary health care facilities to ensure good management of their condition, the possible lack of regular attendance was concerning. Figure 3 shows that, in general, the percentage of PIP Indigenous Health Incentive registered patients for whom no payments were made was higher in Indigenous Health Services than in the general practice sector.

In some sites increasing numbers of people undertook health assessments (which are primarily preventive and diagnostic). This may reflect increased autonomy and

knowledge about health care options, and greater 'ability to seek care' and 'acceptability' – but it may also be a reflection of a number of determinants of access being addressed simultaneously through the ICDP (Figure 4). Uptake of health assessments increased almost four-fold over the evaluation period in the sentinel sites, and around two-fold in the rest of Australia over the same period.

All of the sentinel sites in urban and regional areas showed a general trend of increased uptake of health assessments over time, but the rate of increase was markedly different in different sites (Figure 4). The greatest increase and highest level of uptake were in sites where there were relatively more doctors conducting health assessments and, to a lesser extent, higher numbers of assessments being completed by each doctor.⁸ Strategies employed to increase uptake of health assessments included community promotion by the ICDP-funded workers, promotion of availability within health services and, in some places, support for dedicated health assessment clinics within health services or community settings.

In some instances, delivery of health assessments by services appeared to be driven by a business imperative (as delivery attracted a government payment); in some study sites there was little evidence that patients and communities perceived the need for these checks. This is relevant to the access dimension 'ability to perceive' - patients may wish to have a health assessment if their understanding of personal health risk factors is increased. Since both 'quantity' and 'quality' are important, caution should be used when considering quantitative measures of uptake alone as measures of success.

In some instances, services employed people in male and female OW roles to ensure gender sensitivity - an important cultural consideration. Some health services offered gender specific health assessment days. In making services more culturally safe and therefore more accessible, these initiatives contributed to the ‘ability of people to seek care’.

‘Availability and accommodation’ and ‘ability to reach’

Our data suggested that the ICDP enhanced the interaction between the supply dimension ‘availability and accommodation’ – health services being able to be physically reached - and the demand dimension ‘ability to reach’, by improving access to transport, outreach services, and the establishment in some areas of specialised clinics, thereby making services more available.

Outreach services for specialist and multidisciplinary teams were funded as part of the ICDP to take chronic illness care services to under-served areas (Table 1) – ‘availability and accommodation’. Outreach services resulted in improved patient access to specialists and allied health in some sites. However, efficiency was questioned, with low numbers of referrals and low patient attendance for many services. Attendance at specialist appointments was influenced by the capacity of host organisations to manage clinics and coordinate visits, utilise recall and reminder systems, and arrange patient transport. Increased accessibility of some services and increased confidence of some patients in relation to accessing specialist care was noted.

Despite this investment, challenges to accessing specialist care persisted, especially for patients living in small, dispersed communities. There were often issues with

contacting patients – for example, when patients did not have a fixed address or a mobile telephone. The OWs assisted with contacting patients in these circumstances.

There were also some difficulties with retention of specialists in the outreach program; low numbers of patient referrals and low patient attendance rates at appointments contributed. However, where referrals were being made, and patients were attending, the outreach services appeared to be working well for primary healthcare services, specialists and patients. Ongoing work was needed in communicating with general practices about the availability of outreach services that were predominantly based on Indigenous Health Services.

Lack of transport to attend health appointments was consistently identified by as a barrier in accessing health services – ‘the ability to reach’. OWs played key roles in addressing transport needs, including making transport arrangements and driving patients to health care appointments (including appointments to general practice, specialists and allied health professionals). Resources available to OWs to fulfil this role varied in different organisations, because transport was not specifically funded through the ICDP and health services resourced the transport services in some cases and bore the associated additional costs. Some OWs assisted patients to access Supplementary Services funding for transport needs, but this was only available to a small subset of patients registered with the PIP Indigenous Health Incentive and the care coordination program.

Overall, transport, along with coordination and the support of the OW role, was understood as playing a large role in achieving more regular attendance at the health services by chronically ill patients, as reflected in interview and focus group data.

Another reported influence on ‘availability and accommodation’ was health service scheduling, for example, the scheduling of health assessment clinics during work hours restricted the capacity of working people to access this service. There were some efforts to improve social supports, as highlighted in the access framework under ‘ability to reach’, but this was limited. These efforts mostly comprised OWs linking patients to support services such as housing services, in recognition of the need for support to be offered in addressing other determinants of health and other priorities in their clients’ lives. This was reported by OWs as time-consuming and was not always recognised or supported as a core part of their role.

‘Affordability’ and ‘ability to pay’

Several ICDP components were intended to reduce the cost of health care to Indigenous people who, as a population, have lower family incomes than non-Indigenous Australians and suffer many health conditions related to poverty.

ICDP-funded staff actively advocated for the removal of cost barriers; for example, Care Coordinators advocated for specialists and allied health providers to charge fees equal to government subsidies so patients would not incur personal costs. IHPOs and OWs advocated for the same outcome with general practices – especially when Indigenous patients were seeking health assessments.

ICDP-funded specialist outreach programs were designed to be free of cost to patients. Funding was also made available for medical aides and transport to a subset of clients under the Care Coordinator through a 'Supplementary Services' program. The program was used in some sites to pay the fee differential between the government subsidy and higher fees charged by those specialists, allied health providers and general practitioners. Despite these investments to address affordability, community focus groups raised ongoing concerns about the costs of consulting private specialists in particular. Concerns were raised that private specialists were at times ordering tests that the patient were unable to pay for, or that ICDP-funded specialists were having to refer patients to private providers for further tests that the patient may not be able to afford.

Activities to encourage healthy eating and exercise classes targeting Indigenous people were provided at no cost to participants. The reach of these activities at a population level was variable, with those most in need not necessarily having access.

The PBS Co-payment initiative provided eligible Indigenous patients with heavily subsidised or free prescription medicines addressed 'affordability' – it worked as a patient incentive to access other health services offered as part of the ICDP, and, as reported in the interviews and community focus groups, resulted in improved medication adherence. Uptake of subsidised or free medications was higher than expected (27 per 100 eligible Indigenous patients across the evaluation sites in March – May 2012) and was enthusiastically promoted by the ICDP workforce (Figure 5). Despite this high uptake there was wide variation between urban, regional and remote

1
2
3 sites but more variation at the site level. For example, uptake varied from 12 per 100
4
5 people to 93 per 100 people between urban sites in the same period.
6
7

8
9
10 Despite the high level of response to the removal of medication cost barriers, financial
11
12 barriers continued to influence access to medication in particular circumstances.
13
14 These included when eligible patients were prescribed medication by doctors
15
16 employed in hospitals (and therefore not registered with the ICDP); when they
17
18 attended general practices not participating in the ICDP (for example when
19
20 travelling); and when patients encountered staff in pharmacies who were not aware of
21
22 this particular ICDP strategy. Specialists were initially unable to prescribe under the
23
24 scheme, however this changed during the course of implementation of the scheme.
25
26

27
28 **‘Appropriateness’ and ‘ability to engage’**
29

30
31 Improving coordination and continuity – access dimension ‘appropriateness’ – were
32
33 aims of the ICDP. Aims included improved assessment of needs and better
34
35 coordination of quality care, including specialist medical care and allied health
36
37 services, for Indigenous patients. The PIP Indigenous Health Incentive was designed
38
39 to improve the fit between chronic illness services, care and Indigenous population
40
41 needs. The concept of a ‘medical home’ - a regular general practice or Indigenous
42
43 Health Service - for patients was encouraged. This concept was not fully realised as a
44
45 major focus was to register eligible people in the scheme to access benefits as soon as
46
47 possible, rather than determine the most appropriate or convenient practice at which to
48
49 register.
50
51
52
53
54
55
56
57
58
59
60

Other strategies to improve appropriateness included training for health care staff in brief interventions, patient self-management (reported in 'ability to engage') and cultural awareness training (as reported in 'acceptability' and 'ability to seek').

As outlined in 'ability to pay', it was reported that patient adherence to medication and attendance at health services improved substantially with the removal of cost barriers to medication. This 'ability to pay' enabled an 'ability to engage' – patients and health service providers indicated that patients felt they could fill prescriptions given by healthcare providers, and not feel shame about not being able to afford prescribed medications.

Engagement in healthy lifestyle activities such as exercise classes and the participation of targeted populations in healthy community days indicated 'ability to engage' in health promotion components of the ICDP. It was evident from focus group data that awareness of chronic disease risk factors was generally high prior to the implementation of the ICDP. The employment of OWs contributed to the 'ability of engage', as they acted as 'cultural brokers' and provided information to community members about the services available.

Cross-cutting issues

Despite multi-faceted efforts and strategies to improve access to chronic illness care, data showed minimal evidence of systematic processes being applied to ensure that the most vulnerable were benefiting from the ICDP initiatives. There was an opportunity for improvement in population coverage generally and in targeting activities and resources to specifically reach population sub-groups most in need of

support. ICDP-funded positions had limited population coverage (even in reaching specific vulnerable groups who would stand to benefit most from the program), because a small number of positions had responsibility for covering large geographic areas or large populations.

There was wide variation at the site level in the effectiveness of the ICDP implementation and subsequent improvement in access to health services. Specific local contexts were more significant influences on improving access to chronic illness care than geographic location (urban, regional or remote). Our data suggested that the ways in which the ICDP enhanced the interaction between health service dimensions of access differed in different types of health services, and was strongly influenced by context, including historical factors, and the nature of the ICDP service items that were introduced.

DISCUSSION

There is considerable evidence that the ICDP resulted in improved access to primary healthcare services through various ICDP-related initiatives. Consistent qualitative evidence indicated an increase in access related to ICDP activities such as: the removal of cost barriers to medicines and of transport barriers to attend services; improved cultural safety in general practices; the support and assistance of ICDP-funded workers for Indigenous people to access healthcare services; and more community programs/resources to support healthy lifestyle choices and health-seeking behaviours. While quantitative evidence also showed more Indigenous Australians were registering for the PIP Indigenous Health Incentive, having health assessments and obtaining subsidised prescription medications through a PBS Co-payment, it is

not clear to what extent these data reflect an actual increase in access to high quality primary healthcare services. It may also reflect greater recording of access to these services.

On the whole, the removal of cost barriers and the creation of welcoming, culturally safe spaces appeared to make the greatest contribution to increased access to primary healthcare services by Indigenous people. Use of the access framework for analysis shows how the ICDP focussed predominantly on supply-side aspects to improving access to healthcare. This is consistent with literature, which suggests that internationally there is a focus on supply-side aspects to access rather than demand-side aspects.[4,11] Most frequently, the ICDP targeted service providers and to a lesser extent patients. Continued work is needed on addressing the demand-side dimensions to access, together with ongoing strategies to address supply-side dimensions. Influencing behaviour of Indigenous people in seeking healthcare will in part rely on on-going social reforms to address social and other determinants of health and access to care.[4,22]

The use of this access framework for analysis highlighted a gap in the ICDP implementation, in programs to address people's 'ability to pay' by addressing social and economic disadvantage. Within the ICDP there was a lack of complementary programs in relevant sectors other than the health sector – a lack of attention to social determinants of health. Work was being undertaken through other Commonwealth funded programs to address issues in housing and education, for example, but there were no clear or explicit linkages with the ICDP.

While the access framework¹¹ has been well cited,[13,22-25] we have been unable to identify any previous work where the framework has been used to analyse how well programs have addressed access – as we have done in this paper. Our analysis shows that the access framework[11] is useful for the purpose of analysing access across various dimensions and identifying gaps in ICDP investment or implementation. However, the original presentation of the access framework[11] is vague on the extent to which dimensions are expected to be discrete, and the extent to which demand and supply-side ‘pairs’ are expected to directly correspond with each other. In applying this framework for our analysis, we found that the dimensions of access defined in the framework are not discrete, and in some instances it was difficult to clearly align ICDP-related activities of programs with specific dimensions. In many cases activities related to more than one dimension. In interpreting the data the strong links and inter-relationships between themes needed to be recognised – in some instances themes related to other dimensions that the directly corresponding pair.

The framework is presented as a ‘pathway of utilisation’ from perception of need through to health care utilisation. It is not clear if the dimensions are expected to reflect points along a continuum. From our analysis of data the different dimensions may be relevant to a number of points along the ‘pathway of utilisation’.

There was wide variation in uptake of the ICDP at the local site level. Local site level context influences the implementation of health interventions, and also affects the relative importance of each dimension and the interaction between different dimensions. For example, in some sites there was a perceived need to focus on approachability of the health service more than on affordability.

The barriers to access identified in our analysis are consistent with the research on barriers to health care for Indigenous Australians.[5,18,20,26] Key emerging challenges include achieving general population coverage and reaching high-need groups. The diversity of contexts in which health services operate, the wide variation in uptake of the ICDP between sites, and the relevance of different contextual factors to barriers to access, mean that strategies will need to be tailored to local circumstances and address all aspects of access on both the demand and supply-sides.

Strengths of the analysis in this paper include the mixed-methods approach, the number and diversity of interviewees, the geographic scope and diversity of study sites, and long term repeated engagement with stakeholders, including feedback and member-checking of data and interpretation. More general limitations of the SSE have been described elsewhere,[8] and include the selection of sites on the basis of early and relatively intense ICDP investment and selection of interviewees based on their knowledge and interest in Indigenous health. The data provide a broad perspective of service settings across Australia, but this perspective may not necessarily be representative of service settings in general. Categorisation of themes into the analytical framework and this process may be overly Western-centric,[27] and in conducting the analysis our team was sensitive to this risk.

Improving access to primary healthcare for marginalised and vulnerable populations is a complex challenge, requiring multifaceted solutions. This paper teases out some of these complexities, and the findings are relevant to policy makers / funders looking to develop programs that are intended to improve access to health services for at risk

populations. Our findings reinforce the need to consider the range of determinants that may need to be addressed if access to health services is to be improved.

CONCLUSIONS

This major government funded package of interventions has had some success in overcoming barriers to accessing chronic illness care by supplying services that are more approachable, acceptable and affordable for Indigenous Australians. There is now a need to confront important challenges to address demand-side dimensions of access that have not been adequately addressed such as ‘ability to pay’. Changing the way services are sought by Indigenous Australians will in part rely on on-going social reforms to address social and other determinants of health and access to care.

ACKNOWLEDGEMENTS

The Sentinel Sites Evaluation was conceived and funded by the Commonwealth Department of Health and Ageing. Successful conduct of the evaluation was made possible through the active support and commitment of key stakeholder organisations, community members, individuals who participated in the evaluation, and the contributions made by the broader evaluation team and the Department staff. RB is supported by an ARC Future Fellowship (#FT100100087).

COMPETING INTERESTS

The Sentinel Sites Evaluation was conducted by Menzies School of Health Research under contract to the Commonwealth Department of Health and Ageing. The authors declare that they have no other competing interests.

AUTHORS' CONTRIBUTIONS

JB played the lead role in the conceptualisation, data analysis, interpretation and preparation of the manuscript – with support from RB and GS. MK contributed to the conceptualisation of the paper, and conducted the analysis for the administrative data. All authors contributed to refinement of the paper, based on their close involvement with the evaluation, and all approved the final manuscript. RB led the overall Sentinel Sites Evaluation.

REFERENCES

1. Ring I, & Brown N. The health status of indigenous peoples and others: The gap is narrowing in the United States, Canada, and New Zealand, but a lot more is needed. *BMJ: British Medical Journal*, 2003; 327(7412), 404.
2. Australian Institute of Health and Welfare. *Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians*. 2010; Cat. No. IHW 48. Canberra: AIHW.
3. Australian Institute of Health and Welfare. *Australia's health 2014- in brief*. 2014; Cat. no. AUS 181. Canberra: AIHW.
4. Comino EJ, Davies GP, Krastev Y, et al. A systematic review of interventions to enhance access to best practice primary health care for chronic disease management, prevention and episodic care. *BMC health services research*, 2012;12(1), 415.
5. Australian Medical Association. *Aboriginal and Torres Strait Islander health report card 2010-11: best practice in primary health care for Aboriginal peoples and Torres Strait Islanders*. 2011.

6. Australian Health Ministers Advisory Council. *Aboriginal and Torres Strait Islander Health Performance Framework 2012 Report*, 2012; AHMAC: Canberra.

7. Ware VA. *Improving the accessibility of health services in urban and regional settings for Indigenous people*. 2013; Resource sheet no. 27. Produced for the Closing the Gap Clearinghouse. Canberra: Australian Institute of Health and Welfare & Melbourne: Australian Institute of Family Studies.

8. Bailie R, Griffin J, Kelaher M, et al. *Sentinel Sites Evaluation: Final Report*. 2013; Menzies School of Health Research. Prepared for the Australian Government Department of Health and Ageing, Canberra.

9. Department of Health. *Closing the gap information for General Practice, Aboriginal community-controlled health services and Indigenous health services*, 2010; Commonwealth of Australia.

10. Department of Health [website]
<<http://www.health.gov.au/internet/main/publishing.nsf/Content/irhd-chronic-disease>> (accessed 24 January 2015).

11. Levesque J, Harris M, & Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *Int J Equity Health*, 2013; 12(1), 18.

12. Oliver A, & Mossialos E. Equity of access to health care: outlining the foundations for action. *Journal of Epidemiology and Community Health*, (2004);58(8), 655–658.

13. Edusei J, & Amoah P. Appreciating the Complexities in Accessing Health Care among Urban Poor: The Case of Street Children in Kumasi Metropolitan Area, Ghana. *Developing Country Studies*, 2014. 4(8), 69-88.
14. Frenk J. The concept and measurement of accessibility. In *Health Services Research: An Anthology*. Edited by White KL, Frenk J, Ordóñez C, Paganini JM, Starfield B. Washington: Pan American Health Organization; 1992: 858-864.
15. Mooney G. Equity in health care: confronting the confusion. *Effective Health Care*, 1983;1(4), 179-185.
16. Arabena K. Future initiatives to improve the health and wellbeing of Aboriginal and Torres Strait Islander peoples. *Medical Journal of Australia*, 2013;199(1):22-22.
17. Mirzaei, M, Aspin C, Essue B, et al. A patient-centred approach to health service delivery: improving health outcomes for people with chronic illness. *BMC Health Services Research*, 2013;13(1), 251.
18. Australian Institute of Health and Welfare. *Access to health services for Aboriginal and Torres Strait Islander people*. 2011;Cat. No. IHW 46. Canberra: AIHW.
19. Baba JT, Brolan C E, & Hill PS. Aboriginal medical services cure more than illness: a qualitative study of how Indigenous services address the health impacts of discrimination in Brisbane communities. *International Journal for Equity in Health*, 2014;13(1), 56.
20. Hayman N, White N, Spurling G. Improving Indigenous patients access to mainstream health services: the Inala experience. *Medical Journal of Australia*, 2009; Volume 190 Number 10.

21. QSR. NVivo qualitative data analysis software. QSR International Pty Ltd. Version 9, 2010.

22. Ward B, Humphreys J, McGrail M, et al. Which dimensions of access are most important when rural residents decide to visit a general practitioner for non-emergency care? *Australian Health Review*, 2014.

23. Duckett S, Breadon P & Ginnivan L. *Access all areas: new solutions for GP shortages in rural Australia*, 2013;Grattan Institute, Melbourne.

24. Breton M, Brousselle A, Boivin A. et al. Evaluation of the implementation of centralized waiting lists for patients without a family physician and their effects across the province of Quebec. *Implementation Science*, 2014; 9(1), 117.

25. Westlake C, Sethares K, & Davidson P. How can health literacy influence outcomes in heart failure patients? Mechanisms and interventions. *Current heart failure reports*, 2013;10(3), 232-243.

26. Lau P, Pyett P, Burchill M, et al. Factors influencing access to urban general practices and primary health care by aboriginal Australians-a qualitative study. *AlterNative: An International Journal of Indigenous Peoples*, 2012; 8(1), 66.

27. Johnston L, Doyle J, Morgan B, et al. A review of programs that targeted environmental determinants of Aboriginal and Torres Strait Islander health. *International Journal of Environmental Research and Public Health*, 2013,10(8), 3518-3542.

Figures

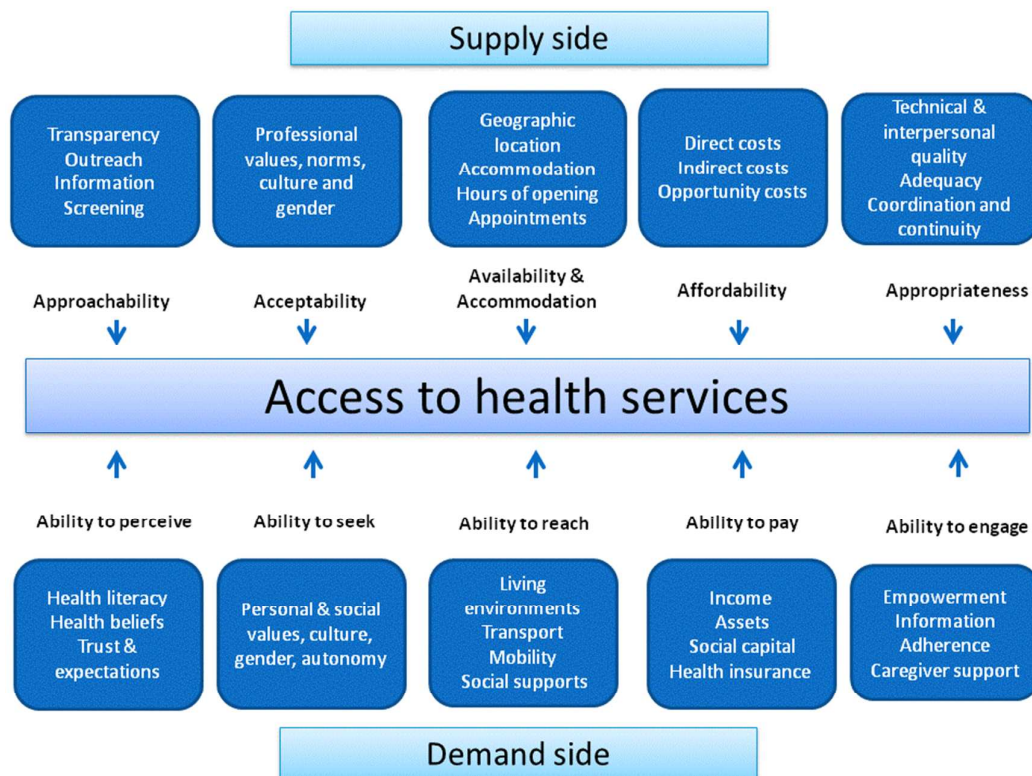


Figure 1: Adapted conceptual framework of access to health care
Source: Levesque et al., 2013.

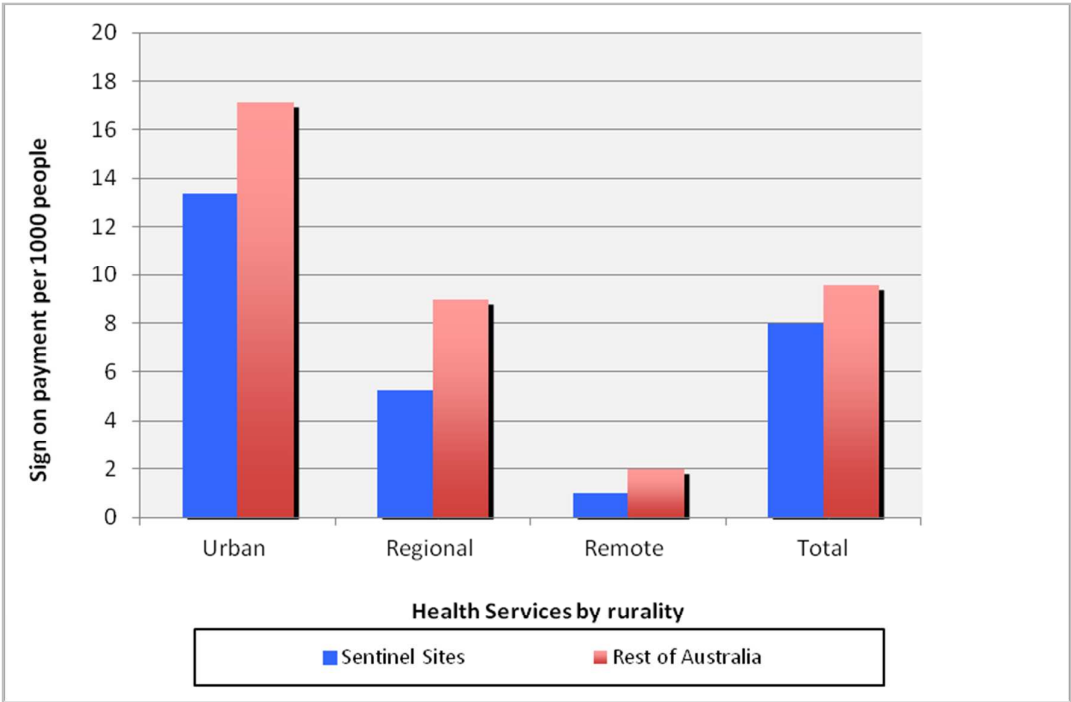


Figure 2: Number of health services receiving the PIP Indigenous Health Incentive sign-on payment per 1000 Indigenous people aged ≥ 15 years in Sentinel Sites and the rest of Australia, by urban, regional and remote locations, May 2012

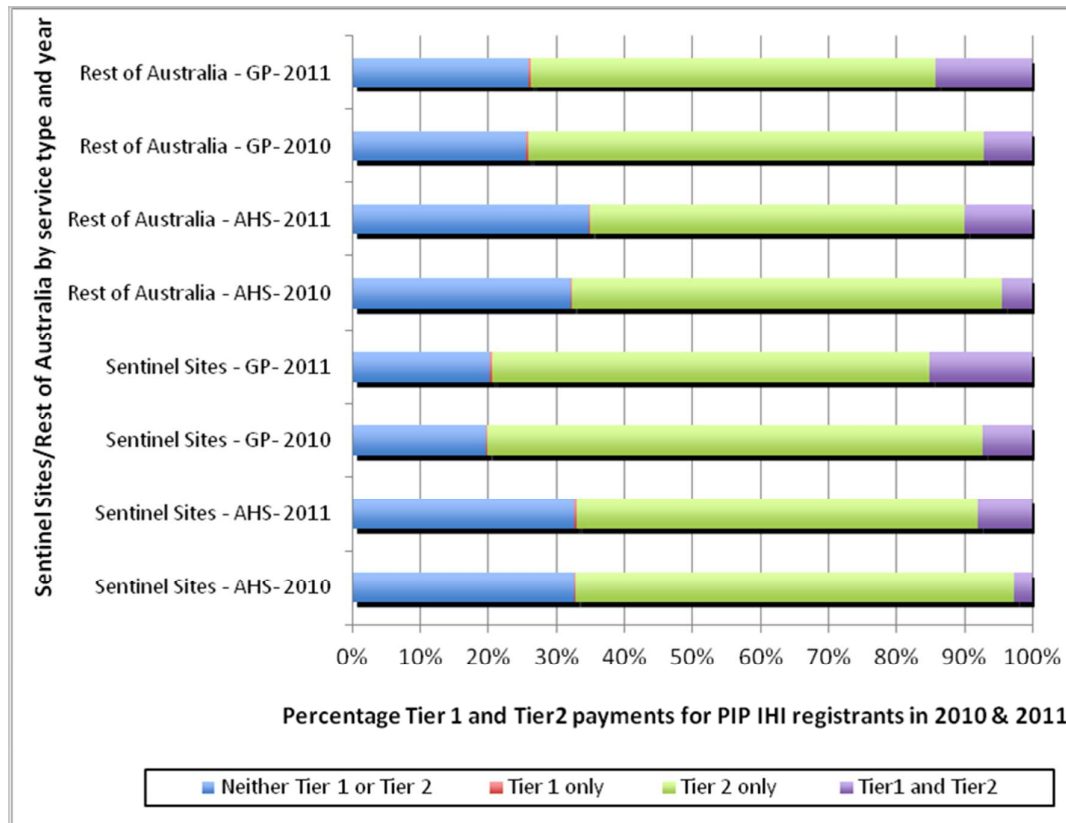


Figure 3: Percentage of Tier 1 and Tier 2 payments for people registered for the PIP Indigenous Health Incentive for Sentinel Sites and the rest of Australia, by sector and year 2010–2011

GP – General Practice; AHS – Aboriginal Health Service

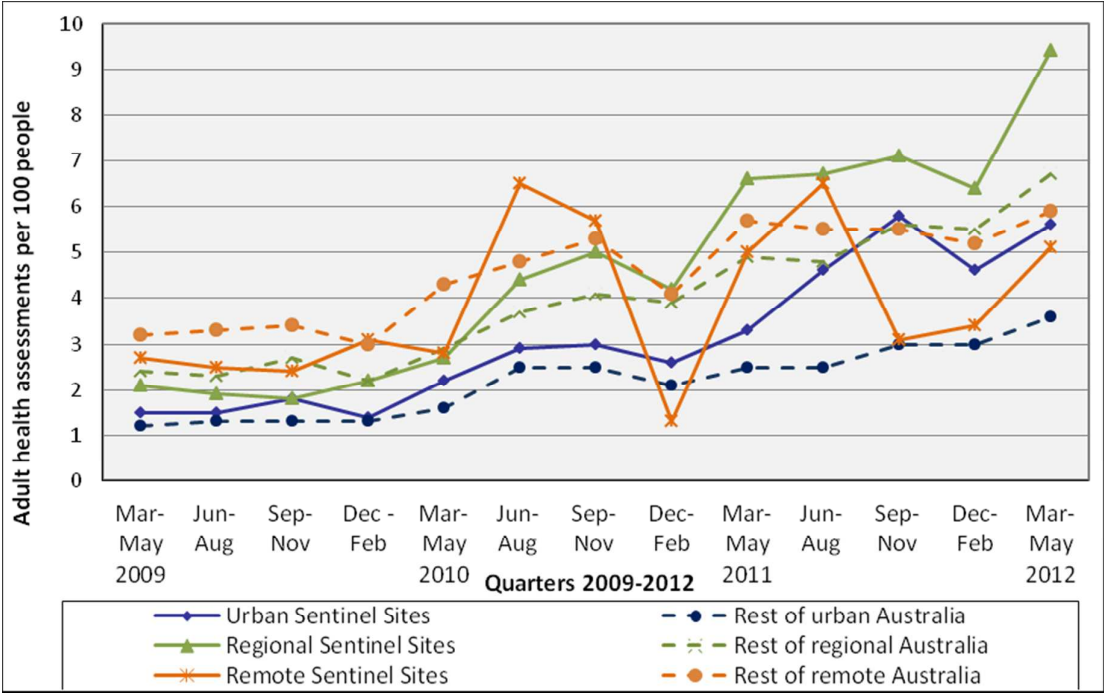


Figure 4: Adult health assessments (MBS items 704, 706, 710 to 1 May 2010 thereafter 715) claimed per 100 Indigenous people aged ≥ 15 years in Sentinel Sites and the rest of Australia, by quarter and rurality, March 2009 – May 2012

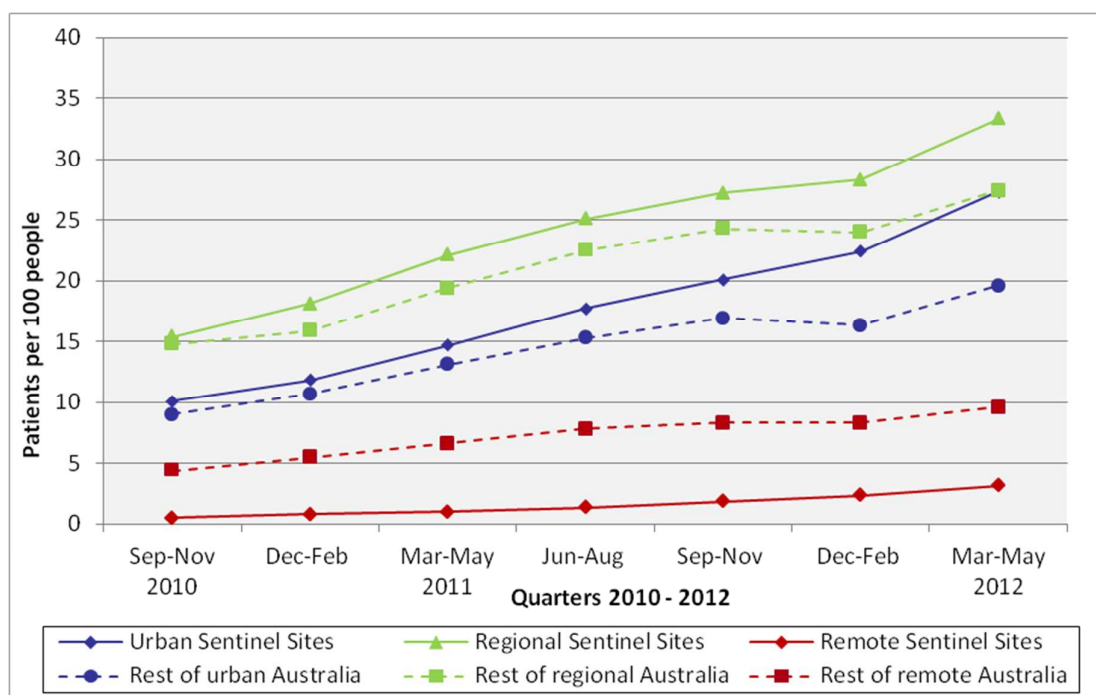


Figure 5: Number of Indigenous people accessing the PBS Co-payment measure per 100 Indigenous people aged ≥ 15 years for Sentinel Sites and the rest of Australia, by rurality, quarter, September 2010 – May 2012

Supplementary File Table 1: Summary of the ICDP programs of work and access dimensions

Priority areas	ICDP interventions*	Supply side					Demand side				
		Approachability	Acceptability	Availability & accommodation	Affordability	Appropriateness	Ability to perceive	Ability to seek	Ability to reach	Ability to pay	Ability to engage
Tackling chronic disease risk factors	National action to reduce smoking rates through a new workforce “tackling smoking teams” & programs	x	x		x		x				
	Reduce risk of chronic disease through a new workforce “healthy lifestyle teams” & programs	x			x		x				
	Increase health promotion activities e.g. health community days, local community campaigns	x									
Improve chronic disease management and care	Provide access to free or subsidised medications “PBS Co-payment measure”				x						x
	Improve patient coordination of care through patient registration at health centres “PIP Indigenous Health Incentive”		x			x					
	Dedicated workforce to improve coordination of care “Care Coordinators” and specific funding for medical aides & transport “Supplementary Services”	x			x	x	x	x	x		
	Delivery of self- management training to health professionals						x				x
	Increase access to specialist services in urban areas			x	x						
	Increase access to specialist services in regional and remote locations			x	x						
Workforce expansion and support	Workforce support, education and training – Outreach Workers training, establishment of GP Registrar training posts in Indigenous health services, nursing scholarships			x							
	Expand outreach and service capacity of Indigenous Health Services through dedicated “Outreach Workers & practice managers”	x			x		x	x	x		
	Improve access to general practice through a dedicated workforce established “Outreach Workers and Indigenous Health Project Officers”	x	x		x		x	x	x		

BMJ Open

Determinants of access to chronic illness care – a mixed-methods evaluation of a national multifaceted chronic disease package for Indigenous Australians

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2015-008103.R1
Article Type:	Research
Date Submitted by the Author:	05-Sep-2015
Complete List of Authors:	Bailie, Jodie; Menzies School of Health Research, Centre for Primary Health Care Systems Schierhout, Gill; Menzies School of Health Research, Centre for Primary Health Care Systems Laycock, Alison; Menzies School of Health Research, Centre for Primary Health Care Systems Kelaher, Margaret; The University of Melbourne, Centre for Health Policy Percival, Nikki; Menzies School of Health Research, Centre for Primary Health Care Systems O'Donoghue, Lynette; Menzies School of Health Research, Centre for Primary Health Care Systems McNeair, Tracy; Menzies School of Health Research, Centre for Primary Health Care Systems Bailie, Ross; Menzies School of Health Research, Centre for Primary Health Care Systems
Primary Subject Heading:	Health services research
Secondary Subject Heading:	Health policy, Public health
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, PRIMARY CARE, PUBLIC HEALTH

SCHOLARONE™
Manuscripts

1
2
3
4 1 Determinants of access to chronic illness care – a mixed-
5
6
7 2 methods evaluation of a national multifaceted chronic disease
8
9
10 3 package for Indigenous Australians
11
12

13
14 4 Jodie Bailie¹, Gill Schierhout¹, Alison Laycock¹, Margaret Kelaher², Nikki Percival¹,
15
16 6 Lynette O'Donoghue¹, Tracy McNeair¹, Ross Bailie¹
17
18

19 8 ¹ Centre for Primary Health Care Systems, Menzies School of Health Research,
20
21 9 Brisbane, Australia
22
23

24 11 ² Centre for Health Policy, The University of Melbourne, Melbourne, Australia
25
26
27

28 13 **Corresponding author:**

29 14 Ms Jodie Bailie
30
31 15 PO Box 10639, Adelaide Street
32
33 16 Brisbane QLD 4000
34
35 17 Phone: 0428 601 559
36
37 18 Email: jodie.bailie@menzies.edu.au
38
39

40 20 **Key Words**

41 21 Aboriginal and Torres Strait Islander health, Indigenous health, access to health,
42
43 22 Closing the Gap, determinants of access
44
45

46 24 **Word Count: 4372**
47
48
49
50
51
52
53
54
55
56
57
58
59
60

27
28
29

30 **ABSTRACT**

31 **Objectives**

32 Indigenous Australians have a disproportionately high burden of chronic illness, and
33 relatively poor access to healthcare. This paper examines how a national multi-
34 component program aimed at improving prevention and management of chronic
35 disease amongst Australian Indigenous people addressed various dimensions of
36 access.

38 **Design**

39 Data from a place-based, mixed-methods formative evaluation were analysed against
40 a framework that defines supply and demand-side dimensions to access. The
41 evaluation included 24 geographically bounded 'sentinel sites' that included a range
42 of primary care service organisations. It drew on administrative data on service
43 utilisation, focus group and interview data on community members' and service
44 providers' perceptions of chronic illness care between 2010-2013.

46 **Setting**

47 Urban, regional and remote areas of Australia that have relatively large Indigenous
48 populations.

50 **Participants**

51 Six-hundred-and-seventy community members participated in focus groups; 374
52 practitioners and representatives of regional primary care support organisations
53 participated in in-depth interviews.

55 **Results**

56 The program largely addressed supply-side dimensions of access with less focus on
57 impact on demand-side dimensions. Application of the access framework highlighted

the complex inter-relationships between dimensions of access. Key ongoing challenges are achieving population coverage through a national program, reaching high-need groups and ensuring provision of ongoing care.

Conclusions

Strategies to improve access to chronic illness care for this population need to be tailored to local circumstances and address the range of dimensions of access on both the demand and supply-side. These findings highlight the importance of flexibility in national program guidelines to support locally determined strategies.

Strengths and limitations of this study

- mixed-methods approach, with a large number and diverse range of interviewees, and long term repeated engagement with stakeholders, including feedback and member-checking of data and interpretation
- wide geographic scope and diversity of study sites, reflecting a broad range of sites with relatively early and intense investment, but not necessarily representative of service settings across Australia
- use of a widely cited framework to gain a broad understanding across various dimensions of access to care, with sensitivity to the possibility of the access framework being overly Western-centric

INTRODUCTION

Minority groups around the world experience profound barriers to accessing healthcare[1], including Aboriginal and Torres Strait Islander peoples in Australia (respectfully referred to hereafter as Indigenous Australians). Similar to indigenous populations of other colonised countries, chronic disease contributes to two-thirds of the health gap between Indigenous and other Australians,[1,2,3] with the requirements of good quality chronic illness care making access to such care especially difficult.[1,3-7]

Recently a number of Australian Government policy initiatives have been directed at addressing access and improving care for Indigenous Australians, including the unprecedented funding of \$A805.5 million for the multifaceted Indigenous Chronic Disease Package (ICDP) from 2009 – 2013.[8-10]However, there is a general lack of research into, and evaluations of, interventions that aim to improve access to healthcare on which such interventions can be based.[4,7,11]

Defining access to healthcare

Internationally, there is ongoing debate about how to define access to healthcare and the factors that influence access.[11-13] A recent review defined access as ‘the opportunity to have healthcare needs fulfilled.’[11]Various authors point to access being reliant on how well healthcare resources (supply-side) interact with a patient’s ability to seek and obtain care (demand-side).[4,11-15]

Levesque et al. recently proposed a framework wherein access is achieved through interaction between five corresponding dimensions identified on the supply (service

103 providers) and demand (service seeking) sides (Figure 1). It is the interactions
104 between patients and providers that enable access. This comprehensive
105 conceptualisation of access is consistent with recent literature emphasising the need to
106 take an ecological approach to Indigenous health[16] and a people-centred approach
107 to healthcare.[17]

108
109 **Delivery of primary healthcare to Indigenous Australians – the Australian**
110 **context**

111 Inequitable access to healthcare for Indigenous Australians occurs despite access to a
112 universal health insurance scheme, Medicare.[3,5,18]Indigenous peoples access
113 primary healthcare (PHC) through private general practice and services specifically
114 established to meet the needs of Indigenous Australians – both community-controlled
115 health services and government-managed Indigenous-specific services (here-in
116 referred to as Indigenous Health Services).[3,19]Access barriers to PHC by
117 Indigenous Australians include economic considerations, transport, cultural attitudes
118 or beliefs, language and communication barriers, the cultural appropriateness of
119 services and paucity of Indigenous staff.[5,7,8,19,20]

121 **Intervention to improve access for Indigenous Australians to primary healthcare**

122 The ICDP was a national intervention implemented through regional PHC support
123 organisations such as Medicare Locals, private general practices, and Indigenous
124 Health Services.[8-10] The ICDP included mainstream services that in many cases
125 have not been proactive in providing PHC to Indigenous Australians. This is an
126 important issue, as not all Indigenous Australians are able, or choose, to access
127 Indigenous-specific services.[20]A key aim of the ICDP was to improve access to

PHC, and funding was provided for a new workforce to enhance the capacity of PHC services to more effectively prevent and manage chronic disease (Table 1).

Table 1: Overview of the Indigenous Chronic Disease Package

Priority area: Tackling chronic disease risk factors	Priority area: Improving chronic disease management	Priority area: Workforce expansion and support
Measures/strategies to: - Reduce smoking by improving access to smoking cessation services through a new tobacco workforce and tobacco campaigns. - Encourage healthy lifestyles through a new healthy lifestyle workforce and improved access to healthy lifestyle programs - Increase health promotion activities	Measures/strategies to: - Provide access to free or subsidised medications - Increase health assessments and follow-up from health assessments - Improve coordination of care through patient registration at health services and dedicated positions - Delivery of training in self-management of chronic disease - Increase access to specialist and multidisciplinary team care	Measures/strategies to: - Increase workforce support, education and training - Expand the outreach and service capacity of Indigenous Health Services through employment of Outreach Workers - Improve access to mainstream primary care through employment of Indigenous Health Project Officers and Outreach Workers

Source: Department of Health, 2010.

This paper assists in addressing the gap in research and evaluation of interventions to improve access to healthcare through providing an analysis of the ICDP against a framework that defines various dimensions of access.[11]We describe how aspects of the ICDP have been operationalised in relation to improving access to chronic illness care, and identify key gaps in how determinants of access have been addressed.

METHODS

We draw on the mixed-methods Sentinel Sites Evaluation (SSE) of the ICDP – methods are described in detail elsewhere.[8]In summary, the SSE was a multi-site,

141 place-based, formative evaluation spanning 24 urban, regional and remote locations in
142 all Australian States and Territories. The evaluation was intended to inform ongoing
143 implementation of the ICDP. Sites were selected where there was early and relatively
144 intense ICDP investment. Data were collected, analysed and reported in 6-monthly
145 intervals over five evaluation cycles between 2010 and 2013.

147 **Administrative data**

148 Administrative billing data on uptake of specific government subsidised items of
149 healthcare (Pharmaceutical Benefits Scheme (PBS) Co-payment, Practice Incentives
150 Program (PIP) Indigenous Health Incentive (PIP-IHI) and health assessments billing
151 data) were provided by the Commonwealth Government Department of Health from
152 May 2009 to May 2012. The PBS Co-payment and PIP-IHI were introduced in May
153 2010. May 2009 to April 2010 was used as a ‘baseline’ period for health assessments,
154 which were introduced before the ICDP.

156 Data are presented as uptake per 100 Indigenous Australians aged 15 years or over.
157 Population data are based on Australian Bureau of Statistics projections from the 2006
158 Census according to the statistical boundaries used to define the sites.

160 **Qualitative data**

161 Qualitative data on access to healthcare were obtained from community focus groups
162 and semi-structured individual or group interviews with a range of key informants
163 from Indigenous Health Services and the private general practice sector - including
164 employees of Medicare Locals (Table 2). Key informants were purposively sampled
165 for their knowledge and experience with the ICDP, and included general practitioners,

166 nursing staff, practice managers, ICDP workforce such as Outreach Workers (OWs),
167 program managers, management staff, and pharmacists. Most ICDP workers were
168 members of local Indigenous communities and could speak from the perspective of
169 consumers of healthcare as well as from the perspective of health workers.

170

171 Community focus groups explored consumer and community perceptions of change in
172 accessibility and quality of services, and the extent to which any change may have
173 been due to the ICDP. Key stakeholder organisations such as the local Indigenous
174 Health Service assisted with convening these groups and identifying participants who
175 met recruitment criteria (member of the local Indigenous community, at risk of or
176 have a chronic conditions, experience using health services in the site). Group
177 interviews with providers and community focus groups were conducted by a trained
178 facilitator and an observer from the SSE team to support equitable input by
179 participants. Repeated 6-monthly cycles of interviews, focus groups and feedback of
180 data between November 2010 and December 2012 allowed review and refinement of
181 our understanding of issues in accessing chronic illness care services.

182 **Data analysis**

183 We analysed the SSE qualitative data using a conceptual framework of access to
184 healthcare (Figure 1).[11]Data analysis and extraction were iterative. During the initial
185 analysis of the SSE data the lead author (JB) coded the primary data in NVIVO 9[21], with
186 specific coding of access from a broad perspective. The data were then further coded in
187 relation to the specific dimensions of supply and demand-side determinants of access relevant
188 to the framework (Figure 1) [11] and by ICDP measures (Table 1).

189

190 In order to ensure the reliability of results, three authors (JB,AL,TM) individually
191 reviewed and then conferred on the categorisation. Any differences in categorisation

192 or perceptions of the relevance were discussed and resolved. In the final stage of
193 analysis the same three authors (JB,AL,TM) reviewed the full SSE Final Report[8] in
194 order to identify any additional information relating to access. This information was
195 reviewed and where relevant was also categorised within the access framework.
196 Emergent themes not encompassed in the Levesque framework were also identified
197 through this iterative process. For each dimension, we considered the ways in which
198 the ICDP influenced (or failed to influence) the fit between the features of the health
199 service, and features of communities and people with or at risk of chronic disease, to
200 improve access.

201
202 All authors checked results were consistent with their perceptions and understanding,
203 based on their experience as SSE team members. Only minor adjustments were
204 required to achieve good concordance between authors in the categorisation, analysis
205 and interpretation of the data.

206
207 This paper focuses on those aspects of the ICDP that were strongly orientated to
208 improving access to health services (rather than detailing all aspects with any
209 relevance to access). The identified dimensions to access were not independent of
210 each other; some findings were relevant to more than one access dimension. We have
211 therefore described the ICDP programs of work according to the predominant
212 dimension of access and the most important influence.

213

214 **Ethical approval**

215 Ethical approval for the SSE was granted through the Commonwealth Government
216 Department of Health Ethics Committee, project number 10/2012.

RESULTS

In total 374 key informants participated in individual or group interviews, many in multiple evaluation cycles that aimed to assess changes in perceptions and experiences over time (Table 2). Interviewees represented a broad cross-section of health service sectors, settings and roles, including clinicians, ICDP funded workforce, program managers and practice managers from the general practice and Indigenous health sector across urban, regional and remote locations. The 72 community focus groups involved 670 participants from urban, regional and remote settings (Table 2).

Table 2: Individual interview participant characteristics by interview type, rurality, sector and position; community focus group characteristics by rurality and gender

	Urban	Regional	Remote	Total
Interviews				
Participants*	138	157	79	374
• Individual Interview	123	108	65	296
• Individuals participating in a group interview	15	49	14	78
Sector+				
• Indigenous Health	67	64	55	186
• General Practice	56	74	20	150
Position				
• Clinician (GP)	32 (21)	37 (14)	19 (8)	88 (43)
• Managers	35	42	30	107
• Practice Managers	13	23	7	43
• ICDP funded workforce	43	35	19	97
• Pharmacist	15	20	4	39
Community Focus Groups				

Participants	261	259	150	670 (31% male; 69% female)
--------------	-----	-----	-----	----------------------------

* Interviewees may have been interviewed more than once throughout the evaluation period. This represents the number of individuals interviewed or contributed to a group session at least once during the evaluation period.

+ Sector numbers do not add up with the interview numbers as it excludes pharmacists not employed by IHS and workforce agency interviews

Note:

Indigenous Health sector includes: Indigenous Health Services & NACCHO State & Territory Affiliates

General Practice sector includes: General Practice, Medicare Locals, Divisions of General Practice, State-Based Organisations

General Practitioner (GP)

Manager category includes interviews with program managers, program officers and CEOs.

ICDP funded category includes interviews with ICDP funded positions such as Indigenous Health Project Officer, Care Coordinator and Outreach Worker.

Clinician category includes interviews with GPs, Nurses, Aboriginal Health Workers and allied health professionals.

Implementation of the ICDP was slower than anticipated, but health services, particularly those with a history of providing PHC to Indigenous people, welcomed the availability of resources to improve services.

Quantitative measures

Uptake of the PIP-IHI, PBS Co-payment and health assessments were a result of a combination of determinants of access working simultaneously. There was wide variation between urban, regional and remote sites but more variation at the site level.

Since both ‘quantity’ and ‘quality’ are important, caution should be used when considering quantitative measures of uptake alone as measures of success.

PIP Indigenous Health Initiative

The PIP-IHI was intended to bring about systematic changes in service delivery such as encouraging improvements in chronic illness care, enhancing capacity, access and health outcomes for patients through culturally appropriate and coordinated care (Table 1). The number of health services registered with the PIP-IHI per 1000 people is to some extent an indicator of accessibility, or at least provider choice for

Indigenous people. By November 2011, 40% of health services registered for the incentive had not yet registered patients; many general practices had few or no Indigenous patients.

Patients registered for the PIP-IHI were expected to have a diagnosed chronic disease, therefore it is notable that additional payments reflecting continuity of care and planned review (Tier 1 or Tier 2 payments) were not triggered for around 30% of patients (Figure 2). This indicates a substantial proportion of patients registered for the PIP-IHI were not attending health services regularly, or health services were not billing for care in a way that triggered payments. There was a higher percentage of PIP-IHI registered patients for whom no payments were made in Indigenous Health Services than in the general practice sector.

Indigenous specific health assessments

Uptake of health assessments (which are primarily preventive and diagnostic) increased almost four-fold over the evaluation period in the sentinel sites, and around two-fold in the rest of Australia (Figure 3). This may reflect increased autonomy and knowledge about healthcare options, and greater 'ability to seek care' and 'acceptability'.

PBS Co-payment

The PBS Co-payment initiative provided subsidised or free prescription medicines. It worked as a patient incentive to access other health services offered as part of the ICDP, and, as reported in the interviews and community focus groups, resulted in improved medication adherence. Uptake was higher than expected (27 per 100

286 eligible Indigenous patients across the evaluation sites in March–May 2012) and was
287 promoted by the ICDP workforce (Figure 4).

288
289 *ICDP programs of work according to the predominant dimension of access and the*
290 *most important influence.*

291 Findings are presented according to the corresponding dimensions of access proposed
292 by Lévesque et al.[11] Example quotes to illustrate the findings are presented in Table
293 3. Supplementary Files (Table 1) detail an assessment of all of the ICDP measures
294 against the framework.

295 *Table 3: Dimensions of access framework (as per the Levesque framework (Levesque*
296 *et al., 2013), with illustrative quotes.*

Dimensions of access (Levesque et al., 2013)	Example quotes
‘Approachability’ and ‘ability to perceive’	<p><i>The IHPO and OW have been very active in community engagement and letting community know about the initiatives available at health services. They have done this by attending lots of community events and Aboriginal organisations. (Group discussion, regional site)</i></p> <p><i>[OW name] also does one-on-one ‘yarn’ with patients when waiting at Doctor’s or in the car or in any other appointments about their health issues and gives them some options to think about their change. The direct assistance to patients attending appointment helps in maintaining regular attendance at the health services. (IHPO, urban site)</i></p>
‘Acceptability’ and ‘ability to seek’	<p><i>IHPO and OW have assisted with cultural awareness. Staff now ask all clients if they are Aboriginal and Torres Strait Islander and not questioning Aboriginality or ‘looking at the colour...sometimes they may be white’ (Practice nurse, urban site)</i></p> <p><i>‘The OW knows the Aboriginal people and ways of networking with the community, they can go into their house and get around them in certain ways ... their communications are good they know how to communicate with the Aboriginal community and with Aboriginal people. (Practice nurse, general practice, regional site)</i></p>
‘Availability and accommodation’ and ‘ability to reach’	<p><i>The community often have no fixed address, no phone or changing numbers or no credit card, so the outreach worker [will] go and find that person and get them. (General</i></p>

	<p>Practitioner, remote site)</p> <p><i>[The OW] will even bring the patients down for us. If there is a new person in the area that wants to see a doctor they will bring them down to the surgery. If I say I have got a patient I have been trying to get a hold of and can't get them [the OW] will even try for me too and with their contacts they know a lot of the family groups and they [are able to] help out. (Practice nurse, urban site)</i></p>
'Affordability' and 'ability to pay'	<p><i>There has been increased attendance at [name of health service] as patients coming back for medications as they know they can afford them. (General Practitioner, regional site)</i></p> <p><i>Too expensive to see a doctor [specialist], costs about \$90, that's a lot of money, a lot of doctors want the money up front and some do bulk bill, some don't. Some say they are booked out and don't take on any more patients around town. (Community focus group, regional site)</i></p>
'Appropriateness' and 'ability to engage'	<p><i>We have patients with a lot of chronic diseases who live a bit far away. [Name of OW] has been fantastic to coordinate all appointments and actually transporting patients to make sure the appointments are attended. (General Practitioner, regional site)</i></p> <p><i>We have linked community members with services and facilitated client access, patient registration for PIP Indigenous Health Incentive and provided client follow-up services. We have helped develop relationships between Aboriginal and Torres Strait Islander clients and staff within various mainstream general practices. This has resulted in staff and clients being more comfortable talking to each other which then results in clients attending the services more often and more regularly. (Outreach Worker, urban site)</i></p>

Notes: Outreach Worker (OW): Indigenous Health Project Officer (IHPO)

'Approachability' and 'ability to perceive'

The ICDP enhanced interactions between health service 'approachability' and the corresponding abilities of communities and individuals to 'perceive the need for care'.

A strong focus on improving the 'approachability' of health services ensured that services could be identified by health service providers and Indigenous Australians.

Services offered by Indigenous Health Services tended to be known in Indigenous communities prior to the ICDP; therefore it had a limited role in promoting community awareness about existing services. Several new and expanded services became available through the ICDP (the availability of subsidised or free medications, nicotine patches to support smoking cessation, and increased availability of health assessments). Interviewees consistently highlighted the role of the ICDP workforce in promoting these new services to communities; community perception of the benefit of a new service item also played a role in uptake. Indigenous Health Project Officers (IHPO) in particular appeared to bridge gaps between communities and services not specifically set up to meet Indigenous community needs. Employed in Medicare Locals, IHPO strategies included developing and distributing lists of participating general practices - including those providing services at no direct cost to patients. Tensions over whether IHPOs should focus on supporting health services to improve approachability, or on increasing community knowledge of the need and ways to access services were overcome by adapting approaches according to local contexts. IHPOs identified as Indigenous tended to work more at a community level. Community focus groups indicated that negative past experiences of accessing care negatively influenced people’s willingness to seek care. OWs acted as cultural brokers to support positive healthcare encounters and build trust.

In some sites, the ICDP workforce provided health services with information about other services to which they could confidently refer Indigenous patients.

Program design had conceived OW positions as entry-level positions, intending they would be recruited from local communities, thus improving the ‘fit’ between health

1
2
3 331 services and clients. However, resources for OW positions were utilised differently in
4
5 332 different contexts; some health providers recruited qualified and experienced health
6
7 333 professionals, concerned that the OW role involved supporting and transporting
8
9 334 people with complex medical problems. A further consideration with policy and
10
11 335 funding implications is that experienced practitioners give credibility to programs in
12
13 336 communities.

17 337 **‘Acceptability’ and ‘ability to seek’**

18
19
20 338 Interaction between ‘acceptability’ of the service and ‘ability of individuals to seek
21
22 339 care’ was enhanced through the ICDP. Cultural awareness of general practices and
23
24 340 related support organisations improved through organising and/or delivering cultural
25
26 341 awareness training. Health service staff valued one-on-one interactions with OWs,
27
28 342 which often focused on creating welcoming reception areas using Indigenous art and
29
30 343 targeted reading matter. Community focus groups reported positive changes in service
31
32 344 delivery as a result of general practice staff attending cultural awareness training,
33
34 345 changes not seen to be required in Indigenous Health Services (already established as
35
36 346 culturally appropriate services). Despite cultural awareness training, some community
37
38 347 focus groups reported perceptions and experiences of racism when accessing some
39
40 348 services, particularly in specialist reception rooms and pharmacies. These staff were
41
42 349 not targeted for cultural awareness training.

43
44
45
46 350

47
48 351 The cultural brokerage role of Indigenous people employed in OW positions made
49
50 352 services more ‘acceptable’ and assisted with access to care, providing a fit between
51
52 353 ‘acceptability’ and ‘ability to seek’.

53
54
55 354
56
57
58
59
60

355 Prior to the ICDP, many general practices and Indigenous Health Services did not
356 have systematic approaches to identify which of their patients were Indigenous. ICDP
357 funded staff worked with general practices to increase identification of Indigenous
358 patients.

360 In some instances, services employed people in male and female OW roles to ensure
361 gender sensitivity - an important cultural consideration. Some health services offered
362 gender specific health assessment days. In making services more culturally safe and
363 therefore more accessible, these initiatives contributed to the ‘ability of people to seek
364 care’.

365 **‘Availability and accommodation’ and ‘ability to reach’**

366 The ICDP enhanced interactions between ‘availability and accommodation’ – health
367 services being physically reachable - and the dimension ‘ability to reach’, by
368 improving patient access to transport, outreach services, and establishing additional
369 specialised clinics.

371 Outreach services (specialist and allied health) were established in under-serviced
372 areas (Table 1) – ‘availability and accommodation’ - resulting in improved access in
373 some sites. However, low numbers of referrals and low patient attendance for many
374 services raised questions about efficiency, and impacted on specialist retention.

375 Capacity of host organisations (predominantly Indigenous Health Services) to manage
376 clinics, coordinate visits, utilise recall and reminder systems, and arrange patient
377 transport influenced attendance at appointments. Improved communication was
378 needed to inform general practices about availability of outreach services.

379

Despite this investment, challenges to accessing specialist care persisted, especially for patients in small, dispersed communities, and for services contacting patients who did not have a fixed address or a mobile telephone. OWs supported contact in these circumstances.

Lack of transport to attend appointments was consistently identified as a barrier in accessing care – ‘the ability to reach’. OWs played key enabling roles, including arranging transport and driving patients to appointments where vehicles (not funded through the ICDP) were available.

There were limited efforts to improve social supports, as highlighted in the framework under ‘ability to reach’. Efforts comprised of OWs linking patients to support services such as housing, recognising the need to offer support in addressing broader determinants of health and other priorities in their clients’ lives. This was reported by OWs as time-consuming and not always recognised or supported as a core part of their role.

‘Affordability’ and ‘ability to pay’

Several ICDP components were intended to reduce the cost of healthcare. ICDP-workforce actively advocated for the removal of cost barriers; for example, advocating for care providers to charge fees equal to government subsidies so patients would not incur personal costs.

ICDP-funded specialist outreach programs were designed to be free of cost to patients. Funding was also available for medical aides and transport to a subset of

clients through Care Coordinators and a ‘Supplementary Services’ program (used in some sites to pay the fee differential between the government subsidy and charges by private providers). Despite these investments to address affordability, community focus groups raised concerns about the costs of consulting private specialists in particular. Private specialists sometimes ordered tests that patients were unable to pay for, and ICDP-funded specialists referred patients to private providers for further tests. Ability to pay was an enduring concern.

Activities to encourage healthy eating and exercise classes targeting Indigenous people were provided at no cost to participants. The reach of activities at a population level was variable, with those most in need not necessarily having access.

Despite the positive response to the removal of medication cost barriers through the PBS Co-payment measure, financial barriers continued to influence access to medication in particular circumstances. These included when eligible patients: were prescribed medication by doctors employed in hospitals, (therefore not ICDP registered); attended general practices not participating in the ICDP; and encountered pharmacy staff who were not aware of the strategy. Specialists were initially unable to prescribe under the scheme, however this changed during ICDP implementation.

‘Appropriateness’ and ‘ability to engage’

Improving coordination and continuity – ‘appropriateness’ – were ICDP aims. The PIP-IHI was designed to improve the fit between chronic illness care services and Indigenous population needs. The concept of a ‘medical home’ - a regular health service - for patients was encouraged but not fully realised, probably due to a focus on registering eligible people to enable immediate access to benefits, rather than on

determining the most appropriate or convenient practice to provide and receive ongoing care. There was also a lack of follow-up after a health assessment[22].

Effective chronic illness management involves coordination and continuity of care, and engagement by patients, therefore the possible lack of ongoing attendance was concerning.

As outlined in 'ability to pay', patient attendance and adherence to medication improved with the removal of cost barriers to medication. This 'ability to pay' enabled an 'ability to engage' – patients felt they could fill prescriptions and avoid the shame of being unable to afford prescribed medications.

Barriers to appropriate care continued despite utilisation of care and contact with providers. The lack of both follow-up after health assessments [22] and continued cycles of care through the PIP-IHI suggests inconsistent levels of care after initial contact with the health service.

In some instances, delivery of health assessments by services appeared to be driven by a business imperative (as delivery attracted a government payment), with little evidence that patients and communities perceived the need for these checks. This is relevant to the access dimension 'ability to perceive' - patients may want a health assessment if their understanding of health risk factors is increased.

Despite multi-faceted strategies to improve access to chronic illness care, data showed minimal evidence of systematic processes being applied to ensure that most vulnerable e.g. those with the least formal education and financially poorest were

455 benefiting from the ICDP. There was an opportunity to improve population coverage
456 generally and direct activities and resources to target population sub-groups most in
457 need. The ICDP workforce often had responsibility for covering large populations or
458 geographic areas, with limited capacity to reach those who might benefit most from
459 the program.

460 **DISCUSSION**

461 There is considerable evidence that the ICDP resulted in improved access to chronic
462 illness prevention and management. Qualitative evidence indicated an increase in
463 access related to ICDP activities such as: the removal of cost barriers to medicines;
464 removal of transport barriers to attend services; improved cultural safety in general
465 practices; support and assistance from ICDP workforce for Indigenous people to
466 access healthcare services; and more community programs/resources to support
467 healthy lifestyle choices and health-seeking behaviours. While quantitative evidence
468 also showed more Indigenous Australians were registering for the PIP-IHI, having
469 health assessments and obtaining subsidised prescription medications through a PBS
470 Co-payment, it is not clear to what extent these data reflect an actual increase in
471 access to high quality PHC services. They may reflect greater recording of access to
472 these services.

473
474 On the whole, the removal of cost barriers and the creation of welcoming, culturally
475 safe spaces appeared to make the greatest contribution to increased access to chronic
476 illness prevention and management services by Indigenous people. Use of the access
477 framework for analysis shows how the ICDP focussed predominantly on supply-side
478 aspects to improving access to healthcare. This is consistent with literature, which

1
2
3 479 suggests that internationally there is a focus on supply-side aspects to access rather
4
5 480 than demand-side.[4,11]The ICDP mostly targeted service providers and to a lesser
6
7 481 extent patients. Continued work is needed to address the demand-side dimensions to
8
9 482 access, together with ongoing strategies to address supply-side dimensions.
10
11 483 Influencing behaviour of Indigenous people in seeking healthcare will in part rely on
12
13 484 on-going social reforms to address social and other determinants of health and access
14
15 485 to care.[4,23]
16
17
18 486
19
20 487 The use of this access framework for analysis highlighted a gap in the ICDP
21
22 488 implementation - a lack of complementary programs in relevant sectors other than
23
24 489 health and insufficient attention to social determinants of health, through programs to
25
26 490 address people's 'ability to pay' by addressing social and economic disadvantage.
27
28 491 Work was being undertaken through other Commonwealth funded programs to
29
30 492 address issues in housing and education, for example, but there were no clear or
31
32 493 explicit linkages with the ICDP and, on the ground, insufficient understanding by
33
34 494 service providers that some ICDP workforce roles required a more holistic approach.
35
36 495
37
38 496 While the access framework¹¹ has been well cited,[13,23-26]we have been unable to
39
40 497 identify any previous work where it has been used to analyse how well programs have
41
42 498 addressed access – as we have done in this paper. We found the access framework[11]
43
44 499 useful for analysing access across various dimensions and identifying gaps in ICDP
45
46 500 investment or implementation. However, the original presentation of the access
47
48 501 framework[11] is vague on the extent to which dimensions are expected to be
49
50 502 discrete, and the extent to which demand and supply-side 'pairs' are expected to
51
52 503 directly correspond with each other. In applying this framework for our analysis, we
53
54
55
56
57
58
59
60

found that the dimensions of access are not discrete, and in some instances it was difficult to clearly align ICDP related activities with specific dimensions. In many cases activities related to more than one dimension. The strong links and inter-relationships between themes needed to be recognised when interpreting the data – in some instances themes related to other dimensions rather than the directly corresponding pair.

The framework is presented as a ‘pathway of utilisation’ from perception of need through to healthcare utilisation. It is not clear if the dimensions are expected to reflect points along a continuum. Our analysis of data suggests the different dimensions may be relevant to a number of points along the ‘pathway of utilisation’.

There was wide variation in uptake of the ICDP at the local site level. Local context influences the implementation of health interventions, and also affects the relative importance of each dimension and the interaction between different dimensions. For example, in some sites there was a perceived need to focus more on approachability of the health service than on affordability.

Barriers to access identified in our analysis are consistent with research on barriers to healthcare for Indigenous Australians.[5,18,21,27]Key emerging challenges include achieving general population coverage and reaching high-need groups. The diversity of contexts in which PHC services operate, the wide variation in uptake of the ICDP between sites, and the relevance of different contextual factors to barriers to access, mean that strategies will need to be tailored to local circumstances and address all aspects of access on both the demand and supply-sides. ICDP workforce role

1
2
3 529 definitions and guidelines may be better served by building more flexibility into the
4
5 530 role definition for local adaptation.
6
7 531
8
9 532 Strengths of the analysis include the mixed-methods approach, the number and
10
11 533 diversity of interviewees, the geographic scope and diversity of study sites, and long
12
13 534 term repeated engagement with stakeholders, including feedback and member-
14
15 535 checking of data and interpretation. More general limitations of the SSE have been
16
17 536 described elsewhere,[8] and include the selection of sites on the basis of early and
18
19 537 relatively intense ICDP investment and selection of interviewees based on their
20
21 538 knowledge and interest in Indigenous health. The data provide a broad perspective of
22
23 539 service settings across Australia, but this perspective may not necessarily be
24
25 540 representative of PHC settings in general. We were aware in the analysis process that
26
27 541 categorisation of themes into the analytical framework may be overly Western-
28
29 542 centric,[28] and endeavoured to limit this through an iterative review processes
30
31 543 involving Indigenous team members.
32
33 544 Improving access to PHC for marginalised and vulnerable populations is a complex
34
35 545 challenge, requiring multifaceted solutions. This paper teases out some of these
36
37 546 complexities, and the findings are relevant to policy-makers developing programs that
38
39 547 intend to improve access to healthcare for at risk populations. Our findings reinforce
40
41 548 the need to consider the range of determinants that may need to be addressed,
42
43 549 increased efforts to engage Indigenous community members and to ensure appropriate
44
45 550 care is continued beyond initial contact with the health service in order to improve
46
47 551 access to health services.
48
49 552
50
51
52
53
54
55
56
57
58
59
60

553 **CONCLUSIONS**

554 This major government-funded package of interventions has had some success in
555 overcoming barriers to accessing healthcare by supplying services that are more
556 approachable, acceptable and affordable for Indigenous Australians. There is now a
557 need to confront important challenges to address demand-side dimensions of access
558 that have not been adequately addressed, such as ‘ability to pay’. Changing the way
559 services are sought by Indigenous Australians will rely in part on on-going social
560 reforms to address social and other determinants of health and access to care.

561 **ACKNOWLEDGEMENTS**

562 The Sentinel Sites Evaluation was conceived and funded by the Commonwealth
563 Department of Health and Ageing. Successful conduct of the evaluation was made
564 possible through the active support and commitment of key stakeholder organisations,
565 community members, individuals who participated in the evaluation, and the
566 contributions made by the broader evaluation team and the Department staff. RB is
567 supported by an ARC Future Fellowship (#FT100100087).

569 **COMPETING INTERESTS**

570 The Sentinel Sites Evaluation was conducted by Menzies School of Health Research
571 under contract to the Commonwealth Department of Health and Ageing. The authors
572 declare that they have no other competing interests.

573

AUTHORS' CONTRIBUTIONS

JB played the lead role in the conceptualisation, data analysis, interpretation and preparation of the manuscript – with support from RB and GS. MK contributed to the conceptualisation of the paper, and conducted the analysis for the administrative data. All authors contributed to refinement of the paper, based on their close involvement with the evaluation, and all approved the final manuscript. RB led the overall Sentinel Sites Evaluation.

REFERENCES

1. Ring I, & Brown N. The health status of indigenous peoples and others: The gap is narrowing in the United States, Canada, and New Zealand, but a lot more is needed. *BMJ: British Medical Journal*, 2003; 327(7412),404.
2. Australian Institute of Health and Welfare. *Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians*. 2010; Cat.No.IHW48.Canberra:AIHW.
3. Australian Institute of Health and Welfare. *Australia's health 2014- in brief*. 2014; Cat.No.AUS181.Canberra:AIHW.
4. Comino E, Davies G, Krastev Y, et al. A systematic review of interventions to enhance access to best practice primary healthcare for chronic disease management, prevention and episodic care. *BMC health services research*, 2012;12(1), 415.
5. Australian Medical Association. *Aboriginal and Torres Strait Islander health report card 2010-11: best practice in primary healthcare for Aboriginal peoples and Torres Strait Islanders*.2011.

6. Australian Health Ministers Advisory Council. *Aboriginal and Torres Strait Islander Health Performance Framework 2012 Report*, 2012;AHMAC:Canberra.

7. Ware VA. *Improving the accessibility of health services in urban and regional settings for Indigenous people*. 2013; Resource sheet no. 27. Produced for the Closing the Gap Clearinghouse. Canberra: Australian Institute of Health and Welfare & Melbourne: Australian Institute of Family Studies.

8. Bailie R, Griffin J, Kelaher M, et al. *Sentinel Sites Evaluation: Final Report*. 2013; Menzies School of Health Research. Prepared for the Australian Government Department of Health and Ageing, Canberra.

9. Department of Health. *Closing the gap information for General Practice, Aboriginal community-controlled health services and Indigenous health services*, 2010;Commonwealth of Australia.

10. Department of Health [website]
 <<http://www.health.gov.au/internet/main/publishing.nsf/Content/irhd-chronic-disease>> (accessed 24 January 2015).

11. Levesque J , Harris M, & Russell G. Patient-centred access to healthcare: conceptualising access at the interface of health systems and populations. *Int J Equity Health*, 2013;12(1),18.

12. Oliver A, & Mossialos E. Equity of access to health care: outlining the foundations for action. *Journal of Epidemiology and Community Health*, (2004);58(8),655–658.

13. Edusei J, & Amoah P. Appreciating the Complexities in Accessing Health Care among Urban Poor: The Case of Street Children in Kumasi Metropolitan Area, Ghana. *Developing Country Studies*, 2014.4(8),69-88.

14. Frenk J. The concept and measurement of accessibility. In *Health Services Research: An Anthology*. Edited by White KL, Frenk J, Ordonez C, Paganini JM, Starfield B. Washington: Pan American Health Organization; 1992:858-864.
15. Mooney G. Equity in health care: confronting the confusion. *Effective Health Care*, 1983;1(4),179-185.
16. Arabena K. Future initiatives to improve the health and wellbeing of Aboriginal and Torres Strait Islander peoples. *Medical Journal of Australia*, 2013;199(1):22-22.
17. Mirzaei, M, Aspin C, Essue B, et al. A patient-centred approach to health service delivery: improving health outcomes for people with chronic illness. *BMC Health Services Research*, 2013;13(1),251.
18. Australian Institute of Health and Welfare. *Access to health services for Aboriginal and Torres Strait Islander people*. 2011;Cat.No.IHW46.Canberra: AIHW.
19. Baba JT, Brolan C E, & Hill PS. Aboriginal medical services cure more than illness: a qualitative study of how Indigenous services address the health impacts of discrimination in Brisbane communities. *International Journal for Equity in Health*, 2014;13(1),56.
20. Hayman N, White N, Spurling G. Improving Indigenous patients access to mainstream health services: the Inala experience. *Medical Journal of Australia*, 2009;Volume 190Number10.
21. QSR. NVivo qualitative data analysis software. QSR International Pty Ltd. Version 9, 2010.

22. Bailie J, Schierhout G, Kelaher M, et al. Follow-up of Indigenous-specific health assessments-a socioecological analysis. *The Medical Journal of Australia*, 2014, 200(11),653-657.

23. Ward B, Humphreys J, McGrail M, et al. Which dimensions of access are most important when rural residents decide to visit a general practitioner for non-emergency care? *Australian Health Review*,2014.

24. Duckett S, Breadon P & Ginnivan L. *Access all areas: new solutions for GP shortages in rural Australia*, 2013;Grattan Institute,Melbourne.

25. Breton M, Brousselle A, Boivin A. et al. Evaluation of the implementation of centralized waiting lists for patients without a family physician and their effects across the province of Quebec. *Implementation Science*,2014;9(1),117.

26. Westlake C, Sethares K, & Davidson P. How can health literacy influence outcomes in heart failure patients? Mechanisms and interventions. *Current heart failure reports*, 2013;10(3),232-243.

27. Lau P, Pyett P, Burchill M, et al. Factors influencing access to urban general practices and primary health care by Aboriginal Australians-a qualitative study. *AlterNative: An International Journal of Indigenous Peoples*, 2012; 8(1),66.

28. Johnston L, Doyle J, Morgan B, et al. A review of programs that targeted environmental determinants of Aboriginal and Torres Strait Islander health. *International Journal of Environmental Research and Public Health*, 2013,10(8),3518-3542.

671

For peer review only

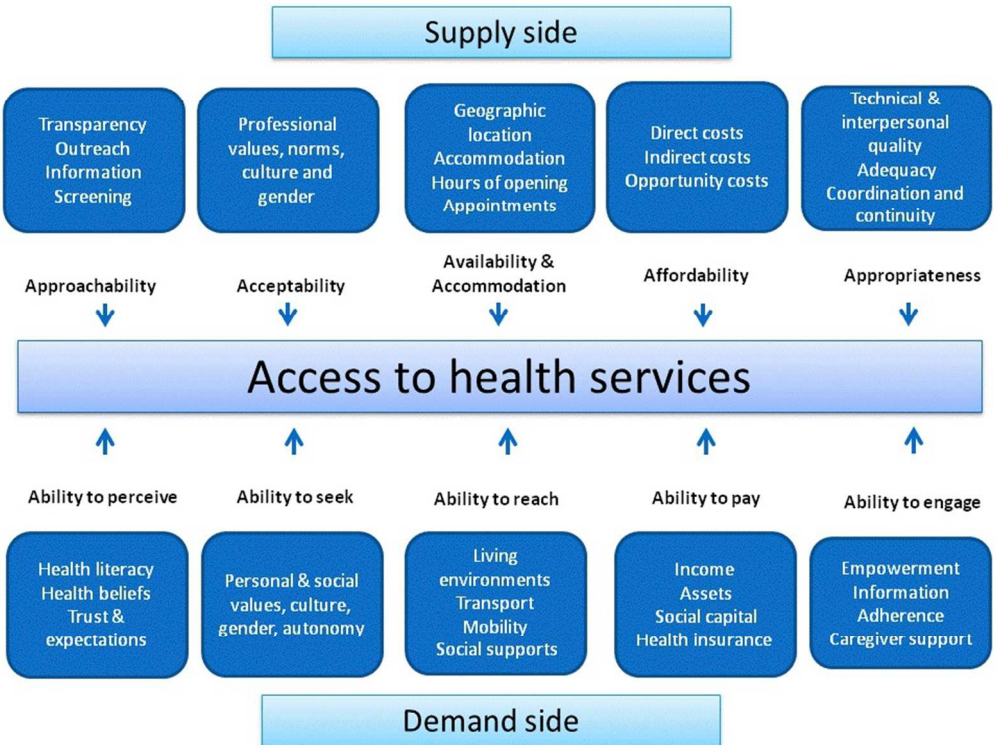


Figure 1: Adapted conceptual framework of access to health care
Source: Levesque et al.,2013.

254x190mm (96 x 96 DPI)

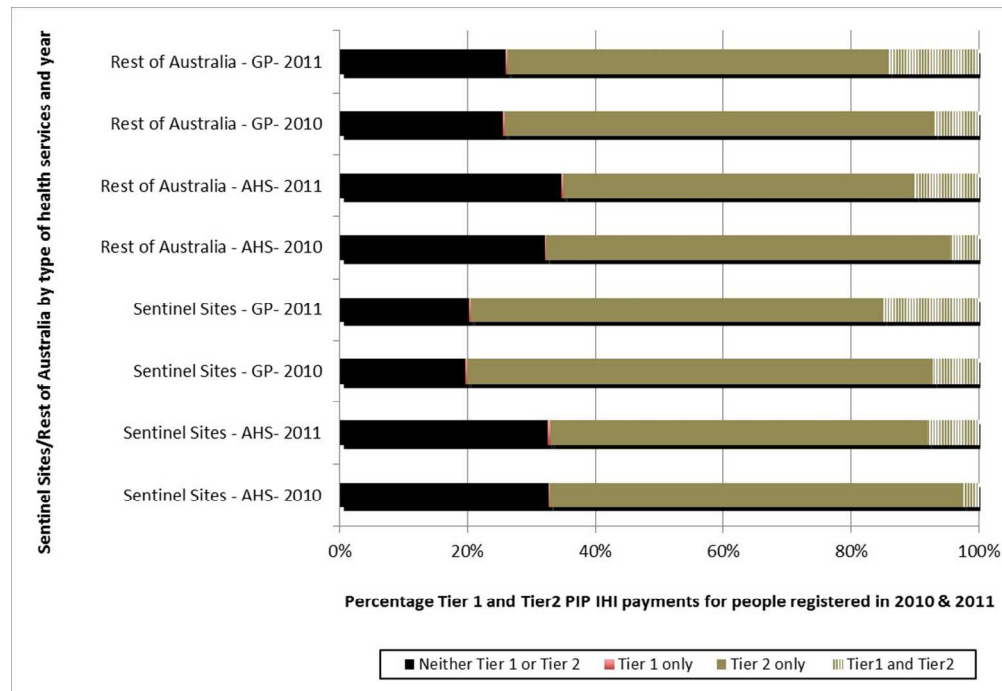


Figure 2: Percentage of Tier 1 and Tier 2 payments for people registered for the PIP Indigenous Health Incentive for Sentinel Sites and the rest of Australia, by sector and year 2010–2011
GP – General Practice; AHS – Aboriginal Health Service; PIP-IHI – PIP Indigenous Health Incentive

185x127mm (150 x 150 DPI)

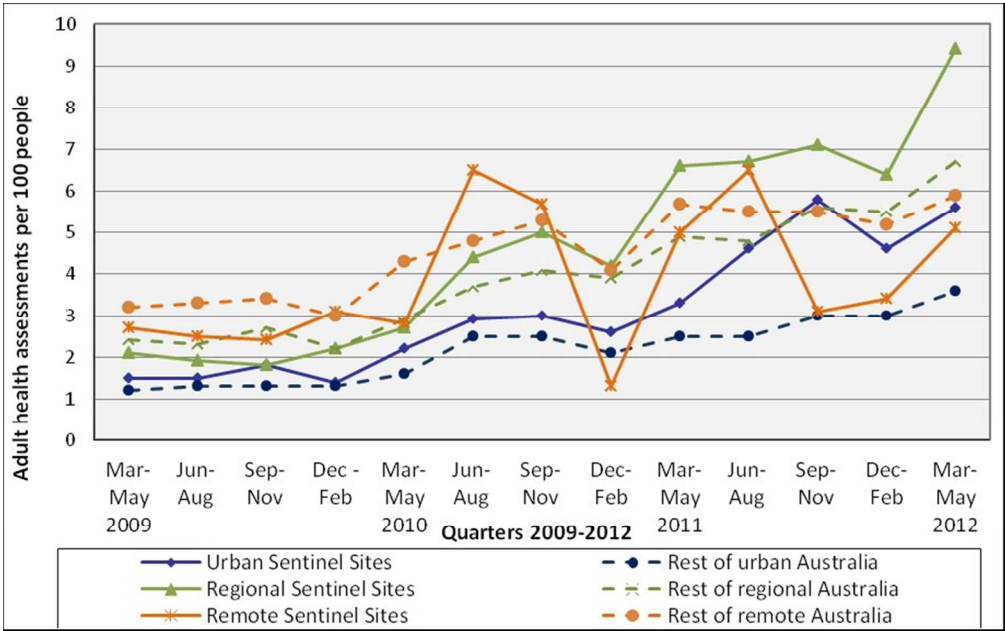


Figure 3: Adult health assessments (MBS items 704, 706, 710 to 1 May 2010 thereafter 715) claimed per 100 Indigenous people aged ≥ 15 years in Sentinel Sites and the rest of Australia, by quarter and rurality, March 2009 – May 2012
155x97mm (150 x 150 DPI)

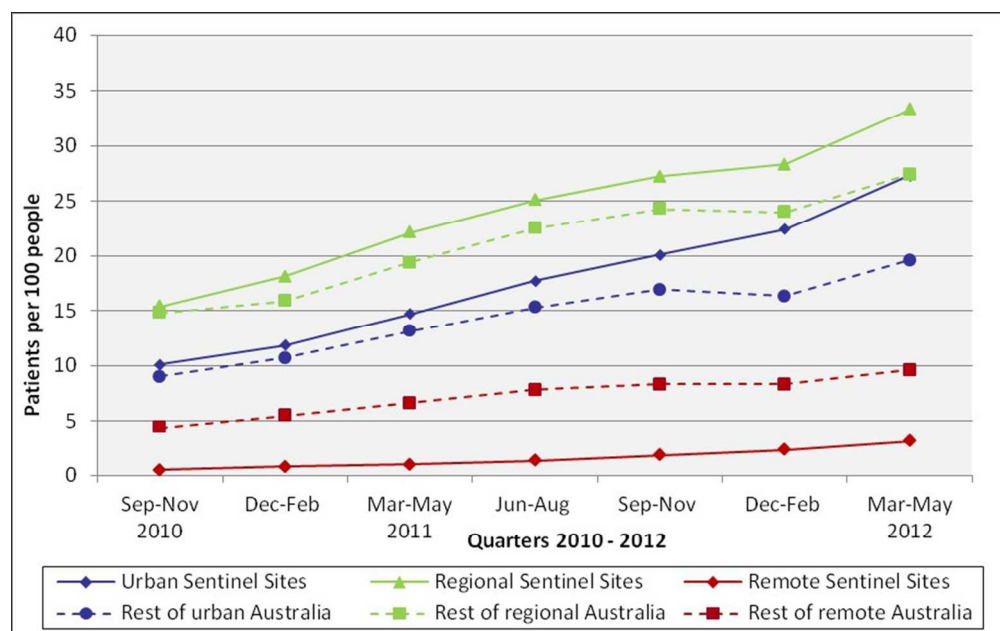


Figure 4: Number of Indigenous people accessing the PBS Co-payment measure per 100 Indigenous people aged ≥ 15 years for Sentinel Sites and the rest of Australia, by rurality, quarter, September 2010 – May 2012

155x97mm (150 x 150 DPI)

Supplementary File Table 1: Summary of the ICDP programs of work and access dimensions

Priority areas	ICDP interventions	Supply side				Demand side					
		Approachability	Acceptability	Availability & accommodation	Affordability	Appropriateness	Ability to perceive	Ability to seek	Ability to reach	Ability to pay	Ability to engage
Tackling chronic disease risk factors	National action to reduce smoking rates through a new workforce “tackling smoking teams” & programs	x	x		x		x				
	Reduce risk of chronic disease through a new workforce “healthy lifestyle teams” & programs	x			x		x				
	Increase health promotion activities e.g. health community days, local community campaigns	x									
Improve chronic disease management and care	Provide access to free or subsidised medications “PBS Co-payment measure”				x					x	x
	Improve patient coordination of care through patient registration at health centres “PIP Indigenous Health Incentive”		x			x					
	Dedicated workforce to improve coordination of care “Care Coordinators” and specific funding for medical aides & transport “Supplementary Services”	x			x	x	x	x			
	Delivery of self- management training to health professionals						x				x
	Increase access to specialist services in urban areas			x	x						
	Increase access to specialist services in regional and remote locations			x	x						
Workforce expansion and support	Workforce support, education and training – Outreach Workers training, establishment of GP Registrar training posts in Indigenous health services, nursing scholarships			x							
	Expand outreach and service capacity of Indigenous Health Services through dedicated “Outreach Workers & practice managers”	x			x		x	x	x		
	Improve access to general practice through a dedicated workforce established “Outreach Workers and Indigenous Health Project Officers”	x	x		x		x	x	x		