Emerging models of integrated primary health care centres

How they optimise access and integration and the influence of characteristics and organisational factors

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A C K N O W L E D G E M E N T S

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THE RESEARCH TEAM

The review was conducted by the UNSW Research Centre for Primary Health Care and Equity (CPHCE) at the University of New South Wales in association with Monash University, Melbourne

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1. Introduction

Growing rates of chronic illness within an ageing population will require increasingly accessible and well integrated primary health care (PHC). International evidence shows well-functioning PHC systems are associated with improved health outcomes,[1-3] better integration and coordination, and thus more effective management of chronic disease.[4]

Australia's health-care system is a "multi-faceted web of public and private providers, settings, participants and supporting mechanisms"[5]. Responsibility is split: the Commonwealth Government is the predominant funder of PHC through the Medical Benefits Schedule (MBS) and Pharmaceutical Benefits Schedule (PBS). States and Territories fund public hospitals and community health services through activity based and block funding arrangements.[6] At a regional level, Commonwealth funded Primary Health Networks (PHNs) have recently replaced Medicare Locals (MLs). Their core objectives are to improve the effectiveness and efficiency of primary care and coordination of care.[7] State/Territory public hospitals and community health services are delivered through regionally based Local Health Networks (LHNs). Most PHC services in Australia are delivered via a traditional general practice model involving GPs and practice nurses.

Improving access, reducing inequity and better managing chronic disease were key priority areas in the Australian National Primary Health Care Strategy.[8] Central challenges identified for PHC include fragmentation due to Commonwealth/State divides; complex funding, governance and reporting arrangements and poor coordination of service planning and delivery within the sector and with other health, social and welfare sectors.

Since 1999-2000, a number of Australian programs have aimed to improve chronic care and teamwork in primary care. Incentives for multidisciplinary care planning and delivery have included team care arrangements for participation of selected allied health professions, capped at five occasions of service per year.[9] Other incentives have aimed to improve quality of care and access to GPs; and to support employment of practice nurses, and expand their roles in monitoring and support for chronic disease.[10] However these operate through the existing fee-for-service (FFS) funding structure. The Productivity Commission noted that FFS increased the likelihood of cost shifting and fragmentation of patient care.[11] Unlike many other comparable countries such as UK and New Zealand, Australia has no patient registration system, which can support a population focus and offer incentives for improving quality of patient care.[12]

Commonwealth and State governments have invested in strengthening the coordination and integration of PHC services, albeit within existing structural and funding arrangements. New organisational models that have been funded to support establishment of a broader range of multidisciplinary care teams (GPs, practice nurses and allied health) include:

- GP Super Clinics (GPSC) (Commonwealth)[13]
- HealthOne NSW[14]
- GP Plus Centres (SA).[15]

All three initiatives provided funding for capital infrastructure to build/renovate existing premises to enable co-location of a range of primary health care professionals. The major approaches to support multidisciplinary teams have been co-location, hub and spoke and virtual models. The latter models are where health professionals are distributed across a number of sites. The multidisciplinary focus of GPSC has been between general practice (GPs and practice nurses) and primarily private sector allied health professionals, and to a lesser extent, medical specialists. In contrast, the focus of the State models has been between general practice and State funded community health services.

By 2014 there were 31 operational GPSCs, 10 HealthOne NSW sites and six GP Plus centres/services (three of which were combined with GPSC). An early evaluation of seven GPSCs (open less than 12 months) found positive patient experiences about access to and

quality of care; concerns about financial viability, with MBS structure and remuneration a significant barrier to MBS bulk billing (BB) (requiring GPs to change a patient co-payment); multidisciplinary care involved sequential, separate episodes of care by different disciplines; little shared planning or use of a shared patient record to support multidisciplinary care.[16]

The GPSC model has some features of an 'extended general practice' model which offers multidisciplinary primary health care, but where primary medical care (delivered by doctors and practice nurses) remains the core of the service, with GPs usually taking the leading role.[17] However, the GPSC model lacks patient registration, and offers no alternative to FFS for general practice, beyond the existing incentives.

Prior to establishing these new organisational models, two other long standing organisational models of primary health care were in place: Aboriginal Community Controlled Health Organisations of which there are approximately 140 throughout Australia and not-for-profit Community Health Services (CHS) in Victoria. These models target particular population groups, have an explicit health equity focus and often involve communities in their governance. They are examples of what has been described as a 'broader primary health care' model and have a stronger focus on prevention and the social determinants of health than extended general practice.[17] Collectively these organisational models of multidisciplinary primary health care centres involving at least three different health professionals are described as integrated primary health care centres (IPHCCs).[17]

The Australian Primary Health care Research Institute (APHCRI) previously commissioned a rapid review of Integrated Primary Care Centres and Polyclinics that described types of IPHCCs and the policy/funding context that supports co-location as a strategy to promote service integration. There are now sufficient GPSCs and other models, with local variations, to begin to identify and assess the characteristics of their development and operation that contribute to successfully achieving the objectives of integration.

This study examined the success of different types of IPHCCs at maximising access and integrating care, their strategies, and implications for policy support. The research questions were:

1. What approaches have IPHCCs used to optimise access and integration of care for people with chronic conditions?
2. How have contextual and organisational factors influenced these approaches?
3. Can differences in approaches to access and integration be explained by context and organisational factors?

1.1 ACCESS AND INTEGRATION

Access and coordination have been identified as two of the core process dimensions of primary care services, along with comprehensiveness and continuity.[18] A systematic review found evidence that access and coordination were associated with improved outcomes including patient satisfaction, population health, and the strength of primary care.[4]

Access of health care services has been described by Levesque and colleagues in terms of five dimensions: approachability, acceptability, availability and accommodation, affordability, and appropriateness – see Figure 1.[19]

Figure 1: Access dimensions (as per Levesque et al)[19]

Approachability	Transparency, outreach, information, screening
Acceptability	Professional values, norms, culture, gender
Availability and accommodation	Geographic location, accommodation, hours of opening, appointments mechanisms
Affordability	Direct, indirect and opportunity costs
Appropriateness	Technical and interpersonal quality, adequacy, coordination and continuity

Integration has been defined as "the organization and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money."[20] A framework for understanding integrated care based on the dimensions and key features of integration at different levels (from macro system level to micro clinical level) has described by Valentijn and colleagues as follows:[21, 22]

Figure 2: Integration dimensions (as per Valentijn et al) [22]

System integration	The alignment of rules and policies within a system
Organisational integration	The extent to which organisations coordinate services across different organisations
Professional integration	The extent to which professionals coordinate services across various disciplines
Clinical integration	The extent to which care services are coordinated
Functional integration	The extent to which back-office and support functions are coordinated
Normative integration	The extent to which mission, work values etc. are shared within a system

It can be seen from these descriptions that coordination is both an aspect of access and of integration. For the purposes of this study, coordination was treated as a feature of integration, appropriateness was defined as access within IPHCCs to services and system integration was not included.

2. Methods

2.1 RESEARCH DESIGN

A mixed methods comparative case study design was used (see Appendix 3).

2.2 SAMPLING AND RECRUITMENT

A purposive sampling approach was adopted. Inclusion criteria included:

- Commonwealth and State health policy models (GPSC, HealthOne NSW, GP Plus)
- Non-policy multidisciplinary general practice
- Location: urban and rural locations; three States (NSW, South Australia, Victoria)
- Co-location of allied health services

Using these criteria, nine IPHCCs centres were initially approached (3 GPSC, 3 HealthOne NSW, 3 GP Plus). Director/managers at each site were invited to participate. None of the three South Australian GP Plus sites accepted, in part due to major concurrent restructuring of the SA health system. Of six centres in NSW and Victoria invited to participated, all accepted. Two of the three HealthOne sites were subsequently excluded: one was a virtual rather than co-located model, and the other was located in a similar rural location.

The initial four participating sites in NSW and Victoria were three GPSCs, and a HealthOne centre. Two additional centres were recruited: one was a multidisciplinary general practice (i.e. not a new organisational model, but a general practice that has evolved into a multidisciplinary practice) and the other (a Victorian community health centre) was recruited as a second State health model. This long established co-location and broader PHC model was located in an inner urban suburb.

2.3 DATA COLLECTION METHODS

Data was collected via two to three day site visits, telephone and email using semi-structured interviews, document analysis, non-participant observation and a staff survey. The ULTRA Practice Environment Template,[23] a survey incorporating the 38 item Team Climate Inventory (TCI),[24] additional PHC questions (reviewing team processes, team social relationships), the access and integration dimensions described earlier,[19, 22] and context literature (including history and initial conditions and local fitness landscape),[25] informed the data collection. Executive, management, clinicians from various disciplines and administrative staff were invited to participate in the 20 to 40 minute semi-structured interviews that were audio-recorded and transcribed.

Table 1: Interviews completed

Centre	GPs (no.)	Nurses (no.)	AHP (no.)	Admin (no.)	Other[7] (no.)	Total (no.)	% of total staff[8]
GP1	3	5	2	2	6	18	80%
GPSC2	2	1	6	3	1	13	36%
GPSC4	2	6	2	4	0	14	25%
GPSC5	4	3	2	2	2	13	22%
HO6	2	5	5	4	2	18	58%
CHS7	4	4	4	2	0	14	35%
Total	*17*	*24*	*20*	*17*	*10*	*88*	

Table 2: Number of surveys completed

Centre	GPs (no.)	Nurses (no.)	AHP (no.)	Admin (no.)	Other (no.)	Total
1	2	3	2	6	0	13
2	1	1	4	3	1	10
4	3	6	3	6	0	18
5	5	4	2	3	0	14
6	2	3	3	6	0	14
7	3	4	6	4	0	16
Total	*16*	*21*	*20*	*28*	*1*	*85*

2.4 ANALYSIS

The analysis of the qualitative data was guided by qualitative research literature,[26, 27] and involved: a) organising the data, b) reducing the data to themes through a process of coding and condensing, and c) representing the data in figures and tables to enable within and cross case analysis (see Appendix 3 for more details on analysis). Transcripts were read and coded by four members of the research team (RK, RL, BW, JM). Weekly teleconferences were held to discuss and refine the coding framework. The field notes, documents and interview data from each case (centre) were managed in NVivo 10 and analysed thematically to build a case description that described the approach, impacts, enabler and barriers influencing integration and access (full case descriptions in Appendix 5).

Analysis was iterative, with insights and learnings from each centre informing the concurrent data collection. Data from the first two cases were coded according to an analytic framework developed for the study. This framework was based on access and integration dimensions as referenced earlier as well as features of complexity science applied to family practices. [25] (Appendix 3).

Figure 3: Analytic framework

[7] E.g. medical specialist, external provider/agency
[8] External providers/agencies interviews were not included in calculating the percentage of total IPHCC staff interviewed.

A two-day investigator data retreat was held to discuss and interpret case descriptions and identify additional data collection. 'Thick' description summaries of two cases were piloted and used to rate the level of access, integration, context and organisational factors across sites. Following within case and cross-case checking these were subsequently modified and completed for all cases. Within case and cross-case checking was then independently conducted for all cases by two researchers. Feedback was conducted at centres in August as a form of member checking[26] and to collect any additional data. Matrices were developed for each case to examine the interactions between context and organisational factors and access and integration. Cross-case comparisons were used to relate similarities and differences to site characteristics and other contextual factors.

The team functioning survey data were analysed using descriptive statistics. The results for all sub scores were adjusted to a scale of 1 to 5 so that results between each sub score could be compared. Mean and standard deviation (SD) scores were calculated for each sub score.

Ethics approval

Approval was granted by the Hunter New England Local Health District (HNEHREC: 14/08/20/4.07), Western NSW Local Health District (SSA/15/GWAHS/12), Monash Health (HREC: 14323L), UNSW (UNSWHREAP: 2014-7-24) and Monash University (MUHREC: CF14/2036-2014001035). Participating sites were offered $1,000 for their involvement in data collection.

Reference group

Input from a reference group including representatives from professional associations, practitioners, policy makers and consumers informed the data collection tools, interpretation and implications of the findings (See Appendix 4).

Feedback

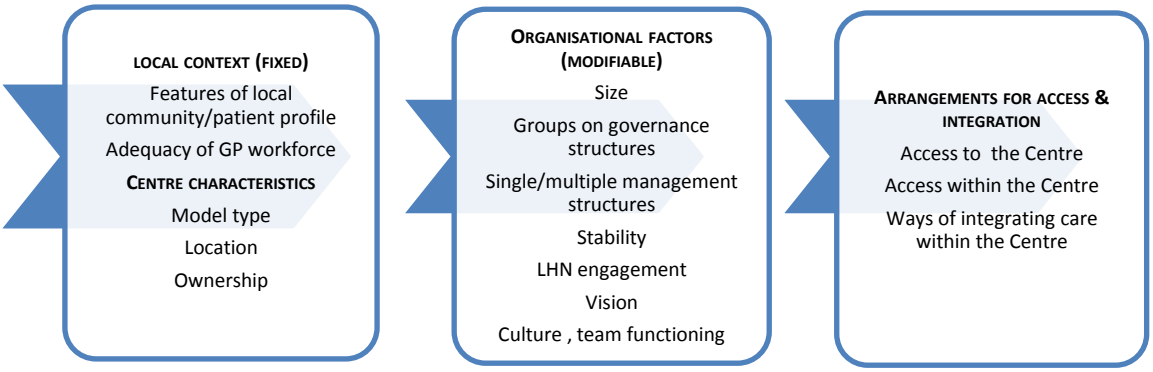
Initial feedback presentations to each centre were undertaken in August 2015 as a form of member checking. Final feedback on the findings to each centre will be held in November 2015.

3. Findings

3.1 INTRODUCTION TO THE FINDINGS

Findings are reported in accordance with the logic model in Figure 4. This logic model was derived from the analytic framework (Figure 3) with modifications based on the data. The assumption underlying this logic model is that arrangements for ensuring access and integration within the centres will be influenced by more general aspects of the centres organisation or functioning that are modifiable (e.g. size, representation on governance structures) and local context factors and core characteristics that are essentially fixed (e.g. the model under which they operate).

Figure 4: Logic model for access and integration in IPHCCs



3.2 DESCRIPTION OF THE CENTRES, THEIR CONTEXT, CHARACTERISTICS AND ORGANISATIONAL FACTORS

Figure 5: Overview of each centre

GP 1: Established in 2005 as a multidisciplinary general practice, evolving from a general practice set up in 1992 by principal GP as a for-profit (FP) enterprise. This small practice is located in an urban setting, with IRSAD[9] in 5th decile. The patient profile includes older regular patients and newer younger families who have moved into the area. Local GP availability has recently improved, from previously being an area of GP shortage.

GPSC 2: Established in 2011 by the DGP/ML as a new not-for-profit (NFP) enterprise under the GPSC program. This medium sized centre is located on the grounds of a university campus in outer urban area, with IRSAD in 8th decile. The patient profile includes a mix of older regular patients, younger families, university student population and people (including adolescents) with mental health conditions.

GPSC 4: Established in 2012 by a for-profit (FP) company under the GPSC program. It operates out of two sites: a new centre (site A) and older established general practice (site B) which was bought by the company. This large centre is located in an urban setting. The patient profile includes younger people who commute to the city for work, after-hours walk in patients from out of area or other practices (site A), and older regular patients and retirees (site B). IRSAD in 9th decile.

[9] IRSAD: Index of Relative Socio-Economic Advantage and Disadvantage (based on LGA). The lowest 10% of areas are given a decile of 1 and the highest 10% a decile of 10)

GPSC 5: Established in 2011 as a not-for-profit (NFP) enterprise, with three foundation partners (a community health centre, LHN and university), under the GPSC program. This large centre evolved from a previous long established general practice. The centre is located in a health education precinct in a rural area, with IRSAD in 6th decile. The patient profile includes regular patients, after-hours only patients, residents of local residential aged care facility (RACF), people with alcohol and other addiction issues, and patients who use only the visiting specialist services. Local GP availability has recently improved, from previously being an area of GP shortage.

HealthOne (HO) 6: Established in 2009 as a public/private partnership (PPP) involving a general practice (established in 2007) and the LHN under the NSW HealthOne program. This medium sized centre is located in a rural setting and the patient profile includes older local residents and those living in outlying villages, as well as patients with chronic and complex conditions especially targeted by the centre. IRSAD in 7th decile.

CHS 7: Established in 2014, with the merger and restructure of several community health centres under the long standing Victorian health community health program. This large centre has operated since 1975 as a not-for-profit (NFP) community governed centre located in an urban setting, with IRSAD in 9th decile. The patient profile includes predominantly people from socially disadvantaged backgrounds including refugees and recently arrived people seeking asylum.

These centres differ from traditional general practices in that they all include a broader range of health professionals in addition to GPs and practice nurses (PNs) (an inclusion criteria).

Most centres have been operating in their current configuration for one to five years, and have evolved from previous models (except GPSC 2). For example, GP 1 was a traditional family general practice that expanded to provide a broader range of services including co-located allied health professionals. GPSC 4, 5 and HeathOne 6 include established GP practices that have been reopened under new ownership and management structures in purpose-built facilities.

In four centres (GPSC 2, 4, 5 and HealthOne 6) some GPs had moved their patient lists into these new enterprises. For more information refer to Appendix 5: case descriptions.

3.2.1 Local context and centre characteristics

Community characteristics

Patients using the centres resided both within and outside the immediate local area or suburb where the centres were located (see also Figure 4). Centres were located in urban areas (including regional cities) or other rural areas.

The Index of Relative Socioeconomic and Advantage and Disadvantage scores for the LGAs where centres were located ranged between the 5th and 9th decile (the lowest 10% of areas are given a decile of 1 and the highest 10% a decile of 10). While CHS 7 was located in a high socioeconomic status area, they specifically targeted people experiencing disadvantage.

GP workforce availability

Some centres were located in areas that had experienced GP shortages while others were in areas of GP oversupply. GP 1 and GPSC 5 had experienced recent increases in the supply of GPs, including the recent introduction of several bulk-billing clinics nearby.

Model type, location and ownership

In Tables 3, 4 and 5, cell entries reflect the number of centres with the relevant characteristic or factor.

Table 3: Relationship between key characteristics

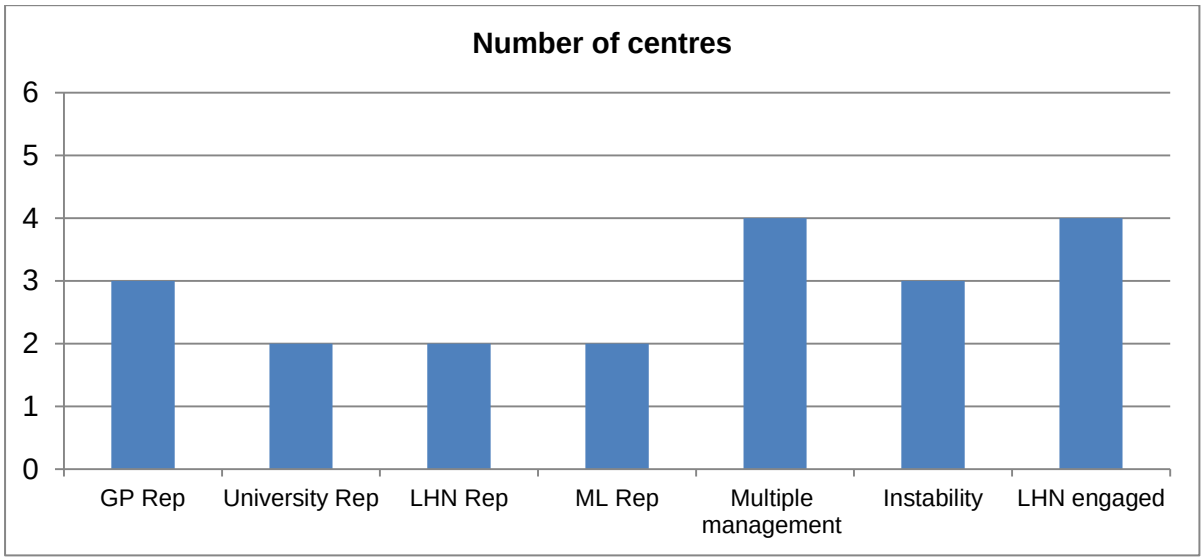
	Location (No. of centres)		Ownership (No. of centres)		
Model type	**Urban**	**Rural**	**For Profit**	**NFP**	**PPP**
GPSC	1	2	1	1	1
State health	1	1	0	1	1
GP	1	0	1	0	0

Overall the six centres were spread across rural (GPSC 4, 5, HealthOne 6) and urban (GP 1, GPSC 2, CHS 7) locations, and ownership models: GP 1 and GPSC 4 were for profit (FP) enterprises; GPSC 2 and CHS 7 were not-for-profit (NFP) and HealthOne 6 and GPSC 5 were public-private-partnerships (PPP).

3.2.2 Organisational factors

The number of centres with each of the selected organisational factors is summarised in Figure 6 and this is followed by a description of the findings for each factor.

Figure 6: Summary of selected organisational factors



Representation on governance structures

Membership on governance structures (e.g. boards/management committees) at the centres differed. Governance representation included Local Health Networks (LHNs) at two centres (GPSC 5, HealthOne 6); a University at GPSC 2 and 5, a Medicare Local (ML) at GPSC 2 and Health One 6, and GPs at GP 1, GPSC 2, HealthOne 6. At GPSC 2, all board members were GPs.

Management structures

GP 1 and GPSC 4 had the simplest single management structures, while the other centres had more complex management structures. GPSC 2 and 5 maintained separate management structures for general practice and co-located LHN/CHS. HealthOne 6 had separate general practice and community health structures, but they also came together in a shared leadership group (which included representation from the hospital and ML) for shared decision-making regarding the joint HealthOne venture. CHS 7 was the most siloed, with three separate management structures for general practice, allied health and client services.

Instability

Instability was apparent at three centres (GP 1, GPSC 5, CHS 7). The types of instability included workforce (leadership/senior management) changes, conflict between partners, or organisational service restructuring. Two of the centres had experienced, and were continuing to experience significant upheaval within their management structures at the time of data collection. This included multiple periods without a centre manager (GPSC 5), and merging with several other centres at an organisational level (CHS 7). Several long term GPs at GPSC 5 provided some consistency to the core staff in a situation of high staff turnover amongst other clinical, management and administration staff. Health issues experienced by the principal GP and lead PN at GP 1 resulted in them reducing their working hours.

Engagement with the Local Health Network

GPSC 2 and 5 and one State health model HealthOne 6 had LHN involvement via co-location of services. GPSC 5 and HealthOne 6 had LHN involvement in governance arrangements. GPSC 2, 5 and both State health models were influenced by LHN policies regarding appointment systems and patient records and the LHN associated with HealthOne 6 had provided funding to support integration approaches. Neither of the two for-profit (FP) centres (GP 1, GPSC 4) was engaged with the respective LHNs.

Vision

Staff, including senior management, directors, clinicians and administration staff, were asked to describe the centre's vision. Commonalities and differences within and between centres were identified.

The vision of these centres was varied and included a range of goals: improved access and integration; workforce education; and providing longitudinal quality care where patient/provider relationships were maintained and associated with improved health outcomes. Staff from all centres referred to their vision of "patient centred practice" and "improved health outcomes".

The team functioning survey considered vision in terms of the clarity, appropriateness and achievability of team objectives. With the exception of GPSC 2, vision was not a particularly strong sub score across the centres suggesting that a shared vision, communicated and implemented through clear team objectives, was possibly still developing at some centres.

In most centres there was a stronger explicit vision about access than integration. This was manifested in having a range of co-located services, and enhancing access for specific population groups. While staff from most centres referred to a "one-stop shop" and "everything under one roof" a more detailed focus of an integration vision was not forthcoming.

The vision of each GPSC as articulated by management was loosely based on the objectives of the GPSC program; but this was not necessarily shared amongst all staff. The comparative newness of these centres, their size, the number of co-located services and the part-time nature of their work may have worked against a centre wide shared vision. At GP 1 (a relatively small centre), the vision was primarily a "bottom-up" approach of the principal GP (to be a medium sized multidisciplinary family practice) and was well understood by most staff. A shared understanding of vision was also apparent amongst staff at HealthOne 6, where the explicit vision was to provide integrated care for people with chronic and complex conditions.

The primary vision at CHS 7 was closely linked to the traditional CHS philosophy of providing integrated services for marginalised groups in the community, which was well understood by core staff who chose to work at this site because they shared these values. However, with growth and mergers of CHS sites and a new more corporate leadership, this selection bias may become less significant over time.

An underlying theme across most centres (especially the three GPSC and GP 1) was maintaining financially viability and GP income. Hence, emphasis on some aspects of access and integration within the overall vision was often associated with local factors that promote financial viability. These included extending after-hours services in response to the local commuting population (GPSC 4), and improving organisational (e.g. billing) systems (GP 1 and GPSC 2).

The improvement of access was commonly associated with growth in the number and types of services provided, which ranged from hosting as many services as possible in one building to setting specific goals for different providers (e.g. *a practice of 4-5 doctors would probably be ideal, such that we can provide a lot of the common services under one roof*). This latter goal was linked to ensuring the model was financially sustainable within a traditional "contemporary" family practice model.

Some centres placed greater emphasis on different aspects of integration and access. For example, at GPSC 2 there was an emphasis on approachability and acceptability via the provision of mental health services within the centre, while at GPSC 4, the emphasis was on overall increased availability and accommodation. At GPSC 5, staff reported that they had increased accommodation and availability through co-location of a range of services, but now needed to focus on integrating services.

Team functioning

The following information presents the findings from the survey of team functioning. This survey collected information on team objectives and vision, team participation, task orientation of team members, support for new ideas amongst the team members, team roles, reviewing team processes and social relationships within the team. Figure 7 provides information about the percentage of staff at each centre who completed the survey. With the exception of GP 1, the percentage of staff who completed the survey at each centre was low (range 25-45%).

Figure 7: Percentage of centre staff who completed the team functioning survey

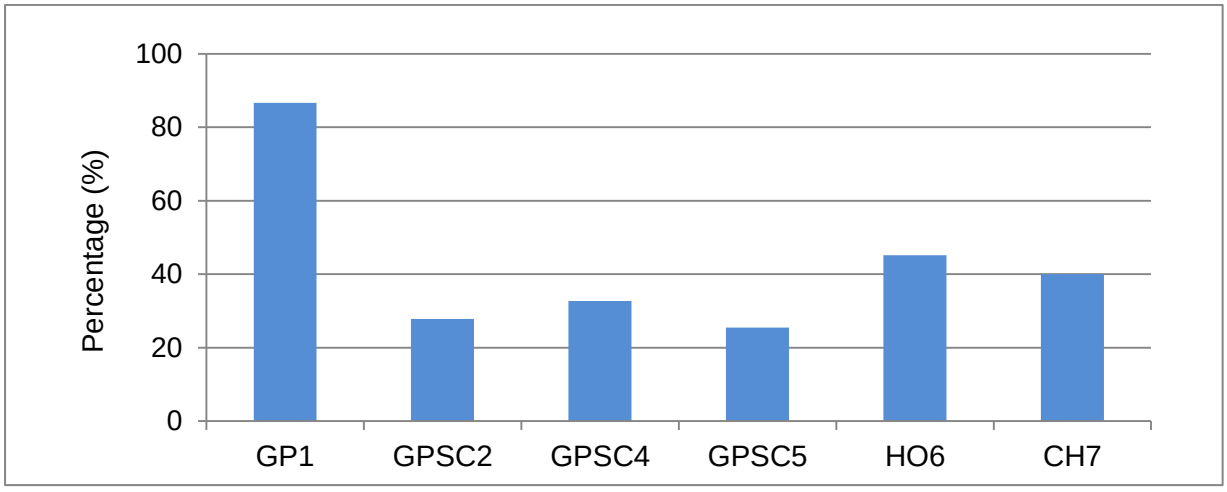


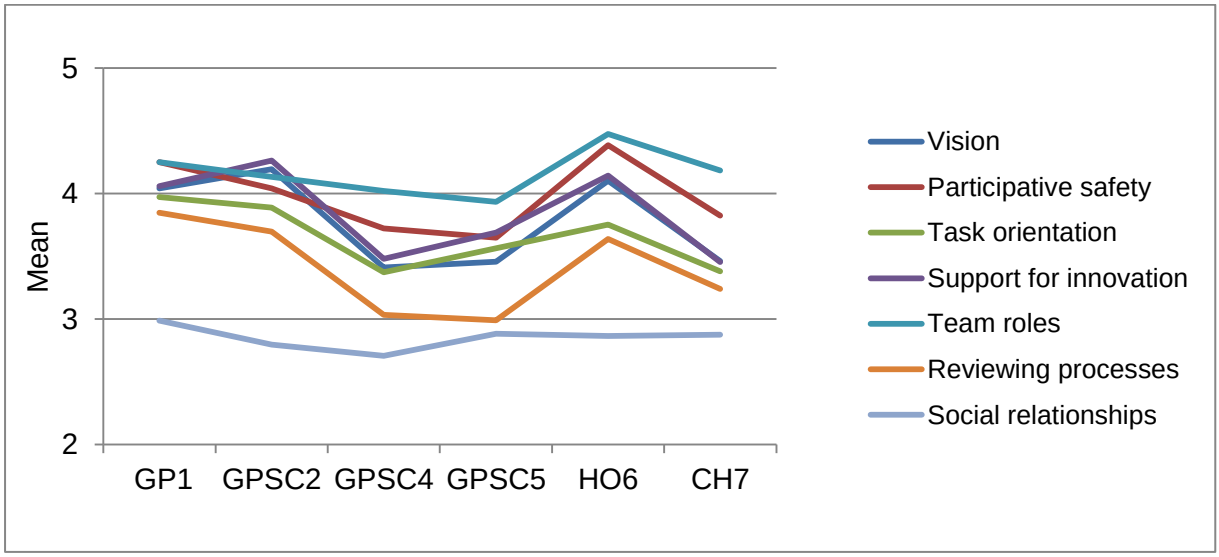
Figure 8 provides a summary description of each of the survey sub scores.

Figure 8: Explanation of sub scores in the team functioning survey

Vision and team objectives (TCI)
Considers team objectives and how they are perceived by the team in terms of their clarity, appropriateness, and whether they are realistic, achievable and worthwhile.
Participative safety (TCI)
Considers participation in the team including the sharing of information amongst team members, the level and type of interaction (formal and informal) and if people feel accepted.
Task orientation (TCI)
Considers how the team monitors and appraises the work it does. It includes whether team members provide practical help, monitor each other and critically appraise potential weaknesses to achieve high standards of performance.
Support for new ideas (TCI)
Considers attitudes toward change within in the team including the degree of openness and responses to change, and support for the development and implementation of new ideas.
Team roles (PHC)
Considers team members' attitudes to each other's roles including how well they make appropriate use of each other's skills and understand the roles of different groups in the team.
Reviewing processes in your team (PHC)
Considers how processes within the team such as team objectives, decision-making, communication and team work are reviewed, discussed and modified.
Social relationships in the team (PHC)
Considers aspects of social relationships within the team including team work and support during difficult times and managing conflict.

Figure 9 presents the results of the team functioning survey including the means for each sub score. A more detailed results table, including the means and standard deviations for each sub score, is provided in Appendix 6.

Figure 9: Survey mean sub scores



Team roles and participative safety were the highest sub scores for most centres. This suggests there was understanding and utilisation of team member's skills and sharing of information amongst the centre staff.

Centres scored less well for reviewing team processes and social relationships. Social relationships also showed the least variability across the centres. Task orientation was also lower suggesting that critical appraisal of performance and review of team objectives are not yet key priorities. This may be an indication of the developmental stage of these centres with most having been established in their current configurations within the last five years.

GP 1 received the highest scores for task orientation, reviewing team processes and social relationships. The remaining top scores were shared between GPSC 2 (vision and team objectives, and support for innovation) and HealthOne 6 (participative safety and team roles). These small (GP 1) and medium sized (GPSC 2, HealthOne 6) centres also received the three highest scores for five of the seven sub scores. These results suggest there may be an optimum size for IPHCCs that enhances team work and relationships. However, there were contextual factors at the other centres, such as being recently established (GPSC 4) and instability at a management level (GPSC 5 and CH 7), that could provide an explanation for these results.

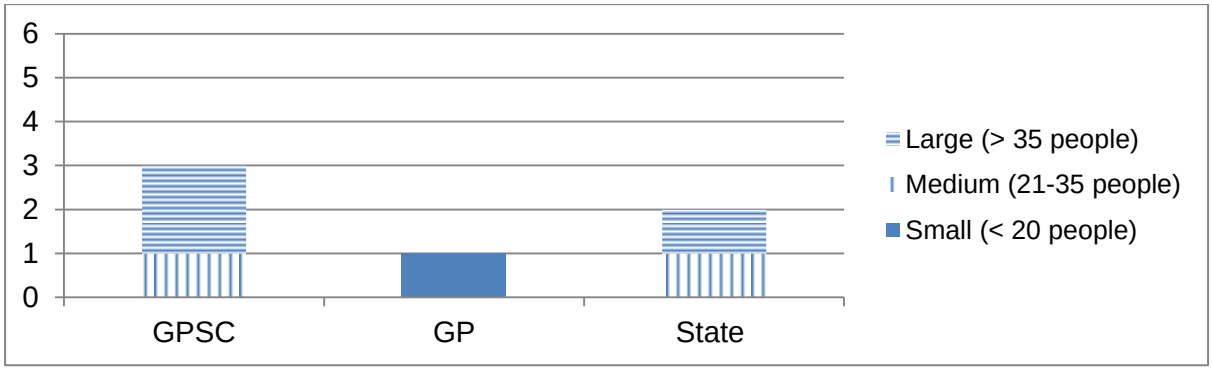
Centres with stable workforce and management structures (GPSC 2, GPSC 4, HealthOne 6) scored slightly higher for vision and team objectives, and participative safety, than centres that were experiencing instability.

The standard deviation of the results of the small (GP1) and medium (GPSC2, HealthOne 6) centres were lower than the larger centres suggesting more agreement between respondents. GPSC 4 had higher standard deviations across the scores for each dimension in comparison to other centres indicating a broader range of responses and suggesting less agreement amongst respondents.

There are a number of limitations that should be considered when interpreting these survey results. Firstly, the response rate was poor (25-45%). Secondly, respondents interpreted 'team' differently. Some respondents defined their team as all staff working at the centre, and others identified particular groups and numbers of staff as being part of their team e.g. the reception or nursing team. These perceptions threaten the validity of the findings making it difficult to interpret the results as an overall measure of team functioning. However, these differing perceptions about team also suggest that despite being co-located, IPHCC staff are often working in a number of sub teams that may or may not work closely together.

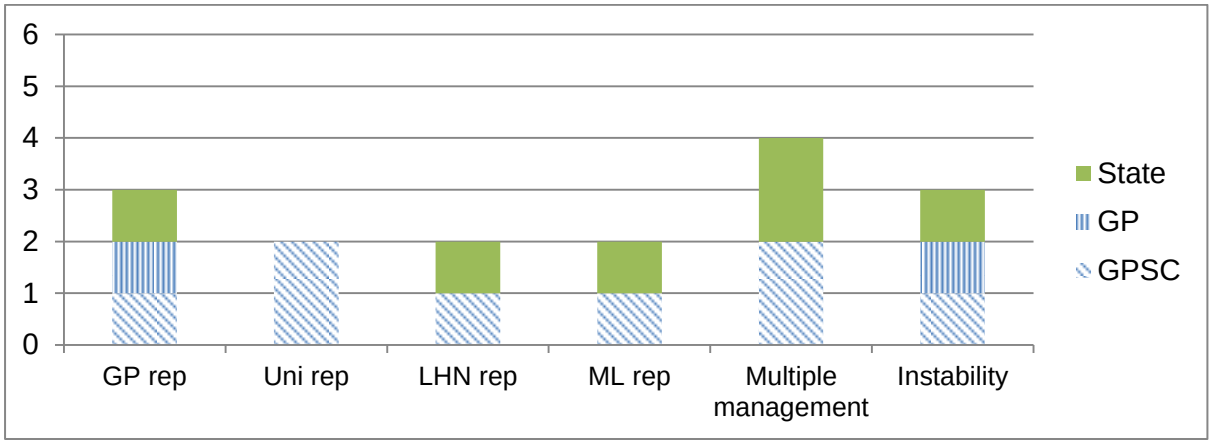
3.2.4 Relationship between context and selected organisational factors

Figure 10: Model type by size



Of the three GPSC, two were large (4, 5) and one was medium sized (2), the GP practice was small and there was a large (CHS 7) and medium sized (HealthOne 6) state health models.

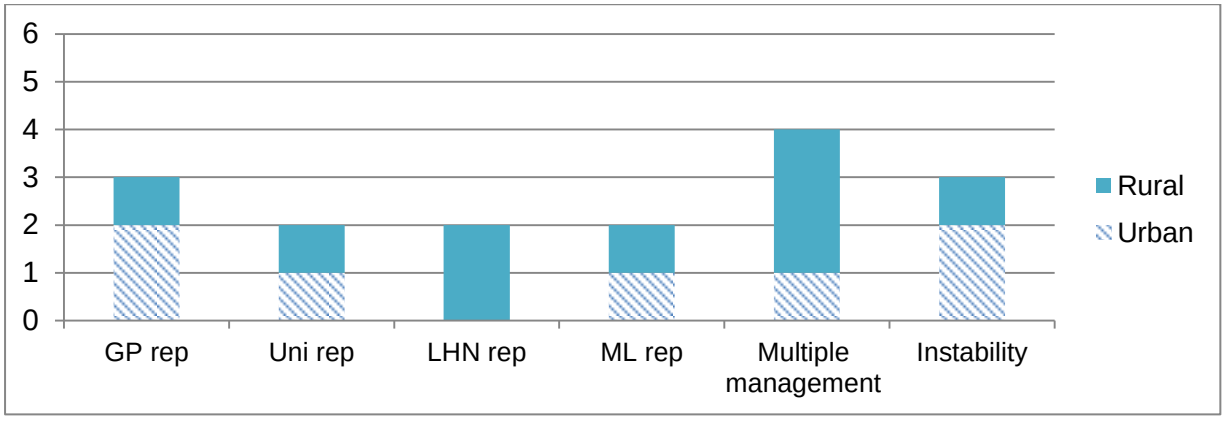
Figure 11: Model type by selected organisational factors



With one exception (GPSC 2 and 5 which had universities represented on governance arrangements) there were no clear patterns by model type. In only one GPSC (2) were GPs involved (all Board members were GPs), and in one (GPSC 5) the LHN was involved. Medicare Locals were involved in governance in two centres (GPSC 2, HealthOne 6).

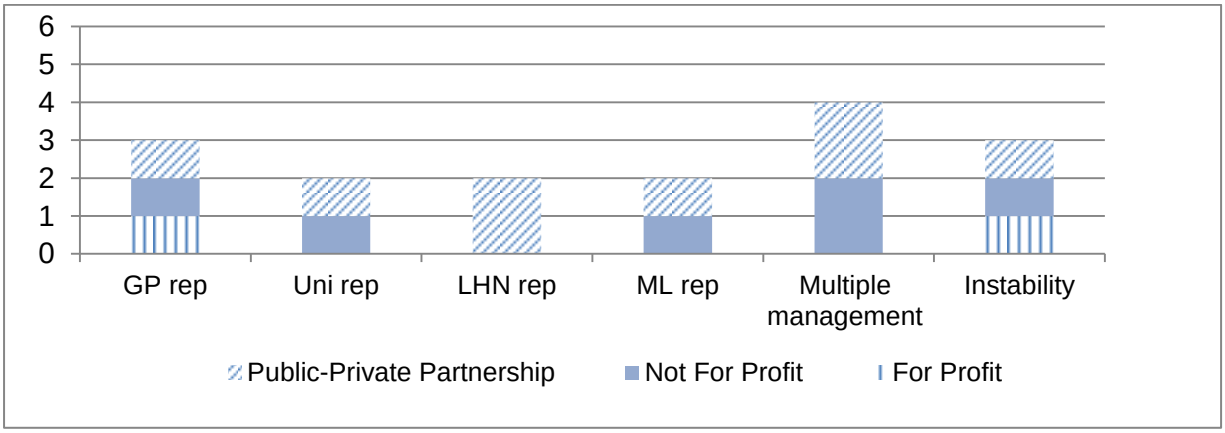
Most GPSC (2, 5) and both State health models had multiple management structures. There were instabilities in each of the models (GP 1, GPSC 5, CHS 7).

Figure 12: Location by selected organisational factors



The patterns suggest location influences some organisational factors. More urban centres had GPs represented on governance arrangements (GP 1, GPSC 2) and more organisational instability (GP 1, CHS 7) and none had LHNs involved in governance arrangements. While rural centres were more likely to have more complex management structures (GPSC 2 and 5, HealthOne 6) and LHNs engaged in governance (GPSC 5, HealthOne 6).

Figure 13: Ownership by selected organisational factors



The patterns suggest that for-profit centres (GP 1, GPSC 4) have less representation from external entities on their governance structures and less complex management structures than other ownership types. LHN involvement in governance structures was confined to public-private partnership owned centres (GPSC 5, HealthOne 6). Of the two not-for-profit owned centres, only GPSC 2 had representation from any of the nominated groups.

Summary

GPs were represented on each, but not all of the three models and ownership types and in both urban and rural locations. Universities were only represented on some of the GPSCs, while LHN representation on governance was confined to PPP.

The variation in single or multiple management structures was associated with model type and ownership. GPSC 2, 5 maintain separate management structures for general practice and co-located LHN/CHS and hold separate team meetings.

While HealthOne 6 has separate general practice and community health structures, they also come together in a shared leadership group (which includes representation from the hospital and ML) for shared decision-making regarding the joint HealthOne venture. CHS 7 was the most siloed, with three separate management structures and team meetings for general practice, allied health and client services.

3.3 PATTERNS OF ACCESS AND INTEGRATION ACROSS CENTRES

3.3.1 Introduction

Qualitative data were gathered on measures of access and integration. In order to assess this data and present it in an intelligible form, we developed a semi-quantitative scoring system for key indicators of ‘access to services’, ‘access within services’ and ‘integration’, with sub scores for each (Appendix 7).

In Tables 7, 8 and 9 below, cell entries indicate scoring of the centres according to these qualitative criteria and were based on discussion and consensus of the research team who collected the data. Scores of 1 to 3 for each key indicator generally reflect a gradient of provision: none or little (1); some or adequate (2); extensive or comprehensive (3) with the criteria being adapted to each item.

Table 7 describes access arrangements ‘to’ and Table 8 access ‘within’ the six centres using the five dimensions of access as per Figure 1: Availability and accommodation; Approachability; Affordability; Acceptability, and Appropriateness.[28]

Table 9 describes integration arrangements within the centres, using four dimensions of integration: Organisational, Professional, Clinical and Functional as per Figure 2.[29]

3.3.2 Access arrangements

Table 7: Summary of availability and accommodation arrangements

Access 'to' services	**Description of arrangements**[10]	**Levels**						
		GP (1)	**GPSC (2)**	**GPSC (4)**	**GPSC (5)**	**HO (6)**	**CHS (7)**	**Median**
Availability & accommodation	Transport to and physical access to building	2	3	3	3	2	2	***2.5***
	GP after-hours (open after 6pm weekdays, weekend opening)	1	2	3	3	3	1	***2.5***
	Same day/walk-in GP appointments	3	3	2	3	3	2	***3***
	Single point of patient entry (telephone, reception)	3	2	3	2	3	3	***3***
Median		***2.5***	***2.5***	***3***	***3***	***3***	***2***	***2.75***

All centres were accessible by public transport, except the most rural centre (HealthOne 6), which was, however, within 200 metres of the town centre. Unsurprisingly, private parking was limited at most metropolitan centres. All centres provided disabled access, with the best examples at recently constructed centres.

Extended weekday and weekend hours of service were best at GPSC 4, 5, and at HealthOne 6 where GPs provided after-hours services from the adjoining hospital. An after-hours GP trial was discontinued at CHS 7 due to local availability of after-hours and satisfaction with the deputising service.

Same-day/walk-in GP services were available at all centres, but limited at GPSC 4 and CHS 7, due to high patient loads and advance GP bookings with regular patients.

Most centres had a single point of entry for most patients. Two centres with co-located LHN services (GPSC 2, 5) maintained separate appointment systems; and one co-located service at GPSC 5 had a separate reception. All three GPSC provided online GP appointments, and some other centres were planning to do so in the near future.

Overall two of the GPSC (4, 5) and one state health model (HealthOne 6) scored higher than other centres on this access dimension, whilst the other state health model, CHS 7, scored lowest, primarily due to lack of after-hours availability.

[10] See Appendix 7 for scoring of indicators.

Table 8: Summary of approachability arrangements

Access 'to' services	Description of arrangements	Levels						
		GP (1)	GPSC (2)	GPSC (4)	GPSC (5)	HO (6)	CHS (7)	Median
Approachability	Information about the services	3	2	3	2	3	3	***3***
	Outreach (e.g. home/RACF visits) /programs	1	2	2	2	3	2	***2***
Median		***2***	***2***	***2.5***	***2***	***3***	***2.5***	***2.25***

All centres provided service information. All centres had detailed webpages, except HealthOne 6. At two centres, poor visibility of street signage hindered new clients finding the service.

All centres provided some home/RACF visits, with GPSC 4, 5, and CHS 7 providing these on a regular basis. GPSC 5 policy was to take on patients whose existing GP will no longer see them when entering RACF or due to addiction issues. Only HealthOne 6 provided substantial regular outreach services and programs to smaller surrounding communities and schools.

Overall, HealthOne 6 scored highest on this access dimension.

Table 9: Summary of affordability arrangements

Access 'to' services	Description of arrangements	Levels						
		GP (1)	GPSC (2)	GPSC (4)	GPSC (5)	HO (6)	CHS (7)	Median
Affordability	Low patient co-payments for GPs	3	3	2	2	3	3	***3***
	Low patient co-payments for other co-located services	1	2	2	2	2	2	***2***
Median		***2***	***2.5***	***2***	***2***	***2.5***	***2.5***	***2.25***

GP 1, GPSC 2, HealthOne 6 and CHS 7 all bulk bill most GP patients, while GPSC 4, 5 only bulk bill patients with concession cards. In GP 1 the introduction of bulk billing was in part a response to local competition and in part to patient feedback.

Most private allied health and medical specialist services entailed significant patient out-of-pocket expenses. LHN services (nurses, allied health, medical specialists) either entailed no patient expenses or low charges for HACC services in CHS 7.

Table 10: Summary of acceptability arrangements

Access 'to' services	Description of arrangements	Levels						
		GP (1)	GPSC (2)	GPSC (4)	GPSC (5)	HO (6)	CHS (7)	Median
Acceptability	Centre identifies and responds to improving acceptability of its services	1	2	1	1	2	3	***1.5***

CHS 7 provided a comprehensive range of services for vulnerable groups such as refugees and people with mental health issues. Two centres targeted population sub groups, including people with mental health issues (GPSC 2) and people with complex chronic conditions at high risk of hospitalisation (HealthOne 6).

Table 11: Summary of access 'within' arrangements (appropriateness)

Access 'within' arrangements	**Description of arrangements**	**Levels**						
		GP (1)	**GPSC (2)**	**GPSC (4)**	**GPSC (5)**	**HO (6)**	**CHS (7)**	**Median**
Appropriateness	Co-location of allied health professionals	1	3	3	2	3	3	***3***
	Co-location of medical specialists	1	3	2	2	1	1	***1.5***
	Regular MD chronic disease clinics, including GPs	1	1	1	2	1	2	***1***
Median score for access within services		***1***	***3***	***2***	***2***	***1***	***2***	***2***

All centres had established multidisciplinary PHC services that included GPs, PNs and a range of allied health professionals. There was a broad range of allied health at all centres except at the smallest centre, GP 1. All GPSC had a broad range of medical specialists, while CHS 7 had only one, and the two smaller centres (GP 1, HealthOne 6) had none. Recruiting new GPs was a priority in several centres, including UK trained GPs at GPSC 4.

Three centres (GPSC 2, 5 and CHS 7) had regular multidisciplinary clinics for people with chronic conditions (diabetes). At GPSC 5 and CHS 7 these involved GPs and PNs, whilst at GPSC 2 it only comprised co-located LHN staff.

Overall, GPSC 2 scored highest and GP 1 and HealthOne 6 scored lower than other centres on this access dimension.

Summary

Table 12: Median scores for access to and access within services

Access	**Median scores**						
	GP (1)	**GPSC (2)**	**GPSC (4)**	**GPSC (5)**	**HO (6)**	**CHS (7)**	**Median**
Access to services[11]	2	2	2	2	3	2	2
Access within services	1	3	2	2	1	2	2

The median scores for access to and access within services were closely related for most centres. HealthOne 6 had more focus on access to, with a narrower range of co-located services and GP 1 also scored lower for access within than for access to services. This finding was probably a function of their smaller size.

[11] The median scores for "access to" services were calculated using the scores for each separate arrangement within the dimensions of availability and accommodation, approachability, affordability and acceptability.

3.3.3 Integration arrangements

Table 13: Summary of organisational integration

Arrangements	Description of arrangements	Levels						
		GP (1)	GPSC (2)	GPSC (4)	GPSC (5)	HO (6)	CHS (7)	Median
Co-location of independent organisations/ practices	Level of organisational integration (loosely coupled, joint structure, tightly coupled)	1	1	1	1	2	3	***1***

Most centres (GP 1, GPSC 2, 4 and 5) involved a loose alliance of independent organisations working under one roof whilst retaining separate external affiliations. These were structured through rental agreements, including the use of reception and appointment systems. For HealthOne 6, while each organisation retained separate external affiliation, they worked in a joint structure. A Memorandum of Understanding between the general practice and LHN set out sharing of resources. Over time as the partnership strengthened these formal arrangements became less important. CHS 7 was most integrated with staff employed by a single organisation.

Table 14: Summary of professional integration

Arrangements	Description of arrangements	Levels						
		GP (1)	GPSC (2)	GPSC (4)	GPSC (5)	HO (6)	CHS (7)	Median
Ongoing multidisciplinary staff training	Involving co-located professional groups beyond GPs/PNs (occurs & attended)	1	1	1	3	3	2	***1.5***
Ongoing multidisciplinary service planning &/ or review	Involving co-located professional groups, beyond GP/PN (occurs & attended)	1	2	1	2	3	3	***2***
Median		***1***	***1.5***	***1***	***2.5***	***3***	***2.5***	***2***

Joint education across disciplines was limited or absent in most centres, except GPSC 5 and HealthOne 6. GPSC 5 held regular cases presentations and other forums for clinicians and students. HealthOne 6 had also held education for all staff on chronic disease management and held an interagency meeting to inform staff about clinical providers operating in the local area.

Service planning and review for HealthOne 6 was conducted by the local leadership group which included representation from the lead GP, PNs and the Medicare Local. A weekly multidisciplinary meeting, including GPs, PNs and AHPs, was also held as part of the Integrated Care strategy to plan and review patient care. HealthOne 6 and CHS 7 had regular structured reviews of inter-disciplinary arrangement. GPSC 2 and 4 had less regular reviews.

Overall HealthOne 6 rated higher than other centres, and the two private-for-profit centres (GP1, GPSC 4) scored lower than other centres for professional integration.

Table 15: Summary of clinical integration

Arrangements	Description of arrangements	Levels						
		GP (1)	**GPSC (2)**	**GPSC (4)**	**GPSC (5)**	**HO (6)**	**CHS (7)**	**Median**
MD care planning & review	Development & /or review of the care plan for GP patients with chronic conditions involves PNs	3	3	3	3	3	3	***3***
	Development & /or review of the care plan for GP patients with chronic conditions involves other co-located services.	1	1	1	2	3	1	***1***
Coordination of care for patients with complex needs	Roles for care coordination identified for patients who receive care from multiple professionals	1	2	1	2	3	3	***2***
Median		***1***	***2***	***1***	***2***	***3***	***3***	***2***

In most centres, PNs had input into the development of the GPMP. In centres with other types of nurses (mental health, refugee etc.), they were sometimes involved. However, there was little formal input from AHPs or medical specialists. CHS 7 had an alternative pathway where an AHP care-coordinator develops (non-GP) patient care plans.

Only two centres (GPSC 5 and HealthOne 6) held regular multidisciplinary meetings to review patients with complex needs, which were attended by relevant staff. In most other centres, these decisions were made by individual GPs or care coordinators. Private AHPs were rarely involved in reviews due to financial impediments, whereas LHN salaried allied health at HealthOne 6 did not face these impediments and were more often involved.

In all centres co-location facilitated informal information sharing and communication between differing health professionals around patient care. In most centres this occurred mainly between GPs and AHPs and less often between allied health and nurses, with some exceptions at GPSC 5, HealthOne 6 and CHS 7. Practice nurses have well defined and well-functioning working relationships with GPs. Arrangements include daily patient lists to identify patients for GPMPs and reviews; rotation of PNs to work with GPs; PNs reporting to GPs on patients via messaging or verbally; and test results being viewed by nurses as well as GPs. In GPSC 2, 5, HealthOne 6 and CHS 7, other types of nurses employed by the LHN or CHS have discrete roles that are independent of GPs.

In centres with co-located private AHPs the major formal arrangements for sharing care with GPs was through Team Care Arrangements (TCAs) or Home Medicine Reviews (HMRs). TCAs however were rarely used for sharing care with LHN or NFP sector allied health positions. There were several examples of co-consulting models involving medical and nursing disciplines (GPSC 2, 5). A nurse led diabetes clinic trial was about to proceed at CHS 7.

An explicit model of sharing care was introduced at HealthOne 6 for a defined group of patients with chronic conditions at risk of hospitalisation. It requires comprehensive assessment, a shared care plan, GP-led MD case conferencing, a HMR, care navigation, and patient monitoring.

In three centres (GPSC 2, HealthOne 6, CHS 7) salaried staff have a specific care coordination role for patients with chronic conditions. In HealthOne 6, this is a dedicated PN position, at GPSC 2 it is part of a PN role, while CHS 7 has parallel PN and allied health care-coordinator positions.

Overall the two state health models (HealthOne 6, CHS 7) scored higher and the two private-for-profit models (GP 1, GPSC 4) scored lower on clinical integration.

Table 16: Summary of systems to support integrated care

Arrangements	**Description of arrangements**	**Levels**						
		GP (1)	**GPSC (2)**	**GPSC (4)**	**GPSC (5)**	**HO (6)**	**CHS (7)**	***Median***
Appointment system used by services	Extent a single appointment system is used by all co-located services	3	1	3	2	3	1	***2.5***
Patient record system	Single centre-wide patient record system that can be used by most co-located staff to read and/or to record/upload patient notes	3	1	3	3	3	2	***3***
Recall system	Recall system in place for patients with chronic conditions.	3	3	3	2	3	3	***3***
Median		***3***	***1***	***3***	***2***	***3***	***2***	***2.5***

GP 1 and GPSC 4, where most co-located services were private AHPs, had a single main reception area and appointment system and single patient record. At GPSC 2 and 5, LHN services maintained separate systems with variations in their use of the central practice system.

At HealthOne 6, there has been an explicit strategy to achieve the use of a single patient record for all integrated care registered patients. At CHS 7 there are two separate record systems, mirroring separate management structures for allied health and GP/PNs.

All centres had a recall system that designated person/s (PN or reception) systematically implemented.

Overall, GP 1 and HealthOne 6 scored higher than other centres, which may have been a function of their smaller size. GPSC 2 scored lowest, which was probably a function of the breadth of co-located services.

Summary

HealthOne 6 rated highest on most integration dimensions, which is consistent with their explicit vision and focus on integration. The two for-profit centres (GP 1, GPSC 4) rated highest on the functional integration systems, but lowest on levels of professional and clinical integration. All the general practice oriented centres rated lower on organisational and clinical integration than the State health models.

3.4 RELATIONSHIPS BETWEEN CENTRE CHARACTERISTICS AND ORGANISATIONAL FACTORS AND ACCESS AND INTEGRATION

Co-location of other health professionals in all centres provided patients with access to on-site allied health and, in some cases, medical specialist health services. While some of these patients were referred to these services by centre GPs, there were also other referral pathways including hospital referrals, self-referrals and external GP referrals.

The analysis showed that co-location alone did not influence integration.

Whether or not GPs were part of governance arrangements did not appear to influence access and integration. The availability of and relationships with, other general practices in the local area, their extended hours and home/RACF coverage and their billing arrangements were more of an influence on the centres' functioning especially regarding access indicators.

The engagement of LHNs in these centres was through three major mechanisms:

- colocation of LHN services (GPSC 2, 5; HealthOne 6);
- involvement in governance arrangements (GPSC 5, HealthOne 6), and
- LHN policies regarding appointment and patient record systems, and provision of additional funding to support integration (GPSC 2, 5; HealthOne 6; CHS 7)

The following sections summarise the influence of the centre characteristics and organisational factors on access and integration (See Appendix 8 for a summary Table).

3.4.1 Model

While all centres had a vision about improving access through the co-location of other health services, both the State health models and two of the GPSC centres (GPSC 2 and 5) achieved the highest scores for their range of co-located allied health services. GPSC models scored more highly than other models on the range of co-located medical specialists and do better on after-hours services while the State health models do better on the provision of acceptability of their services and levels of integration. These findings perhaps reflect the different policy objectives of these models: after-hours primary care being a requirement of the GPSC program and State health models reflecting their broader population health responsibility and State government policy drivers for better integration of primary health care services. In both State based model centres there was an explicit and shared vision about specific population groups they were serving and about providing integrated care. In the GPSC centres, the vision was broader and loosely based on the GPSC objectives, although these were not necessarily shared by other co-located services.

GP 1, GPSC 4 and HealthOne 6 rated higher on systems to support patient care. At GP 1 this was perhaps reflective of being a smaller centre, with a narrower range of services. HealthOne 6 had received additional funding for integrated care activities which had facilitated the sharing of practice patient records with community health staff. GP 1 ranked lowest for access and most integration dimensions. This suggests that as PHC centres evolve from smaller general practices, they may need additional assistance to enhance integrated approaches, especially at professional and clinical levels.

3.4.2 Location

Rural centres do better on the provision of after-hours and outreach services, possibly a reflection of limited availability of services and geographical difficulties in accessing services. They also rated higher on some areas of integration (multidisciplinary training, use of single appointment and patient record systems to support integrated care) but it was not clear if location is the influencing factor.

In urban services, there are few GP co-payments, possibly reflecting competition from greater availability of GP services in local area, emphasising the importance of local context.

3.4.3 Ownership

Overall the public/private partnership models do better on access to services (including same day appointments, after-hours and outreach indicators) and multidisciplinary training, and private not-for-profit centres do better on acceptability. These findings suggest that not-for-profit ownership is more inclined towards a broader PHC approach than for-profit ownership. However private not-for-profit centres scored lowest on use of single appointment or patient record systems to support integrated care, while the other ownership model centres scored higher on integrated patient record systems.

The private-for-profit centres were slightly higher than other models on single entry and information indicators, but lower on acceptability and access within (although the two models differed significantly) and on most integration levels and it may be that integration is not a key priority for them.

Maintaining financial viability and GP income was also a core part of the vision for the four GP-oriented models, irrespective of their ownership.

3.4.5 Size

Medium and larger centres had similar ratings for access to services and had a broader range of co-located services than the smaller centre, which also rated lowest for after-hours and outreach indicators. The small centre (GP 1) had the lowest levels of integration. Medium centres do slightly better than larger centres. These findings suggest that smaller centres lack the infrastructure and capacity of medium and larger centres and that there is probably an optimal size for enhancing access and integration.

3.4.6 University representation

Centres with university representation on their governance structures had higher scores on access within services (reflecting a wider range of services, including medical specialists), and lower scores on integration, particularly organisational, and also functional systems in GPSC 2. University representation on governance arrangements undoubtedly influenced the under and post graduate training role of centres more so than access to and integration.

3.4.7 LHN engagement

The engagement of LHNs in centres (whether through co-location of services, involvement in governance, or policy/funding influence) was associated with higher scores on access (the availability of walk in/same day appointments, after-hours, acceptability of services and the provision of multidisciplinary clinics), and most levels of integration. This is suggestive of a broader PHC focus in these centres. Lower scores on most functional integration indicators suggest there are challenges in integrating general practice and LHN appointment and patient record systems to support patient care.

3.4.8 Management structures

Centres with a single management structure were positively associated with single point of patient entry, rated higher on functional integration systems, but lower on levels of integration, outreach and acceptability of services. Centres with multiple management structures were positively associated with access to a broader range of services, probably reflective of the difficulties drawing a wide range of services together under a single structure. Whereas higher scores on professional integration and having specific care coordinator roles suggests the need for a higher level of coordination amongst services.

3.4.9 Stability

More stable centres were associated with more after-hours services and a greater range of co-located services than centres experiencing instabilities. However the differences in the nature of the instabilities (workforce health issues, Board conflict, merger and organisational restructuring) mean it is difficult to draw any interpretation.

Table 17: Summary of factors associated with higher and lower access and integration

	Higher scores associated with (above the medium)	**Lower scores associated with (below the medium)**
Access to	State health model Public-private partnership Medium size	Private GP model
Access within	Private not-for-profit owned University representation on governance body	State health and private GP models Public-private partnership and private-for-profit owned Small size Single management structures
Integration	State model Public private partnership Large and medium size Less stability	GPSC and private GP models Private for-profit owned More stability Urban Small size Single management structure

Table 17 illustrates overlap between the factors. The state health model and public-private partnership owned centres have better access to services and achieve better integration, but have a narrower range of services The private-for-profit GP model has significant limitations, which may be associated with size.

4. Discussion

4.1 OVERALL SUMMARY

This study of six integrated primary health care centres shows how through co-location arrangements they have expanded their range of services beyond traditional general practice to an enhanced multidisciplinary approach involving allied health professionals and in some case medical specialist services. Most centres were in early stages of developing integrated approaches, although the state health models had more developed more formal approaches. The findings show that specific developments reflected opportunities afforded by the model (and related conditions). The local context (including history, relationships, targeting of population groups, and the need to find a niche in order to maintain financial viability), and ownership imperatives (the distinction between for-profit and not-for-profit enterprises) have strongly shaped their development.

The visions of these centres varied, although it was not clear how much this determines what happens and how much other drivers and opportunities influence their developments.

4.2 SUMMARY FINDINGS

The research questions this study set out to answer were:

1. What approaches have IPHCCs used to optimise access and integration of care for people with chronic conditions?
2. How have contextual and organisational factors influenced these approaches?
3. Can differences in approaches to access and integration be explained by context and organisational factors?

All centres had some basic arrangements for access as part of their standard operations including the availability and accommodation, approachability, and affordability of their services, with fewer centres explicitly focusing on arrangements to enhance the acceptability of their services for hard to reach or vulnerable populations. The main areas of variability included: the availability of on-site after-hours GP services, the provision of outreach services, and the explicit targeting of specific population sub groups such as people with mental health issues, those with chronic and/or complex health conditions and/or recently arrived refugees. Access within centres reflected the range of services on-site. All centres had co-located AHPs (a study inclusion criteria), but differed in the range of professions and only some centres had co-located medical specialist services.

Co-location of other services afforded opportunities for informal communication and information sharing, but more formal approaches to optimising integration varied between centres. Organisational integration was very limited and mostly comprised a low level of loosely coupled arrangements, where organisations retained substantial autonomy and independence.[30, 31] Clinical integration (including collaborative development and/or review of the care plan for patients with chronic conditions) was strongest between GPs and PNs, reflecting the policy focus in recent years through the introduction of PN incentives.[32] However with few exceptions, clinical integration between GPs and allied health had not advanced much beyond traditional referrals and requirements of allied health MBS incentives. More formal approaches for multidisciplinary planning and/or reviews of patients common to all groups was less developed. Arrangements varied for sharing clinical information, in part due to the differing systems, and in part due to differing clinician and organisational requirements. There was no clear indication about what might be the best arrangements for sharing clinical information. In three of the centres there were few opportunities for ongoing multidisciplinary training.

The factors affecting the centres' approaches to optimising access and integration included their context, characteristics and organisational factors and the interactions between these that reflected drivers and opportunities. The model type dictated some but not all the characteristics, although there were some characteristics associated with the model types, for example in GPSCs there was more university representation, co-located medical specialists and after-hours services. With State health models there was a stronger greater focus on the acceptability of their services that was consistent with their population focus, and more formal organisational, professional and clinical integration arrangements. For other characteristics there was not a strong association with model type.

For-profit centres were more likely to involve a narrower scope of only private sector providers, in contrast to the two not-for-profit models which involved a mix of private and public/NGO sector services.

The provision of on-site after-hours GP services reflected the model (GPSC) and location (availability of other on-site after-hours). Outreach services reflected location (rural), model (State health), and LHN engagement (relationships), and GP co-payments reflected local context and location (the availability of other local GPs).

The range of co-located services was associated with the model and partnerships. All centres had co-located AHPs (a study inclusion criteria), but there was a greater range of allied health in GPSC and State health models, and medical specialists in GPSC centres. As one would expect the smaller centre had the least range of services.

Integration was more advanced in larger organisations, reflecting the need for more formal approaches. The example of HealthOne NSW, which had higher levels of integration across most dimensions, illustrates that policy and funding opportunities associated with the more recent NSW Integrated Care Strategy[12], enabled them to expand their integration efforts.

The two for-profit owned centres differed significantly from the four not-for-profit enterprises. They had less complex governance arrangements, management structures and scope of co-located services and did better on functional integration. In contrast the other centres involved a more complex mix of private and public/NGO sector relationships characterised by different organisational cultures and ways of working.[33] However, despite the challenges, the engagement of LHNs was associated with a broader primary health care focus in these centres, particularly in developing a population health orientation. This suggests LHN involvement is useful for the development of accessible, equitable and more integrated primary health care centres.

4.3 IMPLICATIONS

The findings from this study suggest that IPHCCs focus on surviving and flourishing as organisations and that they change incrementally where supported by funding and local opportunities particularly in relation to the integration of APHs into the multidisciplinary team.

Further improvements in access to and within PHC and the integration of care for people with chronic conditions will require policy levers (both Australian and State/Territory Governments) and input from the two major regional organisations: PHNs and LHNs.

The HealthOne NSW example illustrates what can be achieved with funding to support specific integration developments.

[12] http://www.health.nsw.gov.au/integratedcare/Pages/Integrated-Care-Strategy.aspx

To go beyond current arrangements, for example adopting a greater population and equity orientation of IPHCCs would require further reforms including funding. Approaches to consider include alternative payment mechanisms for IPHCCs such as capitated payments based on patient registration with an IPHCC and blended payment models. These options are consistent with those identified in the PHCAG Discussion Paper.[34] Public/private partnership models involving LHNs, outreach and network models are other approaches. Involving LHNs through co-location of allied health and medical specialist services can provide patients with convenient access to LHN services, more affordable alternatives, and models of care that target and address the needs of hard to reach populations in the catchment area. Network models, such as a hub of allied health services (as with some GP Plus, SA and HealthOne NSW models) that can support all/most GPs in a local area are an alternative to co-location models and have the advantage of being a more equitable model.

Greater professional and clinical integration of co-located AHPs could be supported by PHNs as part of their practice support roles, including structures and systems to support multidisciplinary service planning and review, communication and information sharing, and continuing professional development activities that include allied health.

PHNs can also play an important role in future development of IPHCCs: as a bridge between IPHCCs and LHNs to support engagement and relationship development; help to mobilise and organise private allied health practices in the local area as a partner to general practice.

4.4 LIMITATIONS

This study has several limitations. The focus was on co-location models of IPHCCs, only one HealthOne centre was included and we were unable to recruit a South Australian GP Plus centre. Hence the findings cannot necessarily apply to other models, such as hub and spoke or virtual models, where not all staff are co-located and work from a number of sites. Similarly, while we did include one population focused model (CHS), we did not include an ACCHO and so the findings cannot be generalised to models that are primarily established to serve specific cultural groups. We did not investigate patterns of care at individual patient level, nor did we investigate patient or consumer experiences of access and integration. Finally the primary intention was to describe and understand patterns of access and integration within these centres and what factors influenced these. Future research is needed to study the impact and outcomes of these new organisational models of primary health care on outcomes.

Appendix 1: Abbreviations

Abbreviation	Description
AHP	Allied Health Professional
ASGC	Australian Standard Geographical Classification
CDM	Chronic Disease Management
CHS	Community Health Service
DGP	Division of General Practice
ED	Emergency Department
FFS	Fee For Service
FP	For Profit
GP	General Practitioner
GPMP	General Practitioner Management Plan
GPSC	General Practice Super Clinic
HACC	Home and Community Care
HMR	Home Medicine Review
HO	HealthOne
IPHCC	Integrated Primary Health Care Centre
IRSAD	Index of Relative Socioeconomic Advantage and Disadvantage
LGA	Local Government Area
LHN	Local Health Network
MBS	Medicare Benefits Schedule
MD	Multidisciplinary
ML	Medicare Local
MOU	Memorandum of Understanding
NFP	Not-for-profit
NGO	Non-Government Organisation
NSW	New South Wales
PHN	Primary Health Network
PN	Practice Nurse
PM	Practice Manager
PPP	Public/Private Partnership
RACF	Residential Aged Care Facility
TCA	Team Care Arrangements
TCI	Team Climate Inventory
UK	United Kingdom

Appendix 2: Objectives of policy models

GPSC PROGRAM OBJECTIVES

1. Well-integrated multidisciplinary patient centred care
2. Responsiveness to local community needs and priorities including those of Aboriginal and Torres Strait Islander peoples
3. Accessible, culturally appropriate and affordable care
4. Support for preventative care
5. Efficient and effective use of technology
6. An environment conducive to recruitment and retention of workforce
7. High quality best practice care
8. Viable, sustainable and efficient business models
9. Support for the future primary care workforce
10. Integration with local programs and initiatives.

A key focus of the service delivery model was the delivery of multidisciplinary care by different disciplines and service providers through physical or virtual co-location, working as teams.[35]

HEALTHONE NSW OBJECTIVES

1. Prevent illness and reduce the risk and impact of disease and disability
2. Improve chronic disease management in the community
3. Reduce avoidable admissions, and unnecessary demand for hospital care
4. Improve service access and health outcomes for disadvantaged and vulnerable groups
5. Build a sustainable model of health care delivery.

These objectives are achieved by designing services with reference to the four key features of HealthOne NSW services: integrated, client focused, multidisciplinary team care across a spectrum of needs.[14]

GP PLUS CENTRES

1. Work closely with general practice and other services to better respond to the health needs of local communities.
2. Complement the services offered by general practice.
3. Help people take control of their own health care, stay healthy and to avoid unnecessary hospitalisation.[15]

Appendix 3: Methods

RESEARCH DESIGN

A mixed methods comparative case study design was used. Mixed methods are commonly used in health services research.[36] They include both qualitative and quantitative methods to provide depth and breadth of understanding of complex phenomena.[37] In this study, the qualitative and quantitative data were collected concurrently, analysed separately and converged during the interpretative phase to enhance the validity of the findings.[36]

Case study research focuses on understanding real-life, contemporary bounded systems over time, using multiple sources of information.[38] Our comparative case study design included multiple similar and contrasting health services to deepen understanding of access and integration across settings and increase the confidence in and generalisability of the findings.[27]

Sampling and recruitment

Using publically available lists, we developed a sample frame of rural and urban (Integrated Primary Health Care Centres (IPHCC) in three states. Inclusion criteria included:

- Commonwealth and State health policy models (GPSC, HealthOne NSW, GP Plus, Community Health Vic)
- Multidisciplinary general practices that have evolved without national or state program support
- Co-located allied health services

Purposeful sampling for maximum variation [39] was used to select cases that included a range of sizes, locations, governance structures and policy supports. Overall, eleven centres were invited to participate. Three of these declined and two were excluded.

Initially, we invited ten IPHCCs in NSW, South Australia and Victoria to participate. Director/managers were contacted via telephone and sent a letter of invitation. None of the three South Australian GP Plus centres accepted; in part due to major concurrent restructuring of the SA health system. Of the five NSW centres (a traditional multidisciplinary general practice, a GPSC, three HealthOne centres that were initially invited, two HealthOne centres were subsequently excluded; one was a virtual rather than a co-located model, and the other was located in a similar rural location. The two Victorian centres (a rural and urban GPSC) that were initially invited agreed to participate. A third Victorian centre (community health centre) was recruited as a second state health model. This long established co-location model was located in an inner urban suburb.

Data tools and collection

As is typical in case study research, the data collection was extensive and drew on multiple sources of information including observations, qualitative interviews, document/website analysis and quantitative surveys.

Data was collected via two to three day site visits, telephone and email using semi-structured interviews, document analysis, non-participant observation and a staff survey. The ULTRA Practice Environment Template,[40] a survey incorporating the 38 item Team Climate Inventory (TCI),[24] and additional PHC questions (reviewing team processes, team social relationships), the access and integration dimensions described earlier,[19, 22] and context literature (including history and initial conditions and local fitness landscape),[25] informed the data collection. The 20 to 40 minute interviews were audio-recorded and transcribed. Executive, management, clinicians from various disciplines and administrative staff were invited to participate in the interviews.

Semi-structured interviews

Interview guides were developed from the literature and conceptual framework that described the integration approaches and dimensions of access to be explored.[41] The exploratory nature of the research was aimed at gathering a diversity of experiences and meaning. The emergent nature of qualitative research meant that the interview questions were changed and refined over time in light of learnings and reflections during the data collection process.[42]

Representatives from each clinician group, administrative staff (executive and management, reception, other administration staff), and other local stakeholders (e.g. other health care providers, Medicare Local staff) were invited to participate in semi-structured interviews at a mutually convenient private location during office hours. These interviews explored issues relating to integration and access with a) medical, nursing and allied health clinicians and other practice staff, and b) with local primary health care providers (including AHPs and Medicare Local practice support staff) for an external perspective. Approaches to improving geographical access were explored, especially in areas of health workforce shortages (i.e. rural settings). Follow up interviews were undertaken throughout the data collection period to explore changes to arrangements to support integration and access and the success of these initiatives. Each interview, and the associated field notes, was recorded using a digital recorder and transcribed verbatim as soon as possible after the interview by one of the research team/transcription service. Eighty-eight staff participated in interviews as follows:

Table 1: Interviews completed

Centre	**GPs (no.)**	**Nurses (no.)**	**AHP (no.)**	**Admin (no.)**	**Other[13] (no.)**	**Total (no.)**
GP1	3	5	2	3	4	17
GPSC2	2	1	5	3	2	13
GPSC4	2	6	2	4	0	14
GPSC5	4	3	2	2	2	13
HO6	2	5	5	3	2	17
CHS7	4	4	4	2	0	14
Total	*17*	*24*	*20*	*17*	*10*	*88*

Non-participant observation

The ULTRA Practice Environment Template used in a previous GPSC study[43] was used to guide the non-participant observation processes (see below). In-house training was provided to members of the research team involved in data collection who had not previously used the instrument.

Direct observation included observation of front desk and administrative staff scheduling procedures and routines, staff interactions, practice flow and other waiting room/reception desk activities, staff meetings and informal inter-professional interactions. Observations were focused on activity relevant to access and/or integration and was recorded as field notes.

[13] E.g. medical specialist, external provider/agency

Document/website review

A comprehensive profile of each centre was compiled using the modified ULTRA tool,[23] which detailed each centre's location and environment, ICT and systems, daily routines and interactions, how appointments and referrals are handled, knowledge of the local community and communication with patients.

This included reviewing centre websites, aggregated and de-identified centre level data provided by the centres relating to access and integration. Where possible, this included socio-demographic characteristics of patients using the service compared to the local population, patterns of service use within the IPHCCs, and referrals off site.

Staff survey

All staff in each centre were invited to complete a modified version of the Team Climate Inventory (TCI).[44] (see below) The TCI is a validated instrument with acceptable psychometric properties for evaluating team climate. Eighty-five staff completed the 10-15 minute survey as follows:

Table 2: Number of surveys completed

Centre	GPs (no.)	Nurses (no.)	AHP (no.)	Admin (no.)	Other (no.)	Total (no.)
1	2	3	2	6	0	13
2	1	1	4	3	1	10
4	3	6	3	6	0	18
5	5	4	2	3	0	14
6	2	3	3	6	0	14
7	3	4	6	4	0	16
Total	*16*	*21*	*20*	*28*	*1*	*85*

Analysis

The comparative case study approach included qualitative and quantitative data within-case and cross-case analysis. The qualitative transcripts, field notes and non-participation observation records were initially managed in NVivo 10 and analysed further using Microsoft Word and Excel spreadsheet figures, tables, spider graphs and matrices. The quantitative survey data was analysed using a Microsoft Excel spreadsheet. This approach is typical of comparative case studies as it provides a detailed description of each centre and within-case themes before conducting cross-case thematic analysis and interpretations.

The analysis of the qualitative data was guided by relevant literature,[26, 27] and involved: a) organising the data, b) reducing the data to themes through a process of coding and condensing in Nvivo 10, and c) representing the data in figures, tables, graphs and matrices. Consistent with qualitative approaches, the analysis was iterative, with insights and learnings from each centre informing the concurrent data collection.[42]

Transcripts were read and coded in Nvivo 10 by four members of the research team. Weekly teleconferences were held to discuss and refine the coding framework. The field notes, documents and interview data from each centre were analysed thematically to build a case description. This was built from the preliminary coding and memos and consisted of summary text tables on the history, local context, regional/global influences, access arrangements and practices (as per domains described by Leveque et al.), integration arrangements and practices (as per domains described by Valentijn et al.), barriers,

enablers and impacts that influenced integration and access (full case descriptions in Appendix 5).

Within-case analysis was subsequently conducted and tested on the first two case descriptions. Following a description of the model type, physical location, relevant history, governance, staffing and range of services, the local community and health neighbourhood, centre data were coded according to an analytic framework (see below) examining the systems level approach of inputs, arrangements, processes and practices in relation to access and integration and how this impacted upon patient care. These a priori themes included in-depth analysis of the context, achievements, enablers, impediments/challenges; sustained/embedded practices; staff reports of satisfaction and perceptions of quality of care.

A two-day investigator data retreat was held to discuss and interpret case descriptions and identify additional data collection. 'Thick' description summaries of the detailed within-case analysis of the first two centres were presented and used to rate the level of access, integration, context and organisational factors across cases. Following discussion, these were revised and additional analysis was conducted to examine staff vision; future plans; drivers and motivators; culture, teamwork and relationships in relation to access and integration. The remaining within-case analysis was based on this approach. Within-case analysis was independently conducted by two researchers for three centres each. A sample of interviews were coded independently for each case by other researchers, and coding was compared.

Cross-case analysis meta-matrices were subsequently developed using columns, sub-columns, rows and sub-rows that were based on a summary of centre characteristics; staff and services; integration and access arrangements; enablers and barriers; perceived achievements; future plans and embedded practices. This approach provides a visual format and presents the information systematically and so permits cross-case systematic comparisons.[27]

Following investigators' teleconference discussions we did additional within-case analysis that examined the history/leadership/vision; context; functional enablers and culture/team dynamics that influenced access and integration arrangements at each centre. Again, these were each independently conducted by two researchers prior to being summarised and added to the cross-case analysis matrix.

Following additional team discussions, scoring of access and integration arrangements was independently conducted by two researchers for each centre. Scores ranged from 0 to 3. The scoring by access dimensions and integration arrangements across cases enabled us to compare and contrast cases, explore emerging patterns and themes and calculate median within and cross-case access and integration scores.

Spider graphs were subsequently used to visually examine the influence of context and organisational factors on access and integration arrangements. These are commonly used in cross-case analysis as they enable the researchers to collapse and visualise multiple factors and how they influenced each other.

Feedback was conducted at centres in August as a form of member checking[26] and to collect any additional data. An effects matrix was subsequently developed for each centre and across centres to examine the interactions between context and organisational factors and access and integration outcomes. This approach is commonly used to interpret relationships between variables.[27]

The TCI survey data were analysed in an Excel spreadsheet using descriptive statistics. The results for all sub scores were adjusted to a scale of 1 to 5 so the results between each sub score could be compared. Mean and standard deviation (SD) scores were calculated for each sub score.

Ethics approval

Approval was granted by the Hunter New England Local Health District (HNEHREC: 14/08/20/4.07), Western NSW Local Health District (SSA/15/GWAHS/12), Monash Health (HREC: 14323L), UNSW (UNSWHREAP: 2014-7-24) and Monash University (MUHREC: CF14/2036-2014001035). Participating centres were offered $1,000 for their involvement in data collection. All participants were provided with information statement. Those who participated in qualitative interviews also completed a consent form.

All data collected from participants was de-identified using a coding system known only to the research team. The code sheets are stored separately to the completed surveys, non-publically available documents, transcripts and field notes in a locked filing cabinet at the Centre for Primary Health Care and Equity at UNSW or Monash University. Computer files are stored on a) computer hard drive, with password protection; b) back-up server (with high level security and password protection).

Data retreat

The research team met face-to-face at the beginning of the project and again after interim data analysis. This enabled review of the "thick" case descriptions of each centre,[26] review of the emerging themes and their theoretical underpinnings. Participation in the retreat also assisted in refining the key messages from the research, dissemination opportunities and lessons for subsequent studies.

Reference group

Input from a reference group of commonwealth, state, consumer, general practice, nursing and relevant allied health representatives informed the data collection tools, analysis interpretation and implications of the findings. Reference group meetings were held via teleconference at the beginning, and at the drafting of the final report.

Feedback

Initial feedback to each centre was undertaken in August 2015 as a form of member checking. Final feedback on the findings to each centre will be held in November 2015.

INSTRUMENT SCHEDULE

QUESTIONS	**INTERVIEWS**						**OBS**	**DOC REV**	**TCI**
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
DEMOGRAPHICS – Number of years and experience in this field (management of this PHC Centre) – Background/numbe r of years with current organisation – Current position	*	*	*	*	*	*			
CENTRE CONTEXT/ BACKGROUND 1. Tell me about the history and background to this Centre	*	*							
2. How long it has been open & how far is it in its development as a PHC Centre?	*	*	*	*		*			
3. Describe the local area where you draw your patients/clients from: population characteristics, its geography, range of health services available (public and private sector), any particular issues that influence/impact on the Centre, including gaps in health services. – How are community needs assessed? (ULTRA) – How does this centre interact with the community? (ULTRA)	*	*				*	*	*	
4. Describe billing arrangements (check bulk billing)		*					*	*	
5. Describe any other broader contextual factors that influence the Centre	*	*				*			

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
and its development.									
6. Describe the vision/goals, any specific service gaps, population needs or type of care this Centre is designed to address/provide.	*	*	*	*	*			Practice plans	
7. Can you tell me about what you are doing to implement these goals?	*	*							
8. What have been some of the achievements and what has contributed to these?	*	*							
9. Have there been any surprises or unexpected successes and what has contributed to these?	*	*							
10. What have been some of the challenges in developing this Centre?	*	*							
11. How do you see the Centre evolving over the next few years?	*	*							
PHYSICAL LOCATION/ENVIRONMENT (ULTRA) – Location – Office setting – Signage – Other PHC sites – Disability access – How does office space affect interactions and communication?	*	*	*	*	*		* * * * * *		
WAITING ROOM (ULTRA) – Observe and describe interactions among							*		

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
office staff, clinicians and patients in this setting – Describe general ambiance with concrete examples – How are routines affected by varieties of patient needs? (examples, late patients, emergent situations)							* *		
ORGANISATIONAL STRUCTURE, MANAGEMENT AND TEAM FUNCTIONING 12. Can you draw the Centre's organisational structure & staffing (including employment arrangements) & who is responsible for what (inc external collaboration)?	*	*						Orga nisati on chart	
13. How well does it function, the clarity of responsibilities & how well staff work together as a team, inc meetings type, and frequency & who attends (using the map as a prompt).		*					*	*	*
14. Can you describe the sorts of tensions and disagreements that have arisen within the Centre (e.g.)		*	*	*	*				
15. How do these tend to be dealt with?		*	*	*	*		*		
16. How are decisions (clinical, management, administrative) generally made in the centre (e.g. for each of these types of decisions)	*	*	*	*			*		

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
– Do staff make independent decisions? About what? And how? (ULTRA) – How are decisions made generally? (ULTRA) – How are decisions communicated? (ULTRA)									
17. How does the centre handle staff scheduling? (eg. what if people are late or sick? How are routines affected? (ULTRA)		*	*	*	*		*		
18. How is new information (clinical, job training, centre process improvement etc.) acquired and shared with other staff? (ULTRA)		*	*	*			*		*
19. TCI – Support for new ideas/innovation questions									*
20. TCI – Team objectives questions									*
21. TCI – Task style questions									*
RANGE OF SERVICES 22. Can you describe the range of services provided by your Centre Probe re: generalist 1st contact primary clinical care; any regular special clinics/ programs within the service; any regular education/self-management/support programs in the community; prevention or preventative care services	*	*					*	Web page, pam phlets	

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
23. Are any of services run by or in partnership with other organisations? If so, please describe.		*				*	*	*	
24. Can you describe the roles of PNs and how well utilised they are in these roles (differing use by GPs, breadth of role)		*	*	*				*	
25. Describe the centre's relationship to community resources for patients. (ULTRA)									
ACCESS 26. Who uses the Centre and who doesn't? What do you think this reflects? How consistent is this with your vision?	*	*	*	*	*	*	*		
27. What if anything have you done to make the centre more accessible? > How does the office communicate office hours, call schedule, payment expectations, etc.? (ULTRA) > Describe the appointment scheduling process. How long does it take to get and acute illness appointment? A health maintenance appointment? A new patient appointment? (ULTRA) – How does the	*	*	*	*	*		*		

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
centre handle unscheduled/walk in patients? (ULTRA) – Describe the telephone system and procedure for handling patient calls. How does the centre triage patients? How does the centre deal with exceptions situations? (ULTRA)									
28. Are there any groups of patients for whom the centre finds it difficult to provide access to the full range of health services they need (including clinicians within the centre or by referral). Have any special arrangements been made for these groups and if so, how well have these worked?	*	*	*	*					
29. How well do you think your Centre caters for the following groups: – People from NESB, – Indigenous people, – Poor people – People with complex social care needs – People with low health literacy or self- management skills a) Describe how the centre handles issues related to language and culture. For example, how do they handle interpreter needs?	*	*	*	*	*		*		

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
(ULTRA)									
INTEGRATION AND COORDINATION 30. Can you describe the arrangements for sharing information between clinicians in relation to patient care and comment on their adequacy (shared patient records, PCEHR, shared clinical information systems, secure messaging, single appointment systems – who used by	*	*	*	*	*		*	*	
31. How is ICT used to facilitate network and community connections? (ULTRA)		*	*	*	*		*		
32. Are there care pathways/ protocols for particular chronic conditions? Are these MD and who uses?	*	*	*	*			*	*	
– Can you describe the arrangements for care planning and coordination and do these apply to all clinicians. Are these MD – MD care (MD care plans, MD case mgt); – Check involvement in DVA coordinated care; Indigenous CCSS; use of MBS Items) – Referral arrangements (within the centre, to other services and from other services, How much referral is internal,	*	*	*	*	*		*	*	

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
how much external?) – Recall and reminders - who uses them.									
– How are reports (lab results, x-ray, pathology, consultant/referral reports) received? Who reviews incoming clinical information? (ULTRA)	*	*	*	*	*		*		
33. Are there staff with specialist skills who are used as consultants by other staff and how does this work in practice?	*	*	*	*					
34. How well do staff work together to provide multidisciplinary care?	*	*	*	*	*				*
35. Finally, do you ever think about how to improve access and how well integrated are the Centre's services are, and when and how does this come up and how is it addressed? (explore opportunistic and episodic; more planned/structured) – How is patient satisfaction assessed? (ULTRA) – How are staff and clinician satisfaction assessed? (ULTRA) – How are patient complaints handled? (ULTRA)	*	*	*	*	*	*			
36. How do you see this research project might	*	*							

QUESTIONS	INTERVIEWS						OBS	DOC REV	TCI
	Director/ Princip-al	Manag-er	GP's/ PN	AHP	Admin	S/H			
contribute to the development of the Centre?									
INTERPERSONAL & WORK RELATIONSHIPS 37. Observe levels of trust and cooperation among staff, among providers and between staff and providers. How does the centre manage differences? (ULTRA)							*		*
38. Observe any groups of friends at the centre. How are these friendship groups manifested at the centre? In what ways do they affect office functioning or patient care? (ULTRA)							*		
39. Observe any conflicts among staff, among providers and between staff and providers. When describing these conflicts be sure to include the perceptions of participants as to the source of these conflicts. In what ways do they affect office functioning or patient care? (ULTRA)							*		
40. Formal and informal communication. (ULTRA)							*		
41. TCI – Participation questions (team attitude, sharing information, communication, acceptance)									*

TEAM CLIMATE INVENTORY

PRIMARY HEALTH CARE QUESTIONNAIRE

PART 1: BIOGRAPHICAL DETAILS

The first part of the questionnaire asks for details about you and your work.

Please tick appropriate box.

1. Are you ...

Female	[ ]	Male	[ ]

2. How old are you ...

20-29	[ ]	50-59	[ ]
30-39	[ ]	60+	[ ]
40-49	[ ]		

3. Your job title .....

4. How long have you worked in your present position? ..... years ..... months

5. How long have you worked in this team? ..... years ..... months

6. How many people work in your team
(i.e. receptionists, doctors, nurses, etc) .....

PART 2: TEAM ROLES

This part of the questionnaire deals with team members' attitudes to each other's roles.

1. Please indicate the extent to which, on average, the different groups in your practice (e.g. doctors, allied health professionals, nurses, receptionists) make appropriate use of your skills. For example, if you think the doctors use your skills to the maximum extent, circle the figure 5 opposite general practitioners. Please leave blank the numbers which relate to your own group or to groups which are not in your team.

   Please circle the appropriate response.

   In our Centre the following people make appropriate use of my skills ...

	Comple-tely	**To a large extent**	**Some-what**	**To a limited extent**	**Not at all**
General practitioners	5	4	3	2	1
Allied health professionals	5	4	3	2	1
Community health nurses	5	4	3	2	1
Practice nurses	5	4	3	2	1
Practice manager	5	4	3	2	1
Receptionists	5	4	3	2	1
Others (please specify)	5	4	3	2	1

   .....

2. Please indicate the extent to which, on average, you know and understand the roles of different groups in your practice (e.g. doctors, nurses, receptionists). For example, if you think you completely understand the knowledge possessed by the practice nurse, circle 5 opposite practice nurses. Please leave blank the numbers which relate to your own group or to groups which are not in your team.

P*lease circle the appropriate response.*

I understand what areas of knowledge are required in their role in our practice ...

	Comple-tely	**To a large extent**	**Some-what**	**To a limited extent**	**Not at all**
General practitioners	5	4	3	2	1
Allied health professionals	5	4	3	2	1
Community health nurses	5	4	3	2	1
Practice nurses	5	4	3	2	1
Practice manager	5	4	3	2	1
Receptionists	5	4	3	2	1
Others (please specify)	5	4	3	2	1

.....

3. Please indicate your attitudes towards the roles of other groups in the practice team. Please leave blank numbers relating to your own group or groups which are not in your team. *Please circle the appropriate response.*

I consider this role vital in the achievement of team objectives in our practice ...

	Comple-tely	**To a large extent**	**Some-what**	**To a limited extent**	**Not at all**
General practitioners	5	4	3	2	1
Allied health professionals	5	4	3	2	1
Community health nurses	5	4	3	2	1
Practice nurses	5	4	3	2	1
Practice manager	5	4	3	2	1
Receptionists	5	4	3	2	1
Others (please specify)	5	4	3	2	1

.....

PART 3: REVIEWING PROCESSES IN YOUR TEAM

Here are some statements that deal with the reviewing processes in your team. Please indicate whether each statement is an accurate or an inaccurate description of your team.

Please circle the appropriate response.

		Very in-accurate	Mostly in-accurate	Slightly in-accurate	Un-certain	Slightly accurate	Mostly accurate	Very accurate
1.	The team often reviews its objectives	1	2	3	4	5	6	7
2.	The methods used by the team to get the job done are often discussed	1	2	3	4	5	6	7
3.	We regularly discuss whether the team is working effectively together	1	2	3	4	5	6	7
4.	In this team we modify our objectives in light of changing team circumstances	1	2	3	4	5	6	7
5.	Team strategies are rarely changed	1	2	3	4	5	6	7
6.	How well we communicate information is often discussed	1	2	3	4	5	6	7
7.	The way decisions are made in this team is rarely altered	1	2	3	4	5	6	7

PART 4: SOCIAL RELATIONSHIPS IN THE TEAM

Listed below are a number of statements that deal with social relationships in your team. Indicate whether each statement is an accurate or an inaccurate description of your team.

Please circle the response which best describes your team.

		Very in-accurate	Mostly in-accurate	Slightly in-accurate	Un-certain	Slightly accurate	Mostly accurate	Very accurate
1.	Team members provide each other with support when times are difficult	1	2	3	4	5	6	7
2.	When things at work are stressful the team is not very supportive	1	2	3	4	5	6	7
3.	Conflict tends to linger in this team	1	2	3	4	5	6	7
4.	People in this team often teach each other new skills	1	2	3	4	5	6	7
5.	Conflicts are constructively dealt with in this team	1	2	3	4	5	6	7
6.	When things at work are stressful, we pull together as a team	1	2	3	4	5	6	7
7	Team members are often unfriendly	1	2	3	4	5	6	7
8.	People in this team are slow to resolve arguments	1	2	3	4	5	6	7

PART 5: PARTICIPATION IN THE TEAM

This part concerns how much participation there is in your team.

Please circle the most appropriate response for each question.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	We share information generally in the team rather than keeping it to ourselves	1	2	3	4	5
2.	We have a 'we are in it together' attitude	1	2	3	4	5
3.	We all influence each other	1	2	3	4	5
4.	People keep each other informed about work-related issues in the team	1	2	3	4	5
5.	People feel understood and accepted by each other	1	2	3	4	5
6.	Everyone's view is listened to even if it is in a minority	1	2	3	4	5
7.	There are real attempts to share information throughout the team	1	2	3	4	5
8.	We keep in regular contact with each other	1	2	3	4	5
9.	We interact frequently	1	2	3	4	5
10.	There is a lot of give and take	1	2	3	4	5
11.	We keep in touch with each other as a team	1	2	3	4	5
12.	Members of the team meet frequently to talk both formally and informally	1	2	3	4	5

PART 6: SUPPORT FOR NEW IDEAS

This part deals with attitudes towards change in your team. Please indicate how strongly you agree or disagree with each of the following statements as a description of your team.

Please circle the most appropriate response for each question.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	This team is always moving toward the development of new answers	1	2	3	4	5
2.	Assistance in developing new ideas is readily available	1	2	3	4	5
3.	This team is open and responsive to change	1	2	3	4	5
4.	People in this team are always searching for fresh, new ways of looking at problems	1	2	3	4	5
5.	In this team we take the time needed to develop new ideas	1	2	3	4	5
6.	People in the team co-operate in order to help develop and apply new ideas	1	2	3	4	5
7.	Members of the team provide and share resources to help in the application of new ideas	1	2	3	4	5
8.	Team members provide practical support for new ideas and their application	1	2	3	4	5

PART 7: TEAM OBJECTIVES

This part of the questionnaire is concerned with the objectives of your team. The following statements concern your understanding of your team's objectives.

Circle the appropriate response to indicate how far each statement describes your team.

		Not at all			Somewhat			Comple-tely
1.	How clear are you about what your team's objectives are?	1	2	3	4	5	6	7
2.	To what extent do you think they are useful and appropriate objectives?	1	2	3	4	5	6	7
3.	How far are you in agreement with these objectives?	1	2	3	4	5	6	7
4.	To what extent do you think other team members agree with these objectives?	1	2	3	4	5	6	7
5.	To what extent do you think your team's objectives are clearly understood by other members of the team?	1	2	3	4	5	6	7
6.	To what extent do you think your team's objectives can actually be achieved?	1	2	3	4	5	6	7
7.	How worthwhile do you think these objectives are to you?	1	2	3	4	5	6	7
8.	How worthwhile do you think these objectives are to the team?	1	2	3	4	5	6	7
9.	How worthwhile do you think these objectives are to the wider society?	1	2	3	4	5	6	7
10.	To what extent do you think these objectives are realistic and can be attained?	1	2	3	4	5	6	7
11.	To what extent do you think members of your team are committed to these objectives?	1	2	3	4	5	6	7

PART 8: TASK ORIENTATION

This part is about how you feel the team monitors and appraises the work it does. Consider to what extent each of the following questions describes your team.

Please circle the response which you think best describes your team.

		To a very little extent			To some extent			To a very great extent
1.	Do your team colleagues provide useful ideas and practical help to enable you to do the job to the best of your ability?	1	2	3	4	5	6	7
2.	Do you and your colleagues monitor each other so as to maintain a higher standard of work?	1	2	3	4	5	6	7
3.	Are team members prepared to question the basis of what the team is doing?	1	2	3	4	5	6	7
4.	Does the team critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?	1	2	3	4	5	6	7
5.	Do members of the team build on each other's ideas in order to achieve the best possible outcome?	1	2	3	4	5	6	7
6.	Is there a real concern among team members that the team should achieve the highest standards of performance?	1	2	3	4	5	6	7
7.	Does the team have clear criteria which members try to meet in order to achieve excellence as a team?	1	2	3	4	5	6	7

THANK YOU FOR YOUR CO-OPERATION

PLEASE RETURN THE COMPLETED QUESTIONNAIRE IN THE ENVELOPE PROVIDED OR DELIVER IT DIRECTLY TO THE FIELD WORKER WHILST S/HE IS ON SITE

OFFICE USE ONLY:	Centre ID #:	Centre member ID #:	Date Sent:	Data Checked?	Date entered

NON-PARTICIPANT (ULTRA) OBSERVATION TEMPLATE

Centre ID: _____ Date(s): _____

General guidelines for observation:
1. Document examples
2. Include description of how the centre reacts to your presence. Describe your reactions to them.

1. PHYSICAL LOCATION/ENVIRONMENT

Context

 Surrounding community (demographics, socio-economic mix, rural/suburban/urban)
 Client population characteristics – age, ethnicity, socio-economic status

Outside

 Describe/draw a diagram of the building, setting, local environment
 Signage (photograph), note information covered, languages
 Access (parking, public transport, disability access)
 Other PHC sites in the locality – types of services & proximity

Office setting:

 Draw & describe layout & general appearance of the facility (get a floor plan if available)
 Note number & location of examination rooms
 Note internal disability access features/equipment
 How does office space affect interactions and communication?

Reception and waiting area

 Describe general ambiance with concrete examples
 Note availability, type & range of patient information, video screen
 Signage (photograph), note information covered, languages
 Observe and describe interactions among office staff, clinicians and patients in this setting
 Describe how routines are affected by varieties of patient needs (examples, late patients, emergent situations
 Describe how patient privacy is protected in common reception/waiting area

Other practice sites: describe size, relationship, ownership, etc

 From document review

2. ORGANISATIONAL STRUCTURE AND MANAGEMENT

Context

 What is the ownership, board structure etc of the practice?

Teamwork

 Describe informal corridor/lunchtime conversations

 Observe & describe any conflicts/tensions between staff (categories), with patients, where takes place & any effects on office functioning

 If observe meetings, describe purpose, who attends, what's discussed, dynamics

Decision making

 Describe staff making independent decisions (about what, how, how communicated)?

 How does the centre handle staff scheduling? (for example, what if people are late or sick? How are routines affected?

Information Management

 How is new information (clinical, job training, centre process improvement, etc) acquired and shared with other staff?

Assessment of quality of services

 Note availability of patient satisfaction/complaint mechanisms (& range of methods)

Billing arrangements

 Describe billing and payment processes & systems (not electronic/not)

 Describe any issues/challenges staff and patients face in dealing with these operations/impact on the centre

3. RANGE OF SERVICES

 Describe any information/conversations about broader community self-management support resources for patients. (note electronic availability of information)

 Describe range of professions in the centre and their presence – eg how many days per week.

 Role of nurses

ANALYTIC FRAMEWORK

Research questions (original)

1. What approaches are used by IPHCC use to optimise access; and integration of care for people with chronic conditions
2. What are the enablers or barriers to IPHCCs achieving objectives of improved integration and access? What differences (if any) are there between the different models of IPHCCs?
3. What is the impact of the approaches on access and integration of care? What (if any) differences are there between the different models of IPHCCs?

Data collection and analysis framework

Several theories and frameworks are guiding the data collection and analysis and will enable the research questions to be addressed and conclusions to be drawn.

The overall framework comprises the systems level approach of:

- *inputs* (separated into broader contextual factors and Centre-based arrangements to support access and integration);
- *arrangements (systems and structures)* that support access and integration
- *processes and practices* that support implementation of the access and integration arrangements;
- *impacts,* where the focus is on how are these inputs, arrangements and practices are coming together in each Centre , what differences these are making for patients, and to what extent each Centre (and the model it represents) is on track to becoming an accessible and well integrated PHC Centre.

The core concepts and dimensions within each concept to be examined are context, access, integration and equity. The dimensions of *context*[14], *access to health care*[15], and *integration*[16] have informed the data to be collected and analysis.

The following table summarises the concepts from this body of literature (i.e. the first part of each column) and the focus area for data collection (shaded boxes).

These concepts are the a priori themes against which the qualitative data will be coded. The themes and framework method will be tested with the first two case studies in NSW and Victoria.

[14] Miller, W et al. Practice Jazz: Understanding variation in Family Practices using complexity science. JAMA 2001, 50:10. 872-878

[15] Levesque JF; Harris MF; Russell G. Patient-Centred access to health care: conceptualising access at the interface of health systems and populations. International Journal for Equity in Health 2013, 12:18

[16] Valentijn P et al Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. International Journal of Integrated Care – Volume 13, 22 March 2013

<table>
<tr><th>Context inputs</th><th colspan="2">Arrangements</th><th colspan="2">Processes/practices
That support implementation of arrangements</th><th>Impacts (on track to becoming... progress towards…</th></tr>
<tr><th>Complexity science features (Miller et al)</th><th>Access (Levesque et al), including equity of access</th><th>Integration (Valentijn et al)</th><th>Access</th><th>Integration</th><th></th></tr>
<tr><td>History & initial conditions (Centre’s vision, priorities)
Relevant history & significant changes over time that influence integration & access

Local fitness landscape (ie health neighbourhood) (Centre’s niche, local resources, community profile, patient population profile)

Regional & global influences
(larger health care system, policies, finances, funding, regulations, culture)

Data collection
Centre context
– History, vision
– Influence of selected gov’t policies (e.g. Policy model, MBS items, e health)
– Pop’n characteristics
– Local health neighbourhood</td><td>Approachability & consideration of ability to perceive
– How Centre makes itself known
– Outreach
Acceptability & consideration of ability to seek -
– Cultural & social acceptability
Availability & accommodation & consideration of ability to reach
– Physical space & reachability
– Roles of staff
– Reach in a timely manner
Affordability & consideration of ability to pay
– Internal services
– Referral services
Appropriateness & consideration of ability to engage
– Fit between needs & services
– Quality</td><td>Systemic integration (macro level)
– Alignment of rules & policies within the system (see context theme)
Organisational
– Inter-organisational relationships (contracts, strategic alliances, mergers,, joint ventures, liaison officers)
Professional integration (internal)
– Partnerships based on shared competencies, roles, responsibilities and accountability to deliver a comprehensive continuum of care to a defined population
Professional integration (external)
– Arrangements for coordination & collaboration with external providers, eg directories, liaison roles, joint/shared care programs, referral pathways
Clinical integration
– The coordination of person-focused care in a</td><td colspan="2">Data collection
– Utilisation of clinician skills (nurses, allied health)
– Observe teamwork, relationships between staff, communication, info sharing
– Decision-making processes & observations
– Team Climate Survey & additional PHC Qs
– Observations & practices that support access</td><td>Achievements re access and integration
Enablers re access & integration
Barriers re access and integration
Sustained/embedded practices re access and integration
Satisfaction with access and integration arrangements and practices/processes
Quality of care
– Broad range of services,
– Quality and timeliness of information flows & exchange between providers
– Timeliness & continuity of care
– Role of PN fully utilised and integrated with GP care.
– % of people who have received annual cycle of care,
– % of people with</td></tr>
</table>

Context inputs	Arrangements		Processes/practices That support implementation of arrangements	Impacts (on track to becoming... progress towards…
	Data collection – *Physical location, layout, environment* – *Types of patients seen/ accommodated/targeted* – *Access arrangements for vulnerable groups* – *Appointment arrangements* – *Services provided in-house* – *Referral services* – *Patient info/self-management resources, info on community resources*	single process across time, place & discipline. Focus is on care delivery to individual patients. – Shared decision-making between provider & patient – Shared care programs, joint care planning, common decision-support tools (clinical pathways, guidelines), Functional integration (an enabler) – Key back office & support functions & activities (financial, management & information systems) Normative integration (an enabler) – Shared mission, vision, values, culture		CD who have care plans, Data collection – *Reflection on achievements, challenges & contributing factors* – *How informants see the Centre evolving & into what* – *What differences are access & integration arrangements making for patients* – *For whom & how do you know* – *[What is being created at this Centre* – *How is it all coming together (for the Centre as a whole; for individual clinicians)* – *Changes made in relation to feedback/complains (patients, community staff, other providers)*
		Data collection – *Org structure, staff, roles & responsibilities, employment arrangements* – *Arrangements for care planning & coordination – who applies to,* – *Arrangements for sharing information* – *Referral arrangements, comm'n, reports* – *Multidisciplinary care: who, when etc*		

Appendix 4: Reference group membership

Representatives	Members
Allied Health Professions of Australia	Prof Leanne Togher, University of Sydney
RACGP	Dr Nathan Pinskier, Chair RACGP NSC - Health Information Systems
Practice Managers Association	Gary Smith
NEHTA	Dr Mike Bainbridge, Senior Clinical Governance Advisor, NEHTA
NSW Health	Susan Burke
Vic Health	Prof Chris Brook, Chief Advisor Innovation, Safety and Quality
APNA	Kathy Godwin, Ros Rolleston
PHCRIS	Dr Petra Bywood, Deputy Director and Research Manager
Consumer representative	Margaret Brown, Health Consumers of Rural & Remote Australia (HCRRA)
Local Health District	Tish Bruce, Deputy Director, Primary & Ambulatory Care
Medical Local/COPHCE	Rod Wilson

Appendix 5: Case Descriptions

CASE DESCRIPTION (GP 1)

1. Overview

This long standing traditional general practice evolved into an integrated primary health care centre (IPHCC) over time with the employment of PNs and co-location of other health care services, including complementary therapies. With the introduction of the incentives for allied health, there was a shift towards co-location of allied health professionals. It is an accredited and teaching practice for medical undergraduates and GP registrars.

The profile of the centre's patients includes an older, well established community and newer younger families. The population includes older and well established families and younger families moving into new areas of development. There is some SE disadvantage and un/underemployment related to heavy industry downturn, but the IRSAD score of 1009 is above the average.

The facility comprises two buildings, each with a separate waiting/reception area, but joined by a covered corridor for staff movements. There are dedicated GP, practice nurse (PN) and allied health professional (AHP) consultation rooms and a shared staff/tearoom.

The centre is centrally located in an outer urban/rural fringe of a major regional city. It is situated on the corner of two streets adjacent to a shopping centre In the locality there are 3 other solo/small GPs (2 of which offer bulk billing for all patients), a late opening pharmacy, some allied health practices and an early childhood centre. There are 2 hospitals within10kms and a tertiary referral hospital and university (with medical, nursing and some allied health teaching), within 20 kms.

2. History and context

The centre was established by the Principal GP (PGP) in 1992. It is an accredited practice and until recently has been a long standing teaching practice for medical undergraduate students and GP registrars. The centre was awarded General Practice of the year in 2012 by the then DGP. The centre was involved in the APC Collaboratives program until 2012.

There is a mix of staff that have been with the centre for a long period of time (including the PGP, two PNs and one administration person). GP and PN numbers have increased over time. An experienced PM was appointed four years ago and introduced a number of administrative changes to improve the management, administrative and financial systems.

Bulk billing has recently been introduced for some of the GPs in response to a mix of drivers including patient reported need in context of several bulk billing medical centres within 5 to 10 kms, and to build up patient numbers of two more recently recruited GPs.

The centre has expanded from one to two buildings in order to accommodate more staff and offer a broader range of health services including more GPs and AHPs.

Since the initial data collection (July 2014), an additional GP has been recruited to backfill the PGP on extended leave and a dietician has been contracted 1 DPW (had previously worked at centre on similar basis) The PGP and senior PN (spouse) have both had significant health issues in recent times. The PN no longer has a direct clinical role, and the PGP has significantly reduced his hours to 1.5 DPW for the immediate future.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	Y/N	Examples
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	Y	Skin cancer clinic
Regular outreach clinics/program programs	N	
Regular education/self-management/ support programs in the community	N	

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals	Pharmacist, dietician, psychologist
Range of other health professionals/disciplines	NA

4. Vision

The vision (expressed and shared by most staff) is to provide good patient care and this involves offering a broader range of PHC services through co-location of allied health practitioners, utilisation of PNs and a focus on prevention. The leadership vision is to maintain the best aspects of a traditional family practice, but in a contemporary context. This translates to becoming a medium sized and multidisciplinary primary care practice, striving to provide good quality care and best practice. The perceived benefits of this vision are that the longitudinal patient/practice relationship helps with patient adherence to treatment.

> "a practice of 4-5 doctors would be probably ideal, such that we can provide a lot of the common services under one roof and be entirely accessible" (PGP).

Ways of achieving this vision include:

- being an accredited medical training practice, where they are open to peer review
- participating in initiatives such as APC Collaboratives
- providing PNs with training and certification in priority areas
- take up of PC developments including utilisation of IT, incentives to support more coordinated care, and follow up of patients through recall and reminder systems, and
- being part of the local community and of the wider medical fraternity

The family orientation of the practice extends to how particularly the core team of GPs and PNs are valued and the mutual respect for each other's skills and informs the selection of new staff.

5. Importance of access and integration

5.1 Access

An integral part of the centre's vision is to be accessible and the importance of this is reflected in its convenient location, expansion and growth alongside population growth, the prominence of the directors in the local community, and friendly and welcoming behaviour of staff.

The colocation of AHPs has enabled access to a broader range of onsite PC services, and is consistent with the practice's vision of providing a more comprehensive range of services.

A focus on timely access has been a priority and evidenced by the introduction of a 'no appointments' policy, and increasing PN numbers which enables patients to be seen in times of GP shortages, rather than turned away.

Bulk billing has been recently introduced in response to a mix of GP and patient factors: an increased number and stability of GPs working at the practice and the need to increase their patient numbers; and patient feedback re preference for bulk billing.

5.2 Integration

The focus of integration efforts has been to improve information management systems to support patient care and to integrate patient management and billing systems. This was a priority for the PM when she joined the practice, and was compatible with the vision of the PGP to make use of technology designed specifically to support general practice.

Integration is also seen to involve improving communication between all parties in the practice from administration to clinical staff, including the different disciplines and roles, and for improved access to information that supports clinical and diagnostic decisions.

6. How access and integration are optimised

6.1 Major approaches for optimising access

The centre's responses to access issues is primarily influenced by its vision and what it is trying to achieve as a traditional family practice, whilst responding to 21st century demands and developments in primary care (especially improved access to comprehensive, coordinated and multidisciplinary care).

The mix and range of health care professionals, their roles and training enable patients to have ready access to a range of PC services on-site, especially for those with common chronic conditions, and families with young children. This patient profile is a reasonable match to the general population.

The centre operates as a standard 8.30am to 5.30pm practice with no provision of on-site extended or after-hours services and home visiting has been at the discretion of individual GPs, and mainly restricted to regular and well known patients. Access has recently improved for residents of a local RACF, but this is an initiative of an individual GP to build up his business rather than a centre policy to provide outreach care.

The recent introduction of bulk billing has seen an increase in new patients and return of former patients suggesting affordability has been improved. The concern that it might encourage a shift in the patient profile away from patients with whom the practice develops longitudinal relationships does not seem to have occurred. While there are no co-payments for patients referred by GPs under TCIs or for HMRs, little consideration has been given to affordability issues in relation to referrals to external services.

A 'no appointments' policy has been implemented and communicated and the centre has well-functioning procedures and practices to respond. The aim is to leave six appointment time slots unfilled each day for urgent/unplanned presentations and urgent presentations are triaged by PN, and sick children prioritised. This policy also includes that patients are never denied an appointment. There are no arrangements/mechanisms to address or proactively inform patients about long waiting times (20 to 40 minutes observed) unless they ask on arrival or phone beforehand.

The centre has given thought to the approachability of its services by the local community and uses a variety of methods to communicate the availability, range and types of services, and any changes (web page information and highly visible signage outside the centre are the major methods).

Little attention has been paid to identifying or responding to the needs of patients with low literacy or other special needs. There are no procedures or practices to sensitively identify patients with low literacy –this is left to discretion of individual staff members and most staff admitted rarely coming across this issue.

A revised patient registration form enables self-identification of indigenous status, but there are few arrangements in place to actively support or encourage their access to the centre.

While at the centre, researchers observed a very distressed and anxious patient who presented to practice. The PM managed this situation (for patient, other patients and reception staff) in a manner that was sensitive to the patient's anxieties, and the discomfort of other patients and staff.

As part of the renovations and opening of a second building, physical access has been improved for patients with disabilities.

6.2 Major approaches for optimising integration

Organisational level

Organisational integration arrangements are restricted to fairly basic contracts with co-located AHPs that outline the rental fee. Other arrangements include access to the patient booking system (administered by reception staff), and access (read and write) to the information system (Medical Director).

Professional level

<u>Internal integration</u>

Arrangements and practices at the whole of centre level and at the health professional level facilitate multidisciplinary team working. At the centre level there are regular clinical meetings attended by GPs and PNs and the staff only passageway connecting the two sites facilitates easy staff access to one another.

GPs and PNs work well as a team. This is facilitated by a number of arrangements and practices, including rotation of PNs allocated to work with GPs; generation of daily GP and PN patient appointment lists; use of GPMPs as a tool to coordinate care; messaging systems; informal conversations; the layout of the Centre with dedicated PN consultation/treatment rooms in each site and in close proximity to GP rooms; the well-defined roles of PNs re health assessments; specified tests and checks (eg INR, Dopplers, ECGs, Pap smears, immunisation, wound care etc). While GPs vary in how they work with PNs (2 major approaches include those GPs who prefer patients to be first seen by PN and those who prefer to see patients first), the skills of PNs are well utilised in either approach.

> "But in this practice it is pretty good because when I'm working here I've got a nurse always working with me, which means I know exactly who my nurse is. And if she has got a problem she has got open access, she comes to me. If I need to get her to do something or ask her opinion about something I just walk across and speak to her, and that works" (GP-1).

Co-located AHPs were not seen as core members of the team by all staff, and less so by PNs than GPs, but their relationships with staff and a good team working environment appear to have facilitated their integration into the centre.

> "There's not a lot of interaction regarding the patient between the allied professionals and the registered nurse." (N-GEN 3).

Standard referral processes used, supplemented by informal conversations when required by both GPs and the AHPs. Given part time co-location arrangements, Medical Director is widely used for communication and information sharing between GPs and AHPs (for letters, messages etc).

Occasional case conferences are held with PN and allied health involvement, but these are mainly initiated by the PGP rather than by the other GPs. This may reflect the patient profile of the PGP (mainly older and long standing patients with chronic conditions).

External integration

Attention has been paid and continues to be monitored to ensuring that reports and results from external health care provider (pathology, radiology and medical specialists) are bought to the attention of the GPs for review, action and e filing. The systems and practices to support this were developed soon after the current PM was appointed. Practice software contains up to date information on medical specialists in the region.

There are few formal arrangements between professions beyond standard referral letters and feedback reports. The exception is the nomination of a staff member at a sleep clinic (which was previously co-located) to liaise with the Centre regarding referrals. There is a perception that the contact between the two services and the support provided to patients enhances their adherence to treatment.

Informally as judged by each health professional (urgency or complexity of process) patients are supported to access external services through staff finding the relevant service/person to contact, making appointments, organising transport etc.

Some external services do not have a good knowledge of the services provided by the practice or the PNs roles and have little interaction with the practice.

Timely receipt of discharge letters and the quality of information provided was identified as an ongoing problem with the public hospital sector, as was the lack of input into the length of time patients spend on waiting lists. However, the implementation of electronically sent discharge summaries from public hospitals in the region has been an improvement over previous paper based system.

Periodically (two yearly) bone density assessments are offered via an onsite van. The company providing this service pays for the centre to send out patient invitations and upload the reports into the patient files via Medical Director.

Clinical level

Arrangements include daily generation from Medical Director of GP and PN appointment lists which are located outside each respective consultation room and which each other can refer to. These lists are used by both GPs and PNs to identify and flag patients for GPMPs, reviews, HMRs etc.

> "I probably come in, check my list, see who I've got booked in and set up my day. Look at the doctor's day and what we try and do is go through, in our spare time, our patients and see what's due for the patient and we try and get the extras done for them" (N-GEN 4).

PN lists are based on reason for GP appointment if known. The familiarity with and use of common health assessment tools, GPMPs and guidelines by GPs and PNs, support the integration of clinical care.

Good use is made of medical director features including flags, alerts, reminders and messaging by particularly GPs and PNs to integrate and support continuity and coordination of care. At least one AHP also uses these features to integrate medication management as part of clinical care.

> "Sometimes it's opportunistic, we have a recall system set up on Medical Director so the patient if they've been in last year for their annual health assessment we then put it into recall so that it comes up in 12 months' time…..I do the recalls….I am out of direct patient care for Tuesday afternoon and that's when I do the recall system" (N-GEN 1).

Follow up appointments are commonly made before patient leaves the practice, and these may be facilitated by GP or PN with the patient at reception using the booking system.

6.3 Future plans/next steps/priorities

Target men's groups for information sessions, especially around mental health issues.

Broaden the patient base (attract younger families) by employing another female GP.

Take more advantage of technology to streamline processes, for example the use of apps for on-line appointments, electronic referrals

Refocus on systems for monitoring and improving quality of care and a focus on best practice for example cycles of diabetes of care through use of tools such as Pencat.

7. Enablers and barriers

7.1 History and context (including vision, local context)

Issue	Integration	Access
The characteristics of the staff and the directors have contributed to the centre's visibility in the community and relationships with other health care providers. Most staff live locally, have worked at centre for many years and have a good knowledge of local area and patients. The PGP and senior PN are prominent community members and are well known amongst the local health neighbourhood.	Y	Y
Few GPs could recollect involvement in QI or audit activities.	Y	
Barrier has been lack of consideration to succession planning and allocating role re ongoing monitoring and audits to support quality care.	Y	
While the vision is to have a five GP practice, at present, there is not enough work (ie. patient numbers) and income to support their employment.		Y
Barrier to co-location of AHP (more hours, greater range) is the limited number of referrals that can be generated by the practice; and need for the AHP to generate referrals from other GPs/self-referrals to meet income goals and pay rent.		Y

7.2 Drivers, motivators (including regional/global influences)

Issue	Integration	Access
What's important and a priority for the PM is to have a well-run and highly professional practice, where the back office systems support patient care (introduction of single electronic health record, comprehensive use of information systems e.g. medical director to support patient care, coordination and communication); the viability of the practice (billing systems), and staff (role clarity, more professional approach).	Y	
Her approach is to work alongside staff to implement changes. The working relationship between the PGP and PM is one of mutual respect and trust.	Y	
The increasing availability of BB options in the surrounding area has had a significant influence. The introduction of BB has		Y

Issue	Integration	Access
increased numbers of new and former patients suggesting affordable access has improved.		
Different financial drivers for PGP, as FFS has been a way of controlling his patient numbers (but many have health concession cards).		Y
Financial incentives (MBS) have enabled the provision of a greater range of services, (co-location of commonly used AHP for patients with chronic conditions; and more systematic implementation of health assessments and care planning and expansion of PN numbers and their role). These contribute to goals of more comprehensive and coordinated care, improved CDM and business viability.	Y	
The lack of incentives has limited a more systematic focus on using audits for quality purposes.	Y	
Recent changes to HMR policy has reduced demand and the need for co-located pharmacist to generate referrals from a wider range of GPs.	Y	
HMR policy focus on home visits a barrier to access for patients who would prefer review to be conducted in practice	Y	
The ML has supported involvement in APC Collaboratives in recent past– with a focus on appointment strategies and systems for diabetes and heart disease – But lack of incentives has limited ongoing focus or broader involvement by other staff.	Y	
Patient reluctance to be referred to especially dieticians means that dietary education and self-management is predominantly provided by the PNs (however there is little communication between dietician and PN re their respective roles.		Y

7.3 Functional enablers (for access and integration)

Issue	Integration	Access
Administrative and operating arrangements and practices have been substantially improved with experienced PM. Arrangements include a single telephone system operating across both sites, a recall and reminder system, enhanced use of electronic information systems for financial management, care planning and management and communication, and ARGUS for secure communication with external services (pathology, pharmacies, some medical specialists). Increasingly medical specialists are also sending their referral reports via ARGUS. There is a preference to refer to specialists who communicate electronically.	Y	Y
Systems appear to be working well in practice, and the meeting minutes note when staff are reminded to conform with arrangements. Through the meeting structures staff have opportunities for input into decision-making. Some AHP noted that having access to the health records lets them know if GP	Y	

Issue	Integration	Access
has followed up on their suggestions/recommendations.		
Most co-located AHP organise their own appointments but informal discussions with reception staff take place to coordinate visits with other clinicians where appropriate. This is seen as an efficient practice	Y	Y
Governance and management structures are well defined and regular clinical, admin and team meetings are held which are attended by most core staff– can be hard to maintain the regularity of meetings with number of part time staff. "the doctors and nurses, they'll have a clinical meeting and then we'll have an administration one and then we'll have a whole one… so everyone knows what's going on" (AD-3).	Y	
Governance structure seen to be effective decision-making body, with PGP acknowledging that this takes the pressure off him. Occasionally the Board goes out to dinner when there have been internal conflicts and tensions that need to be addressed.	Y	
A focus on understanding the practice workload has enabled a better use of PN time and role and has improved timely access for patients, especially when there is a shortage of GPs	Y	Y
Dedicated position of senior PN to run audits using PENCAT for QI purposes, (e.g. treating blood pressure, immunisation rates) and feeding information back to individual GPs re areas for clinical improvement. The systematic implementation of this activity and use of audits for QI declined during period of changed work hours, but has recently picked up again.	Y	

7.4 Culture, teamwork & relationships

Issue	Integration	Access
Good working relationship between co-located AHPs and GPs has facilitated referrals and informal shared decision-making.	Y	Y
There is a culture of mutual respect and trust within the team and at senior management level.	Y	
Staff work well together, felt there was a culture where they look after each other and that admin staff worked together with GPs and PNs. Some, but not all AHP feel they are a core part of the team when on-site. "..there's, obviously, conversations and discussions and general thrust of the practice that I miss out on, but when I am here, I feel like I am part of the team" (AHP-Pharm). "Occasionally I liaise with the doctors. I don't think I'm a big team player. I don't know whether I'm in that immediate close network team" (AHP-Diet).	Y	

Issue	Integration	Access
"He (GP) just slipped into the position very easily and was very easy and comfortable to work with and the patients liked him" (CM).		
Culture of open communication between staff who communicate with one another formally (via e messaging) and corridor conversations to provide coordinated care and help one another out to track down resources and supports for the patients when needed.	Y	
The closing of the Centre enables staff to have lunch together	Y	
Strategy of employing clinical staff that have the professional values wanted in the practice including an interest in preventive care and embracing technology.	Y	

8. Impacts

8.1 What's been achieved

Successful recruitment of a UK trained and experienced GP and surgeon (in context of regional recruitment challenges). This has built the practice and extended the range of services. Patients like him, and he has established a big patient load and has also been able to reduce the load and waiting time for the PGP.

The strategy to recruit younger families to the practice has been successful with the perception that more parents with young children are using the centre.

The introduction of bulk billing has improved access by bringing new and returning patients to the practice (without impeding practice's financial viability or shifting the practice ethos) The introduction of bulk billing has been perceived to help to improve continuity of care as patients can continue to use the practice and see same GP irrespective of their changing financial circumstances.

The number of long standing patients and continued use of the practice by patients who move out the area were perceived indicators of patient satisfaction and loyalty to the practice.

The independent patient experience survey (n=99 responses) conducted for accreditation (Feb 2012) concluded that the overall mean score of 85% fell into 50% of benchmark score. The centre scored in the highest benchmark quartile for a question about reminder systems, and scored slightly above median benchmark for information provision to patients and continuity of care.

They pride themselves on the recall system for improving the continuity and coordination of care as it enables them to recall patients due for preventive health checks, care plans, annual cycles of care, reviews etc…

> "So we pride ourselves on that. Pretty much we don't miss – the doctors don't miss anything. It's been followed up. It's getting done. Patients are being brought back. They're getting their ECGs done, their Dopplers done, their feet checked for diabetic patients" (PM).

External stakeholders expressed the opinion that the practice had a reputation as being progressive and well-functioning. Contributing factors include: the leadership and involvement of the PGP and Senior PN in the regional primary care community; the award as practice of the year in 2012; their commitment to provide good quality of care and keep

up with best practice (e.g. through involvement in APC Collaboratives); how they use PNs and implement team based approaches; and the achievements of the PM re systems and processes and ability to create a good team.

There was also the perception from external stakeholders that staff are happy and work well together for a common purpose to provide good patient care.

Perception by external stakeholder, who is also a current patient, that the practice provides good quality care, as evidenced by their experience of a comprehensive health assessment and referral to a range of other services – high level of satisfaction and reassurance

Achieving the right practice team over time (including the co-location of AHP) has helped to establish the practice's credentials in the eyes of patients and the visibility of good relationships between GPs and co-located AHP helps to enhance their adherence with care.

8.2 What's sustained/embedded

- Patient information software (Medical Director) applications are used by staff consistently.
- Consistent application of recall and reminder systems for preventive health checks and diabetes annual cycle of care.
- Co-located AHPs (present and past) expressed satisfaction with the arrangements and opportunities for providing more integrated care and their good working relationships with the Centre.
- A focus on understanding the practice workload and patterns of utilisation has enabled a better use of PN time and role.
- Utilisation of PN role has improved timely access for patients, especially when fewer GPs employed.
- Sustained GP/PN working relationships supported by formal (PN allocated to each GP; adjoining consultation rooms) and informal arrangements (corridor conversations).
- High levels of mutual respect and trust between GPs and PNs.
- Routine practice by PN allocated to manage recall and reminders to look ahead to identify anticipatory care needs of patients.

CASE DESCRIPTION (GPSC 2)

1. Overview

This centre was established by Division of GP/Medicare Local under the GPSC program. It is accredited and a teaching practice for medical and nursing undergraduate students and GP registrars.

Located in an outer urban area on the grounds of a University campus the facility comprises a single story building. Two wings of consultation and treatment rooms extend either side of the central reception area, with a large meeting/event room at the rear. One wing used by GPs, PNs and private allied health, includes a treatment room and a training facility for observing consultations. The second wing is rented by a LHN for allied health and specialist clinics. Well designed, welcoming site with a relaxed atmosphere in the reception/waiting area. It is bright, well-lit, free-Wi-Fi and has good physical access for people with disabilities. The spacious waiting room facilitates sensitive management of stressed patients.

The profile of the centre's patients includes a mix of older, well established and younger families. Mental health services have gradually developed, particularly for young people, and the centre seeks to accommodate the needs of patients with mental health conditions. The centre also provides health services to the university student population. The population of this outer urban area includes a mix of older, well established and younger families. This is a higher socio-economic area, with some pockets of disadvantage IRSAD score of 1061 is in the 9th decile and thus well above average. There are nine public and private schools within 3km of the centre.

There are seven other GP practices in the immediate area, ranging from solo to large corporate practices. There are two pharmacies (open until 9pm), three pathology centres, three optometrists and a large physiotherapy practice nearby. There is a public hospital within 1km providing a comprehensive range of health services, and a tertiary hospital within 15 km.

The centre is located in an outer urban area on a University campus, near an entrance from a major road, with a bus stop and railway station nearby. The site is not very visible from main road, and there is some confusion amongst potential non-student clients that it is only a University clinic.

2. History and context

It is an accredited practice and a teaching practice for medical and nursing undergraduate students and GP registrars. A strong LHN partnership has been developed, with many allied health and specialist clinics out-posted from hospitals.

As this area is well serviced area for GPs and other health services, attracting patients has been a major priority. Initial allied health staff were provided by a NGO – they left due to insufficient demand. There are now private allied health and LHN allied health and specialist clinics as tenants.

The PGP has a long history in the area and elsewhere. One GP comes from a medical training authority and plays a role in remediation – for registrars whose placement has not worked or for GPs returning from suspension.

The PGP works close to full time. As patient numbers have gradually increased, a number of other GPs have begun working at the clinic on a 0.2-0.4 FTE basis. Initially, a nurse, was employed part time, but this was suspended for four months for financial reasons. At the time of data collection there was a full time nurse, with a second about to begin part time.

Since initial data collection, after-hours services (until 8.30pm) have been extended from one to three days per week.

The centre Board appointed is by the Medicare Local, including a representative from the University. Practice manager and Principal GP (clinical director) report to the board. The PM handles most interactions with LHN and day to day matters, but defers to the Board for major decisions.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	Y/N	Examples
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	Y	Youth mental health groups Diabetes: Life program through ML
Regular outreach clinics/program programs	Y	Youth mental health clinics in schools alongside psychologists
Regular education/self-management/ support programs in the community	Y	
Other	Y	

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals	Private allied health professionals include: audiologist. Hypnotherapist, audiologist, yoga and psychologist.
Range of other health professionals/disciplines	LHN out-posted hospital clinics include: Psychology - acute, Psychiatry, Sleep consultant, Lung (respiratory), Lung oncology, Liver specialist, Diabetes, Endocrinology, Haematology, Haematology oncology, IBD specialist, Gastro Surgeon

4. Vision

The vision for the centre was spelled out in the centre's operational plan, which addressed GP Super Clinic program guidelines. Core staff were committed to the vision, whilst co-located allied and specialist staff had varying degrees of understanding and agreement. Key elements include:

- A strong focus on customer service and patient centred practice
- Providing multidisciplinary care for the local community
- Training facility for medical, nursing and possibly AHP
- Providing services for university students. (GP1,2)
- Mental health

Ways of achieving these elements include:

- Use of centre meeting/training room by other organizations to provide services
- Co-location of multiple allied health and specialist clinics.
- Close links with University doctor and nurse education, and with GP registrar training.
- Act as campus medical centre; organise vaccination program for student nurses;
- Employment of GPs with mental health experience (one also works at headspace); especially for young people including through outreach to secondary schools (N) and running a youth mental health group on the premises; availability of private psychology and LHN psychology and psychiatry on site.

5. Importance of access and integration

5.1 Access

Access is not seen mainly as about being able to get an appointment, as this area is well-supplied with GPs. Timely access has been a priority, with the use of IT to allow online booking and system alerts for patients who need long appointments, notification of patients if their doctor is delayed, the introduction of a 'no appointments' policy, and trials of extended hours - initially one night per week.

Accommodating the needs of mental health patients is given significant emphasis, with training for staff (especially around Clozapine management). Reception acts to ensure short waiting times for mental health clients, and follow up no-shows quickly.

The colocation of AHP and specialist staff has enabled convenient access to a range of onsite services. With LHN clinics, this has both reduced travel time and improved the acceptability of the services. The centre

> "is much better [than hospital].… we're on time. We have appointments"

5.2 Integration

Integration is seen as about co-ordination across disciplines. For co-located AHPs and specialists there is no shared electronic medical record. Coordination is seen as improved by increased informal communications available to co-located staff, in addition to formal reporting in case summaries and care plan reports.

> "as tenants, none of them have contractual agreements for integration. So everything that has been achieved has been on [a] collegial, interpersonal basis." (GP1)
>
> "It's less frenetic. ... doesn't have that hospital environment feel". (psy3&4).

6. How access and integration are optimized

6.1 Major approaches for optimising access

Approachability

- Outreach to local schools for mental health.
- Centre is used by ML, community groups and private health providers for training workshops and group health activities.
- Web page informative and has some interactive features.
- New signage to improve visibility from the road.

Availability and accommodation

- There are arrangements/mechanisms to address long waiting times: booking alerts for patients who need long appointments and proactively informing patients about delays.
- Good physical access, parking etc. Waiting room allows management of stressed patients.
- Use of Health Engine for online appointment booking.
- Was standard Monday to Friday 8.30am-5.30pm practice; trial of 8.30pm closing one night per week during data collection - subsequently extended to three nights per week. There are some visits to RACFs.

Affordability

- Mixed billing – bulk bill those in need. LHN clinics mostly free.
- Private psychologists do not bulk bill, some registered for ATAPs. So GPs will often refer outside the clinic to psychologists who do bulk bill.
- Dressings and vaccination are billed at close to cost price.

Appropriateness

- Patient registration enables self-identification of indigenous status, but there are few indigenous clients. Limited CALD, other than international students. Limited use of interpreters.
- Strong approach to make centre appropriate for mental health clients, especially for Clozapine patients: – training of reception and other staff, monitoring attendance, reducing waiting times, strategic use of waiting room, provision of support to stressed patients such as a cup of tea.
- Staff are trained to deal with patients in distress (particularly those with mental health issues) through providing reassurance, space in the waiting room, and adjusting appointments to reduce wait times.

Acceptability

- Strong focus on meeting the social needs of patients with mental health problems
- Access to interpreters available, but rarely needed

6.2 Major approaches for optimising integration

Organisational level

- LHN and private clinicians are tenants.
- LHN clinic arrangements vary for billing, appointments etc. LHN psychologists more closely integrated than other LHN staff.
- LHN and private AHPs have aspects of both internal (informal discussions, referrals to GPs etc.) and external (formal care plan communications, referrals through LHN triage) professional integration. No sharing of patient records, other than through formal communications.
- Reception staff have limited access to hospital record system for LHN psychologists via a dedicated front desk terminal – to make appointments etc.

Professional level

Internal integration

Arrangements and practices at the whole of centre level and at the health professional level facilitate multidisciplinary team working for GPs, PNs and administrative staff, but less so for others. At the Centre level there are regular clinical meetings attended by GPs and PNs. Internal decision making structures appear high functioning. LHN and private clinicians feel well consulted, but not directly involved.

Co-located AHPs and specialists are not seen as core members of the team, but their relationships with staff and a good team working environment appear to have facilitated their partial integration into the centre.

Formal communications (referrals etc.) are similar to any external AHP or specialist; letter, care plan. But informal communication are closer with co-located services, especially between GPs and both private and LHN psychologists. The separation between two wings – one for LHN staff, and the other for GPs, PNs and private AHPs – does not appear to interfere with this communication.

The nurse works closely with GPs and has strong roles, especially in: student nurse immunisation; care plan preparation and organisation of referrals; management of test results. By contrast, mental health care plans are only done by GP, without PN input. There is both informal and formal consultation with mental health staff.

External integration

Good internal and external communication systems; good IT set up, secure well used website. They need evidence that secure electronic messaging will be reliable externally before making it general, due to problems with interoperability of systems.

Strong systems were put in place from clinic start-up to ensure that reports and results from external health care provider are bought to the attention of the GPs and PNs for review, action and e filing.

Practice software contains up to date information on medical specialists in the region.

There are few formalised arrangements between professions beyond standard referral letters and feedback reports.

Clinical level

Good use is made of Best Practice features including flags, alerts, reminders and messaging by reception, GPs and PNs to integrate and support continuity and coordination of care. These features are not available to AHPs and specialists.

Follow up appointments are commonly made before patient leaves the practice, and these may be facilitated by GP or PN with the patient at reception using the booking system.

6.3 Future plans/next steps/priorities

Increasing patient base to allow more implementation of vision objectives around training and multidisciplinary care:

> "would like to have more AHPs on site, so I can ask opinion, refer" (GP2).
>
> "The next step in integration will depend on securing critical mass. When the 9-5 general practice has expanded enough … we will need a diabetes educator, some dietetic support" (GP1).

7. Enablers and barriers

7.1 History and context

Issue	Integration	Access
Clear understanding of vision of centre amongst core staff	Y	Y
Having well known, experienced PGP but limited site visibility and community awareness of Centre		Y
Well-serviced area – hard to get patients, hence financial concerns led to contracting out of AHP, reduced nurse hours for a time, etc.	Y	Y

7.2 Drivers, motivators

Issue	Integration	Access
GPSC program made it possible for the centre to exist, and objectives include a strong multidisciplinary focus.	Y	
However, political decisions re site of clinic made gaining patients difficult.		Y
Funding issues		
No Bulk billing private psychologists at site.		Y
Funding withdrawn for mental health nurse.		Y
Funded for two Youth Mental Health programs – one weekly sessions at the clinic, outreach to secondary schools.		Y
Low patient load a pressure initially.	Y	Y

7.3 Functional enablers

Issue	Integration	Access
Settled cohesive leadership and management structures: Board, PGP and PM;		
Recruitment of high quality CM, receptionists, doctors, PNs with commitment to centre goals for team based care.	Y	
Strong nurse role in coordinating referrals test results etc.	Y	
Well set up IT and procedures from inception. Consistent data entry. Secure website. Good use internal messaging.	Y	Y
Use of IT for online booking, alerts for long appointments, SMS reminders, recalls etc.		Y
Lack of shared patient records with AHP and specialists – so multiple systems for appointments, billing etc.	Y	
Regular staff meetings and good internal communication structures	Y	

7.4 Culture, teamwork & relationships

Issue	Integration	Access
Cohesive core staff with happy work atmosphere	Y	
Co-located staff happy with arrangements and consultation	Y	
Whole of practice approach to accommodate mental health clients	Y	Y

8. Impacts

8.1 What's been achieved

- Maintained financial viability despite low patient numbers initially in well serviced area.
- Addressing lack of after-hours through online booking and three nights per week extended opening hours.
- Youth mental health programs significant.
- Positive, collegiate atmosphere, both within direct centre staff and with LHN and private tenants.
- Challenges with getting site visible physically and in the crowded local PHC environment.
- Significant training role, within limitations of initially low patient load. Strong nursing education focus, also registrars, medical student placements etc.
- Student nurses immunisation program.
- Consistent application of recall and reminder systems for preventive health checks and diabetes annual cycle of care managed by PN
- Core staff appear happy and work well together for a common purpose – to provide good patient care.
- Strong link with ML and other community health providers for groups health activities, workforce training etc.
- "Speed with which a multidisciplinary facility was established through arrangement with AHP provider" (BM1).
- Gaining funding for mental health programs.
- High levels of mutual respect and trust between GPs and PNs

8.2 What's sustained/embedded

- Consistent implementation of recall, reminder and test result systems, with well-established reception and PN roles.
- Co-located AHPs and specialists expressed satisfied with current arrangements and working relationships with the Centre. However opportunities for providing more integrated care require further work
- GP/PN working relationships supported by formal PN formal responsibilities and informal communications

CASE DESCRIPTION (GPSC 4)

1. Overview

This centre consists of two practices (Site 4a and Site 4b) operating independently within a corporate organisation that includes multiple practices. Site 4b was bought as an established practice and re-opened in 2012 as part of a GPSC which also included the newly established practice at Site 4a.

The population profile at Site 4a consists of significant numbers of younger families who live in the area because of the proximity to the city for work and more affordable housing options. Most patients attending the practice are local. However, there are high numbers of walk-in patients from other practices and from out of area due to a shortage of GP availability. The population profile at Site 4b is more disadvantaged and includes significant numbers of retirees and elderly people. The majority of patients attending the practice are regular patients and are well known by the staff.

Both practices consist of new, purpose-built, two storey facilities. Site 4a utilises one storey with the second floor yet to be developed. GP and PN treatment and consultation rooms are located adjacent to each other with further consultation rooms for private allied health professionals located toward the back of the facility. At Site 4b, GP and PN consultation and treatment rooms are separated by a waiting area and allied health professionals use consultation rooms on the second floor.

Both practices are located within two hours travel from a state capital city, Site 4b is the only GP practice in the immediate area and there are two other GP practices located within 1km of Site 4a. There are two public hospitals, including one tertiary referral hospital (4a) located within 30 minutes' drive of both practices. There is a community health centre located within 300m of the practice at Site 4a and a dental surgeon and pharmacy located within a few hundred meters of the practice at Site 4b.

2. History and context

This centre is owned and operated by a company established in 2007 by two business entrepreneurs. The CEO/Co-founder is also the owner of both practices, and the primary decision maker. A contracted Centre Manager works across both practices.

Site 4a is described as the hub of the GPSC. It is a new practice, established as part of the GPSC, which opened in January 2012. At least two GPs in the local area have sold their practices and moved their patients to this site. One GP recently moved 15,000 patients and their medical records. These patients are new to the practice and many are not yet known by staff. It can be difficult for these patients to make an appointment to see their original GP and some have moved to other practices.

Site 4b was bought by the company as an established practice and is described as a primary care spoke of the GSPC. It has a long history in the community and there is the perception from patients that they 'own' the practice. This practice moved to a new facility in July 2012 when it opened as part of the GPSC.

GP recruitment has been a challenge for both practices and most GPs in the area have closed their books. A number of staff mentioned that there are not enough GPs in the area to accommodate the growing population and there are issues with GP recruitment. Both practices are accepting new patients and provide access to GP and health services for new people moving into the area. Both practices are accredited.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	Y/N	Examples
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	N	
Regular outreach clinics/program programs	Y	Provide GP services at local residential aged care facility. PNs and GPs conduct home visits
Regular education/self-management/ support programs in the community	N	

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals:	Allied health professionals include: Audiology, Dietician, Chiropractor, Osteopathy, Pathology, Podiatry, Physiotherapy, Psychology, Psychotherapy, Clinical Pharmacist, Massage Therapist, Sleep Services, Exercise Physiologist.
Range of other health professionals/disciplines	Orthopaedics, Psychiatry, Ophthalmology, Renal and Cardiology.

3. Vision

The vision of this centre as stated in the company mission statement is to “support skilled, professional, multidisciplinary practitioners and administrative staff to provide positive health outcomes for clients”. The vision expressed by management staff is to provide an accessible range of services under one roof using a multidisciplinary team approach. The Centre Manager (CM) described the owner’s vision as being a practice where co-location facilitates collaboration between health professionals to deliver patient-centred care. The CM also talked about a focus on prevention and providing preventative care.

Providing accessible health services to the community also seems to part of the overall vision of the centre. Both clinical and administration staff at both sites stated that providing access for patients to a number of health professions under one roof as being part of the vision of the practice. The aim to provide a

> “one stop shop” and “having as many services as possible in the one building” (AD(1)).

was a consistent message from staff. Staff also expressed that the centre was provided GP services to people in the local area that otherwise wouldn’t be able to access them.

Maintaining a viable business is another important part of the overall vision of the centre and this is reflected in the corporate ownership and governance structures. However, there appears to be limited input into decision making by clinical staff and almost no clinical leadership to drive the health vision.

Ways of achieving this vision include:

- Co-location of a variety AHPs, specialists and pathology services
- Extended opening hours at both practices. This includes some evenings and weekends.
- Sharing of patient notes with other practices when patients access the centre after-hours
- Completion of health assessments and team care arrangements support the vision for providing preventative and multidisciplinary team care, as well as keeping the business financially viable.

5. Importance of access and integration

5.1 Access

Access is a significant part of the overall vision and would be defined by this centre as providing health services to patients who would otherwise have difficulty accessing the care they need in their local community. Providing timely access to GP services in an area of GP shortage is a major area of focus and has been addressed in number of ways. Both sites accept new patients providing access for patients to see a GP in their local area. The employment of nurse practitioner at Site 4a provides more timely access for patients when a GP appointment isn't available.

Extended opening hours have been introduced at both practices meeting the needs of the community where there are significant numbers of people working full time and commuting long distances. This commitment to providing after-hours access extends to the wider community demonstrated by their willingness to share patient notes when care is provided patients from other practices.

Another major area of focus is making allied health and specialist services available to patients in their local community, preventing people from having to travel out of area to find these services.

5.2 Integration

Integration at this centre would be defined as the provision of multidisciplinary team care. The focus of integration efforts has been on building a multidisciplinary team of health professionals at a single location as described in the vision. The centre has provided the facilities and the opportunity for this 'multidisciplinary team' to collaborate and work together to provide patient care.

The provision and use of information management systems to streamline patient care is another focus of integration efforts. The single patient health record can be accessed by most co-located allied health staff. Reception staff at each practice manage the bookings and billing for the majority of co-located allied health professionals. The psychologist does not use the patient record system to enter notes but is able to access patient notes. The chiropractor uses a software system designed specifically for chiropractors.

6. How access and integration are optimised

6.1 Major approaches for optimising access

Major approaches for optimising access primarily address availability and accommodation, particularly the need for increased access to GP services. Both practices are accepting new patients and have extended opening hours during the week days and opening on weekends. Site 4a is particularly busy on the weekend and sees a lot of walk-in patients. Urgent patients are always accommodated and triaged by receptionists and PNs. Appointments are set aside in the booking system and "*released"* on the day to accommodate urgent patients Walk in patients are accepted however reception staff often have to turn patients away. A protocol has been implemented for reception staff to provide patients with "options" if they

are unable to see a GP. Appointments are usually available the following day however, not always with the GP of choice with some GPs booking out one week in advance. There are multiple, part-time GPs and patients are not always able to see their own doctor making continuity of treatment difficult to provide (4GP(5). The Nurse Practitioner at Site 4a is able to see appropriate patients if a GP is not available and allowing them to accommodate more patients than was previously possible, particularly on weekends (4N-NP(1).

In terms of range of services available the centre has aimed to recruit and provide the most common specialists that people need to see or those that

> "people are finding it hard to get in to" (4AD(4)).

or need to travel out of area to access. Co-location of AHPs and specialists allows patients to see more than one health professional on the same day and by reception and clinical staff try to accommodate patients in this way where possible (4AD(7)). The centre provides services to group homes and aged care services, and offers home visits.

Consultation fees for GPs, AHPs and specialists are also displayed in the waiting area and are available on the website. Eligible patients are bulk billed, but other patients can be bulk billed at the discretion of the individual GP. There is a mixture of private and bulk billing to see AHPs and specialists to provide access for patients where affordability is an issue.

Approachability is addressed in a number of ways that communicate information about the centre and services available with their patient cohort and the wider community. Methods include external signage, a comprehensive website, Facebook page, information about visiting AHPs and specialists in waiting areas and regular adds in the local newspaper about services available (Site 4b). A PN described considering the specific needs of patients in the provision of health information resources including literacy, ethnicity and vision impairment and attempting to make the practice friendly and appropriate for children (4N-GEN(2).

Aboriginal artwork by a local artist hangs in the waiting areas and consultation rooms, as a way of making the practice more welcoming to Aboriginal patients. An Aboriginal PN had just started working at Site 4a. Her recruitment was coincidental rather than intentional but was seen by the centre manager as being helpful to Aboriginal patients (4CM(1). A low light 'soft' room is available to be used for psychologist appointments.

6.2 Major approaches for optimising integration

Organisational level

Organisational integration arrangements are limited to the independent contracts made with GPS, AHPs and medical specialists. AHPs and specialists pay rent for rooms and receive referrals for both patients at the practice and external patients. Arrangements also include access to patient booking and information systems. A small number of AHPs and GPs work at both sites.

This centre operates within a larger organisation that includes practices in QLD and NSW. They have the same board and management structures which aim to implement consistent management and administration processes across all practices.

In terms of organisational integration arrangements with external organisations, both sites share patient medical records with other practices if requested when they have seen a patient who attends another practice. Site 4b has a contract with the Medicare Local that supports them to provide after-hours primary medical care to the local community.

Professional level

Internal integration

Each practice has a number of arrangements and practices in place that contribute to professional (internal) integration. Staff meetings and clinical meetings are held regularly however, staff report that they are usually not well- attended.

There is a difference in the physical layout of the two practices in relation to the location of the PN consulting rooms. At Site 4a these rooms are located in the middle of the facility, surrounded by GP and AHP consultation rooms. At Site 4b they separated from the GP rooms by the waiting area and front entrance of the facility, and AHP rooms are located upstairs. PNs at Site 4b seem to overcome this situation by being particularly opportunistic and intentional about catching up with GPs face to face discuss patient care by 'watching' lists and waiting at the front desk outside the door. They were observed to make regular visits to the front desk assisting reception staff with patients and answering the phone.

Staff view the co-location of allied health staff as a way of facilitating their participation in patient care, and allowing them to provide more direct and timely feedback to GPs and PNs following AHP consultations. Co-location allows informal collaboration between staff however, there seems to be some variation in how often this occurs and how embedded the AHPs are in the practice team. 4AD(7) described the osteopath as being

> "very much part of the clinic",

but the psychologist doesn't see herself as part of the practice team (4AHP(Psy1). A PN at one site reported regularly referring to AHPs for specialised information (4N-GEN(1). A PN at the same site reported that she doesn't often discuss patients with AHPs (4N-GEN(3). AHPs are described as being integrated at the patient care level but not the

> "whole picture" (4AD(1)),

of the practice. They discuss patients with GPs and PNs and document in the patient's health record, but they are not involved in decision making at a practice level. Management staff encourage new allied health and specialists to introduce themselves to GPs to establish a relationship and promote referrals.

External

Arrangements for external integration primarily consist of the referral arrangements and processes between the practice and external AHPs and specialists. Standard processes for referrals and feedback reports are used for both internal and external AHPs and specialists. Referrals are tracked in Best Practice and attendance is checked by the GP. Invitations are sent to external AHPs and specialists to participate in team care arrangements but few are returned to the practice *(4N-GEN(2).* Site 4a has made a general consulting room available for medical specialists to have regular clinics at the practice seeing both patients from the practice and the local community. Most specialists bring their own receptionist and billing is processed externally.

A PN at Site 4b has worked on establishing an informal network with individual health providers in the local community when she started working at the practice. There are no formal relationships with local hospital or community health centres.

Clinical integration

There are good examples of GPs and PNs in particular collaborating and working together to coordinate patient care. PNs at both practices routinely identify patients who are eligible for health assessments as part of their role and usually report back verbally to the GP after reviewing a patient. Often these assessments are nurse rather than GP initiated and 4GP(5) mentioned that they were not always aware that an assessment had been completed on a patient. Health assessments, care plans and team care arrangements facilitate referrals to AHPs and GPs and PNs work together to assess and manage complex patients using these

methods (4GP(4), (4GEN(2)). PNs will make recommendations to GPs about AHP referrals after discussion with the patient (4N-GEN(2) & (6)). There are some differences in how PNs are utilised by GPs at Site 4a. The Nurse Practitioner at Site 4a takes a role working with GPs on chronic disease management including reviewing current treatment and identifying gaps in care where other services could be provided.

The nurses at Site 4b believe a significant part of their role to be supporting the GP and maximizing the time they (the GP) have to spend with the patient. The PN's

> "work as a team and we support the doctors" (4N-GEN(3)).

They 'watch' the GP appointment list to see if they behind and for tasks they can attend to. The GPs have ongoing 'to-do' lists for PNs to attend to had been given responsibility for the management of chronically ill patients by conducting home visits while a GP was on extended leave (4N-GEN(1). All new patients have an appointment with a PN before seeing the GP so they can begin the patient record and document history and observations. GPs and PNs at both sites work together on APC collaborative waves based on interest in particular clinical areas.

AHPs do not take a formal role in patient care planning and planned case conferencing does not often occur. However, colocation allows informal /corridor discussion between GPs and AHPs about patients they are treating.

A number of clinical staff, both GPs and PNs, mentioned a lack of clinical leadership, vision or supervision to inform their practice.

> "There are no checks and balances for me" (4N-GEN(1).

4GP(4) described the practice as

> "having no leader as far as the clinical side". "So the clinical… is the weak point".

Clinical meetings tend to focus on the running of the practices rather than discussion of clinical issues. Attendance is by choice, but the number of part-time staff and the high workload of the GPs impact on the attendance of clinical staff.

6.3 Future plans/next steps/priorities

Recruitment of GPs continues to be an important priority for the centre to provide increased access for patients as well as to become profitable as a business.

When funding is available there are plans to expand Site 4a to a second storey to accommodate more GPs and allied health professionals at the practice, as well as a staff training room.

Maintaining and working toward the next accreditation standard is another important priority for the centre.

7. Enablers and barriers

7.1 History and context (inc vision, local context)

Issue	Integration	Access
Site 4b was a previously established practice and well-known by the community who have taken some time to accept it as a privately owned practice when they previous viewed it as being "owned" by them.		Y

Two GPs working at Site 4a have moved their practice and patients to the centre. There are extra GPs working at the centre but this hasn't really added capacity to the availability of appointments. These GPs continue to booked out booked out for 1-2 weeks in advance seeing their previously and essentially have closed books. Several of their original patients have left the practice because they can't always book in to see their GP of choice.	Y	Y

7.2 Drivers, motivators (inc regional/global influences)

Issue	Integration	Access
It has been difficult to recruit full-time GPs to the practice and a higher number of part-time GPs affect the continuity of care that is able to be provided to patients who can't always make an appointment with the same GP each time.	Y	Y
Participation in the APC Collaboratives has increased the use of the PENCAT tool, the running of clinical reports and lead to the establishment of diabetes registers at both practices that are overseen by a PN.	Y	
Both sites are purpose built and have good facilities for consultation.		Y
The owner is aiming to make both practices financially viable and to facilitate expansion at Site 4a which has currently developed and using one of two floors at the site.		Y
Focus on identifying, completing and claiming extra item numbers for nursing and AH eg. care plans, health assessments, HMR (GP(5).	Y	

7.3 Functional enablers (for access & integration)

Issue	Integration	Access
There are clear governance structures for decision-making between the owner and practice management staff which seem to work well for the negotiation and implementation of decisions at an administration level.	Y	
Regular staff and clinical meetings scheduled but not always well-attended. Significant number of part time staff. Difficult to arrange formal and informal discussions 4AD(7).	Y	
A lack of clinical focus or leadership for clinical staff was mentioned by a number of staff. There is no designated person for clinical leadership, governance or accountability. Clinical staff either don't have time or don't see the value in staff or clinical meetings and don't often attend. GPs are employed as independent contractors of the practice rather than employees.		
A larger practice means that there are more resources available to establish and maintain information and communication systems.	Y	

Issue	Integration	Access
There are clear governance structures for decision-making between the owner and practice management staff which seem to work well for the negotiation and implementation of decisions at an administration level.	Y	
Regular staff and clinical meetings scheduled but not always well-attended. Significant number of part time staff. Difficult to arrange formal and informal discussions 4AD(7).	Y	
A lack of clinical focus or leadership for clinical staff was mentioned by a number of staff. There is no designated person for clinical leadership, governance or accountability. Clinical staff either don't have time or don't see the value in staff or clinical meetings and don't often attend. GPs are employed as independent contractors of the practice rather than employees.		
A larger practice means that there are more resources available to establish and maintain information and communication systems.	Y	
Single patient record system. All clinical staff are able to access. Utilisation and documentation in patient notes is by choice for co-located AHPs. AHPs have less access than GPs. GPs can make certain areas confidential. Assists AHPs with care delivery.	Y	
Purpose built sites with well-planned consultation and treatment facilities for all clinical staff. Physical layout makes the facility easily accessible for all patients.	Y	Y
Streamlined billing and appointment systems: Majority of appointments and billing (including AHPs and specialists) handled by practice receptionists. SMS reminders system and phone calls.	Y	Y
Well-defined recall and reminders systems in place including follow up procedures for urgent results and handling correspondence from external providers.		
Co-location of AHPs benefits both practice staff and patients. Facilitates teamwork, communication, collaboration, patient appointments/access.	Y	Y

7.4 Culture, teamwork & relationships

Issue	Integration	Access
It has been challenging to get the multidisciplinary approach working well particularly communication between professions. AHPs have been reluctant to interact with the GPs despite being co-located (4CM(1).	Y	Y
On site AHPs not always referred to. 4GP(5) reported a preference for referring patients to the AHP and pathology services that he knew and had used previously before moving to this practice. Patients may prefer to be referred to an off-site AHP or specialist.	Y	

A good working relationship between the GPs and PNs at Site 4b has increased the participation and role of PNs in patient follow up.	Y	
Some clinical staff perceive that the business focus of the practice has resulted in a lack of vision, particularly from a clinical perspective.	Y	
The vision of providing multidisciplinary team care and access for patients to multiple services under one roof seems to be well-known by staff at both sites.	Y	Y

8. Impacts

8.1 What's been achieved

The presence of the GP Super Clinic (Site 4a) has facilitated access to GPs for patients when needed and reduced workload for GPs in the area (4GP(4) (4N-GEN(2)). Extended hours mean more time for patients to access services (4N-GEN(2)). A significant number of GPs are part-time and it is difficult to provide continuity of care when patients can't always access the same GP at each visit.

Setting up multidisciplinary integrated care was described as an achievement by the CM who believes that the practice is

> "breaking the mould as far as how we care for people" (4CM(1)).

This has been achieved to the extent that there is a diverse range of allied health practitioners that have been recruited and are working at both sites, as well as a number of medical specialists. However, there seems to be variation in how closely the different professions work together and co-location directly resulted in collaboration. This informal communication between professions has taken a long time to develop but is now starting to work well (4CM(1)).

Achieving and maintaining accreditation was also identified as an achievement (4AD(1)).

8.2 What's sustained/embedded

The recall system in Best Practice is used to recall patients for urgent and non-urgent results. There is an established procedure to follow up these patients implemented by GPs, PNs and reception staff.

PNs at both practices routinely identify patients for care plans and health assessments as part of their role. Standard care plan templates in Best Practice are used to complete these assessments

A protocol has been negotiated between management and reception staff and implemented so reception staff have clear guidelines on how to manage walk-in patients when there are no appointments available. Patients are provided with a list of options and are able to speak with a clinician if required.

A procedure has been introduced at Site 4b where all new patients have an initial appointment with a PN to document history and being the patient record before they see the GP.

PNs at Site 4b make regular visits to the front desk to support reception staff with receiving patients at the desk and answering phone calls. This also allows them to speak with GPs opportunistically if required.

Patient notes are shared with their usual GP practices. This is particularly in Site 4a where patients from other practices are seen after-hours or on the weekend.

CASE DESCRIPTION (GPSC 5)

1. Overview

This large centre was established in 2011 and built as a GPSC. It is a relatively new, purpose built, two-storey facility. The centre is in a regional city located within two hours travel of a State capital. The city covers an area of 3,000 square kilometres. The population is approximately 100,000 and growing. Population projections are for growth of 29% between 2015 and 2031, increasing from 113,000 (Estimated Resident Population) to 146,000 people. Couples with children make up 27% of the population while 10% of the population are older couples without children. The SEIFA index of disadvantage score is 967.

The city has two universities and two hospitals; a private Catholic hospital and a large public hospital, both in the process of rebuilding. There is an extensive network of GPs and allied health private and public providers in the city and the regional hospital and its outpatient/outreach programs provide services to residents from towns located in the region.

The centre is committed to workforce education and training and has strong partnerships with two local universities. It is located in the health education precinct close to the regional hospital, university 1' s (uni 1) Rural Clinical School and university 2's (uni 2) Rural Health School. Uni 1 provides a clinical training school and partner clinics to medical students and uni 2 has extensive allied health and nursing programs. There are buses services to the site and some no-cost patient parking.

Up until a few years ago, there was shortage of GPs in the city and because of the extended opening hours of the centre, many city residents attended the centre for emergency or incidental care. So while there are a very large number of patient records at the service, approximately 50% are active.

The centre provides services to three groups: 1) regular active GP patients 2) after-hours only patients and 3) patients who only use the co-located or visiting specialist services. The centre also provides services to client groups, such as alcohol and other drug users and residents in aged care facilities, that other practices in the area are reluctant to provide.

2. History and context

A practice existed on part of the site since 1992, led by the current centre's Clinical Director since 2003. This centre was established in 2011 under the GP Super Clinic scheme, with additional funding from the State government. This allowed construction of a much enlarged centre. There were three foundation partners: a Community Health Service (CHS), a Local Hospital Network (LHN) and a university (uni1). Initially the board was composed of two representatives from each partner; in 2013/4, it moved to three representatives and three independents. There are four other project partners: Medicare Local; city council, a university (uni2) and a medical education agency.

In addition to the Clinical Director, several other GPs have been with the centre since 2011, as have several other administrative and nursing staff. There has been significant turnover in management and administrative staff. At the time of initial data collection (August 2014), the fourth Centre manager was in place – she subsequently left, and her replacement suffered a major illness from April 2015.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	Y/N	Examples
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	Y	Alcohol and other drug services
Regular outreach clinics/program programs	Y	Provides services at local residential aged care facilities
Regular education/self-management/ support programs in the community	Y	Diabetes group education
Other	Y	Strong focus on clinical education and training

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals:	Private allied health professionals include: physiotherapy and psychology.
Range of other health professionals/disciplines	LHN/CHS out-posted hospital clinics and services include: HARP, oncology, familial cancer genetics, paediatrics, podiatry, diabetes education, dietetics, mental health and social work. There is also an onsite pathology service.

4. Vision

A number of staff mentioned aspects of the objectives of a GP Super Clinic including:

- A centre for integrated, holistic care
- A multidisciplinary best-practice centre with a focus on teaching and education
- After-hours services that accommodate overflow from the hospital emergency department located in the same precinct.

However, there were reports of high staff turnover, little continuity and organizational memory and community perceptions that it is a difficult place to work. This was consistent with the turnover of management staff and the instability of and conflict between the three partner organisations (uni1, LHN and CHS). As a result, staff perceptions of the vision and its implementation differed widely.

Despite this, the centre provides services to a very diverse population including alcohol and other drug and residential in aged care that other practices are reluctant to provide. However, with the recent over-supply of GPs in the area, there is some evidence of rivalry between this and other practices and concerns about the financial viability of the centre itself.

5. Importance of access and integration

5.1 Access

Access is primarily seen through the lens of being available for patients who would otherwise not be seen in a timely manner by a GP or, to a lesser degree, another provider. This is expressed in the strong commitment to extended opening hours, accepting clients from residential aged care facilities (RACFs), and accepting clients with alcohol and other drug addictions. Historically, a predecessor clinic had a significant role in providing out of hours care and as an overflow from the adjacent hospital emergency department (ED). Within this overall framework repeated attempts to formalise an arrangement with the adjacent hospital for diversion from ED are yet to succeed.

5.2 Integration

The centre has achieved only modest steps towards goals around integration. For example GP5 (Clinical Director) rated progress as 5/10, while 5ES (AHP mgr) thought multidisciplinary care had been established,

> "but interdisciplinary care, maybe not so much".

While numerous services are co-located with the centre core services and share use of the main patient record system, they not strongly integrated. There is evidence of internal clinical integration. More recent efforts to build practice infrastructure have been hampered by the changeover of practice managers and tensions between management staff, the Board and LHN.

Co-consulting models are used; particularly at specific PN and GP-registrars clinic; more through reporting processes in other cases. This model is especially useful for complex care issues.

6. How access and integration are optimised

6.1 Major approaches for optimising access

Availability and accommodation

The centre is open seven days a week; until 10pm Monday to Thursday, 6pm on Friday and 11am to 5pm on the weekends. They provide an online appointment booking service and see a large number of people who cannot get an appointment with their own GP. This is problematic in terms of access to medical records.

While parking is available on site, much of this is used by non-clinic attendees who seek parking for other purposes in the health precinct and LHN is reluctant to install a boom gate to restrict non-clinic parking. In other respects, physical access through entrances, corridors etc is adequate for people with disabilities.

Approachability

There are multiple signs regarding service hours and queues for other co-located services that are sometimes relatively small. There are numerous preventative health brochures/information and advertising via screens (all in English) in the waiting areas. Information packs, sheets and website details are provided. The reception area is large, but often very busy and not friendly.

Outreach community education talks are provided but they are not regular. A SMS reminder system has started but is not fully implemented. Home and RACF visits are routinely provided. Policy is to take on people entering RACF in cases where their existing GP will no longer see them and to see people with addiction issues.

Affordability

Despite continuing perceptions that this is a bulk-billing clinic, it has a mixed billing system, with concession card holders and children bulk-billed, and others at the discretion of the GP. There are often charges for a range of PN services. In some cases, the GP also sees these patients so they can be bulk-billed for the service. Management plans are often used to access services without out-of-pocket charges. However, there is confusion because some allied health services are provided by several co-located staff who work under a range of billing arrangements – so a patient may transition from free (HARP) to co-payment (EPC) systems.

Acceptability

Services are provided for refugees (particularly for the local Karen community), mental health and AOD clients; often for those who other practices will not see. Interpreter services are provided via telephone and while these are time consuming to book, they are commonly used by some families.

Appropriateness

There are a range of co-located allied health, medical specialists and multidisciplinary clinics at the centre. Very few indigenous patients are seen. They commonly attend the local AMS. However some of the GPs do sessions at the AMS and so, in theory, they can come and seek care with their own GP.

6.2 Major approaches for optimising integration

Organisational level

There are reports that the functioning of the Board has improved, with improved focus on strategic direction since the introduction of directors independent from the founding partners, and that the Chair provides strong leadership. However, there are tensions with LHN and concerns about their intentions. For example, the centre wanted to provide pharmacy services but LHN wants this to be a part of the new hospital which will be opened in 2016. Recently, there have been a number of attempts to address some of the problems with LHN.

The GPs are funded under several different arrangements. Most are on MBS percentage, some rent rooms as private contractors, others are salaried for particular purposes while GP registrars are on salaries.

Professional level

<u>Internal integration</u>

Many of the visiting providers operate autonomously and this can be a problem. Some staff view this as “siloed” care and think it would be best if LHN services all used the same room. There are a number of co-located services and some of these are a temporary arrangement as they wait for the opening of the new hospital. Some of these services bring their own reception staff and health records and/or just send their appointment list ahead. This was particularly apparent for one medical specialist who initially wanted their own rooms, phones and computer systems.

Patients can move from differently funded programs to receive the same service (e.g. from HARP to community health) and so their medical record might be with the centre, the co-located provider or the provider may enter details into both systems. Recently, a system has been established where hospital co-located services can be booked from both the hospital and the centre systems.

Overall, GPs are well utilised but there is room for improvement. Some GPs have come from solo practices and so are not accustomed to working with PNs. However, they are willing to adapt.

Under the original model, CHS provided allied health services on-site. However, the centre began to charge room rental and so diabetes education was withdrawn. The student-led podiatry clinic continued. However, this will cease, because uni 2 is to discontinue the local podiatry course.

There are a number of inter-disciplinary education opportunities. There are monthly inter-disciplinary discussion groups held monthly. The medical, nursing and allied health students get a lot out of these. There are also lunchtime case presentations and these are attended by GPs, nurses and other clinicians.

There is a lot of incidental communication with co-located AHPs. These include corridor conversations, phone calls, email messages and notes in Best Practice. Some AHPs believe that inter-disciplinary care is still a "struggle" with GPs and that it is commonly multidisciplinary care whereby the GPs still like to be

> "in total control of patients' care" 5ES(AHP mgr).

<u>External integration</u>

Referral arrangements between GPs and allied health are similar for co-located and external personnel, utilizing reports and care plans:

> "I would absolutely need to have a mental healthcare plan, and that's a regulation" 5N(CMH).

Some co-located referrals are sent electronically or put in the pigeon-hole. Externally, this can take time, e.g. to go through the LHN appointment system, so they would like to have

> "our own in-house allied health people that want to actually have those referrals internally" 5GP(Clinical Director).

GPs refer to co-located or external providers,

> "based on the need of the patient" 5GP(2).

Clinical level

Two levels of clinical governance exist – a clinical governance committee, and a fortnightly Clinical Advisory Group. However, there is evidence of variation amongst providers: GP2 has purchased own access to therapeutic guidelines and

> "can't think of any guidelines that I use which are available to everyone … every health professional has their own ways of clinical decision making." (GP2).

The GP or PN usually co-ordinates care. PNs are well utilised and typically do immunisations, wound management, phone triage, health assessments, care planning (also at RACFs) and assist with procedures. Sometimes the PN does the care plan with the GP. Within the co-consulting clinics model, PNs train GP registrars in things such as wound care and immunisations. The clinical director explains the model to the registrars prior to them participating.

6.3 Future plans/next steps/priorities

The priority for the centre is to stablise the management. The Board had put in place a centre manager to be a change agent to improve culture and bring standardisation. However, she left, and new manager is ill, so this is a work in progress.

There is a focus on improving staff culture particularly in relation to ensuring the centre is be welcoming of patients. To do this, there is a recognised need to stabilise reception staffing. The appointment of a full time reception team leader will provide continuity and make significant steps toward achieving a different attitude to patients, and establishing continuity and standardisation of practices.

Financial viability is also a priority. Financial issues continue to be a challenge to the existence of the clinic. There are still plans to establish a pharmacy onsite. This would assist financial viability through rental income and through bringing more clients to the centre.

There are also plans to have some AHPs directly contracted on site. It is thought this would expand cooperative arrangements.

7. Enablers and barriers

7.1 History and context (including vision, local context)

Issue	Integration	Access
Barriers:		
Pre-existing perceptions of the centre as an occasional, overflow, bulk-billing clinic, rather than as a place for good ongoing care.	Y	Y
Conflicts within founding partners - Board	Y	Y
Financial viability > patient numbers > LHN as blocker. Initially of Pathology, then of Pharmacy	Y	
Lack of clearly agreed vision/mission/goals for the centre	Y	Y
Enablers:		
Patient perceptions shifting toward seeing that they are getting high quality care	Y	Y
Recent shifts in board structure enable more strategic focus	Y	Y

7.2 Drivers, motivators (including regional/global influences)

Issue	Integration	Access
Barriers:		
Case conferencing not financially attractive for allied health	Y	Y
Seed funding often not available for initiatives	Y	Y
May not use available MBS items as effectively as possible	Y	
Enablers:		
GPSC reporting requirements support attention to goals around multidisciplinary care, health workforce education, access, etc.	Y	Y
Use of health care plans and assessments	Y	Y

7.3 Functional enablers (for access & integration)

Issue	Integration	Access
Barriers:		
Board/partner conflicts	Y	Y
Poor communication history with management/admin staff		Y
Turnover of managers – constant changes of approach for other staff.	Y	Y

Turnover of reception – lack of continuity and standardisation		Y
Culture not patient focused	Y	Y
Management and reception instability		Y
Enablers:		
Purpose built centre with good consulting spaces and physical access	Y	Y
Wide range of services under one roof	Y	
Shared patient records; use of internal messaging; overall good communication clinically	Y	
Inter-disciplinary meetings with case presentations.	Y	
Nurse team leader important in coordination of nursing workforce with multiple roles and part time schedules.	Y	

7.4 Culture, teamwork & relationships

Issue	**Integration**	**Access**
Barriers		
Culture not patient focused	Y	Y
Management and reception instability		Y
Enablers		
Nurse team leader important in coordination of nursing workforce with multiple roles and part time schedules.	Y	

8. Impacts

8.1 What's been achieved

- Still open – have not succumbed to financial pressures
- Assembling a large number of GPs and allied health and specialist services under one roof
- Playing a significant role in education of medical, nursing and allied health workers
- Nurse/Registrar co-consulting clinics
- Regular interdisciplinary educational events
- Providing access to people that others won't or can't see – drug and alcohol addiction issues, RACF, after-hours
- Allied health use practice record system for practice clients – at higher level than usual
- Some argue that there has been a change in public perception - now has a good name. However, others say that it is still a seen as a bad place to work

8.2 What's sustained/embedded

- Nurse/Registrar co-consulting clinics
- Regular interdisciplinary educational events
- Providing access to people that others won't or can't see – drug and alcohol addiction issues, RACF, after-hours.

CASE DESCRIPTION (HO 6)

1. Overview

The centre operates as a partnership between a GP practice and the community health nurses and allied health staff who are employed by the Local Health District (LHD) and co-located at the centre.

The centre provides a hub for primary health care services to a small, rural town of 1,600 people as well as four smaller surrounding communities within one hour's travel of the centre. The surrounding area is predominantly rural. The population profile is classified as socioeconomically affluent however, some members of the community experience significant social disadvantage particularly those residing in smaller communities. There have been a number of young families move into the area but there are a significant numbers of older residents (approximately 15% 70 years and over).

The centre is located in a one storey facility located within 200m of the town centre. There are GP and PN consulting rooms on one side of the facility and community health nurse/allied health rooms on the other side. These areas are joined by two corridors with a staff tea room located in the centre of the facility. There is a single reception desk staffed by both practice and LHN staff.

The centre is located 30 minutes travel from a major, rural city. There is a second solo GP practice (newly opened, specialising in skin surgery), pharmacy and dental surgery located in the town centre and a 27 bed hospital located within 1km. There is a major regional hospital located 40km away in the regional city.

2. History and context

This centre opened as a HealthOne approximately 8 years ago and moved to a purpose built facility in 2009. The general practice is accredited, and a teaching practice for the University of Sydney.

There are several long term staff still working at the centre, including the original Principal GP and PN. A number of staff have been working in the local area, including at the local hospital and in surrounding communities, for several years and have good knowledge about the local community. The practice manager recently joined the practice but has previously worked as a PN with the Principal GP at one of the smaller communities serviced by the centre.

The centre has been participating in the NSW Integrated Care Strategy (IC strategy) which is operating as a partnership with the LHD and two Medicare Locals. The strategy includes targeting the most complex chronic disease patients for health assessments and multidisciplinary care planning, and the sharing of patient records between both the practice and LHD staff working at the HealthOne.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	**Y/N**	**Examples**
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	Y	Integrated care strategy (chronic disease patients)
Regular outreach clinics/program programs	Y	Regular clinics to smaller communities in the surrounding area.
Regular education/self-	Y	Healthy lifestyle programs: Cardiac rehab, falls

Type of services	Y/N	Examples
management/ support programs in the community		prevention, Heart Foundation walking group.
Other		

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals:	Dietician, Occupational Therapist, Physiotherapist, Fitness Leader, Psychologist, Podiatrist, Optometrist, Pharmacist, Counsellor.
Range of other health professionals/disciplines	NA

4. Vision

There were consistent messages about the vision and goals of this centre given provided by both the practice and community health staff. The vision of the centre has always been to provide an integrated approach to primary health care, between the community health service and the general practice (PGP(1)). Increasing and enhancing local services (6ES-ML), providing a central place for clinical care (as per the HealthOne model), and a service that is free and easily accessible to the community (6CM(1)) were also mentioned by staff as being part of the overall vision of the centre.

Preventing people from using the hospital as an alternative to GP services, keeping people with chronic disease well and reducing hospital admissions were also mentioned by a number of staff as being part of the overall goals and vision of the centre.

> "I'm very conscious of trying to keep those ED departments for emergency presentations, so we do – it's always been an ethos here" (6N-GEN(4)).

The Integrated Care Strategy currently being implemented at the centre has a focus on prevention and chronic disease management.

> "So the aim of that program is to try and stop people who've got a chronic disease burden becoming more unwell, and ultimately we'll try and keep people out of hospital and independent for longer" (6PGP(1)).

Ways of achieving this vision include:

- Aiming to be perceived by the community as one organisation eg. having one reception desk and contact point for all services.
- The introduction of multidisciplinary case conferences, a dedicated care coordinator with extended appointments for patient care planning through the integrated care strategy.
- The introduction of the sharing of electronic records for practice patients with community health clinical staff.

5. Importance of integration and access

5.1 Access

The centre has focused on providing the local population with an affordable range of services that can be accessed within their local community. This includes working well with external services.

> "…if we can work better together then it's going to be a lot easier for patients to access care**"** (6CM(1).

Transport to health services and affordability of services were the two major access issues identified by centre staff. Outreach clinics are provided to surrounding communities, including local schools, making health services more accessible to those who are may find them difficult to reach.

The centre aims to main a reputation of 'no fees' for patients and all general practice and community health services provided by the centre are bulk billed. Patients are informed in advance about out of pocket expenses for any external providers they are referred to both within and external to the centre.

The majority of staff, particularly those in management positions (6CM(1), 6PGP(1), ES-ML, ES-HSM), have a good understanding about the needs of the local community and use this knowledge to develop a health service that is meeting those needs.

5.2 Integration

Integration has been an important part of the overall vision of the centre as it has developed. Integration at this service is about providing a streamlined service to patients and much of the planning and services have been focused on providing integrated care.

The development of teamwork between the practice and co-located community health staff is perceived as an essential component of providing integrated patient care and a cohesive service. There has also been a focus on expanding the local multidisciplinary team to include staff at the local hospital.

The Integrated Care Strategy has provided allocated time and funded positions specifically for the development and implementation of integrated care strategies. *6CM(1)* believes the strategy is helping to change the mindset of the staff toward multidisciplinary care planning and looking at the bigger picture when providing patient care.

6. How access and integration are optimised

6.1 Major approaches for optimising access

The centre goes about optimising patient access to health services within the local community in a number of ways.

The purpose built facility provides good physical access for patients to and within the centre. Adequate parking is available, including disabled parking spaces and limited community transport services are provided by the council is available to assist patients to reach health services.

The centre has standard opening hours, 8.30am to 5pm, Monday to Friday. Walk in patients are accepted and there are 3 to 4 appointments left open each day for emergency patients (6CM(2), 6CM(1)0. *A*fter hours are services provided by the hospital. After hours arrangements are communicated to patients through the practice information sheet, telephone message and outside signage.

Patients have access to a range of community health and private allied health professionals at the centre. Patients can access these services in one location, unlike larger towns where they have to go to multiple locations (6GP(2).

The centre provides weekly GP outreach clinics to surrounding smaller communities and the aged care facility next door. Exercise and health promotion programs are run after-hours allowing people to attend after work. Health promotion programs are implemented based on identified community health needs e.g. men's health/suicide rates, chronic disease prevention in 40-45 year age group.

Centre staff also seek to connect patients with external services they are eligible to receive and assist them to navigate the services available (6CM(1). Receptionists make appointments on behalf of patients with internal AHPs, as well as external providers including AHPs, specialists and radiology. There can be long waiting lists for specialists and a direct phone call from the practice can assist patients to get an earlier appointment if required (6CM(1).

PNs and receptionists will try to book appointments with multiple internal providers on the same day to accommodate patients, particularly if they are travelling long distances (6CM(1).

The practice aims to maintain a reputation for having no fees and all patients are bulk billed for practice and community health services. Private providers are responsible for own billing so payments are not associated with the practice. Receptionists inform patients of the expected costs for referrals to external providers.

Other

Centre staff are well-known in the community and there is a positive perception about the centre in the community (6ES-AHP(Phar)). Staff regularly try to connect with and encourage patients to attend exercise and health promotion programs. People are more likely to attend when they have met and know the people running the programs.

Centre staff (6AHP(FitLdr, 6N-GEN(CN)1), seek to provide health information tailored to the interest of the patient and their ability to understand the information.

> "I mean it depends on their education, how much they actually know and how well informed they are (6N-GEN(CN)1).

6.2 Major approaches for optimising integration

Organisational

Practice and LHD community staff are co-located within the centre and patients perceive the centre as one entity rather than two co-located organisations. Private AHPs (podiatrist, optometrist, psychologist) hire rooms (leased from the council), and handle their own billing and bookings.

Operational costs are shared between practice and the LHD. There are memorandums of understanding in place about the use of resources but these have become more historical rather than binding and both the practice and LHD utilise each other's resources. Initially there were clear divisions of roles between LHD and practice staff. Over time they have become more centre and patient focused and less important.

6PGP(1) contracts the Medicare Local to undertake recruitment and development of position descriptions. The Medicare Local also manage staff employment records, and staff access payroll records and payslips through the Medicare Local.

Professional

<u>Internal</u>

Co-location has promoted collaboration between clinical staff (GPs, PNs, CHNs and LHD AHPs) including referrals, joint case conferencing, informal multidisciplinary team meetings and professional development (6CM(1). The shared tea room, located in the centre of the building, is used by both practice and LHD staff. Internal referrals between practice and LHD staff are made regularly and using a variety of methods ranging from informal referrals made during conversations, phone, email, or specific referral forms (PNs) and GP referral letters.

Working relationships and trust have developed over time. The practice and community have developed from two separate teams to a situation where staff are able to

> "move between the GP practice and community primary care and really it's all pretty open and transparent" (6ES-ML).

PNs and CHNs have their core roles but their roles often "overlap" and they "step in" to take on tasks for other nurses when needed.

The recently implemented Integrated Care (IC) strategy enables weekly multidisciplinary team meetings to be held providing a more formal structure for collaboration between clinical staff (GPs, PNs, LHD AHPs). Separate monthly team meetings are held for LHD and practice staff. CM(1) attends practice staff meetings so issues raised can be communicated to the LHD team.

External

Private AHPs are less integrated with the rest of the team than community health AHPs and do not attend clinical or practice meetings or have access to clinical records. An exception to this is the local pharmacist who conducts home medication reviews one day per week and attends the weekly multidisciplinary team meeting as part of the IC strategy. The pharmacist has received an increasing number of HMR referrals since the IC strategy began and has developed a stronger relationship with staff at the centre.

Co-location of external providers allows informal collaboration with centre staff eg. the visiting psychologist is able to catch up with referring GPs to talk about any concerns they have about particular patients (6ES-AHP(Psy).

> "The doctors here are always really open though to just wandering over, and knocking on their door, and having a chat about clients once I receive a referral" (6ES-AHP(Psy)).

The centre aims to connect and work with local external services. These relationships and networks also have an impact on access for patients to other services. 6ES-ML mentioned that the centre have been liaising with local home-based services and the LHD to address the gap mental health services in the community. An interagency meeting had been organised to educate staff about what services are available for patients in the local community.

Centre staff have established networks and relationships with external providers built on previous experience and employment at other health services in the area *(*6N-GEN(4). 6NGEN(CN)2 specialises in palliative care and has previously works closely with the palliative care unit of the regional hospital. If the patient lives in another community 6NGEN(CN)2 will do joint home visits with the local community nurse.

The working relationship between the centre and the local hospital has developed over a period of time facilitated by informal relationships between PNs and 6CM(1) who have previously worked at the hospital and understand the context. The relationship has become more formalised with the implementation of a weekly meeting held at the hospital and attended by centre (6CM(1), 6N-GEN(4), AHPs) and hospital (NUM) staff to review in-patients and support the hospital to discharge plan and assess what services are required. Centre staff (6PGP(1), CM(1), a PN) also attend the monthly hospital meeting on patient safety to discuss patient issues and outcomes (N-GEN(PN)3).

Community health AHPs and GPs provide clinical services to the local hospital, and the hospital may receive referrals from the centre to attend to dressings and infusions on the weekend.

> "As far as the hospital goes there's very good communication if you need - you know we're all very good at information sharing if it's pertinent to the patient's care" (N-GEN(PN)3).

Service/Clinical level

Care plans for practice patients are completed by PNs and GPs and all patients new to the practice are booked for an appointment with a PN before seeing the GP. Community health AHPs don't contribute to care plans for practice patients.

The partnership between the hospital and the centre has helped to identify and manage high risk patients in the community. High risk patients are "flagged" during the weekly multidisciplinary meeting at the hospital for the purpose of implementing health assessments, care planning and preventive services eg. occupational therapy (6CM(1)). There has been an increased focus on discharge planning, with the support of the centre,

> "to ensure that there is cohesion between what's happening up here with the patients that need to go home, or what's happening, and trying to get them ready for community support, particularly if they are one of our frequent flyers and chronic patients." (6ES-HSM).

The introduction of the IC Strategy has introduced a number of initiatives that impact on integration at a clinical level. The model of care includes

> "giving them a comprehensive home-based assessment; giving them a shared care plan; the GP-led multidisciplinary case management conferencing; a home medication review; and then care navigation…and then we put them on the recall reminder system to bring them back every three to six months." (6CM(1)).

The top 50 "high end users" of services have been identified using specific criteria as part of the IC strategy. There is one PN employed who works on care planning and health assessments for these identified patients. The next 125 patients have recently been identified and care planning has commenced.

Access to the Best Practice system (consented practice patients only) has provided LHD staff with more information about patient medical history, pathology and radiology results. The practice is aiming to consent all practice patients for the IC strategy.

Multidisciplinary team meetings are now held weekly for planning and decision making about care for IC strategy patients. The shared patient electronic record is accessed during these meetings and notes, actions and decisions are added so other staff can access this information.

> "it's more effective compared to working individually by ourselves because some of the information we might get are from other disciplines that we couldn't get it by ourselves." (6AHP(Diet)).

6.3 Future plans/next steps/priorities

Implementing and demonstrating a model for integrated care that works, that is financially viable and uses clinicians effectively.

> "I would hope we would be able to export that then to other general practices" (6PGP(1)).

The centre is aiming to include all practice patients with chronic diseases in the model of care being implemented as part of the IC strategy.

7. Enablers and barriers

7.1 History and context (including vision, local context)

Issue	Integration	Access
6PGP(1) seems to have played a key role in setting and executing the vision for the centre. "Oh, he just sort of sets a vision, and he just goes for it. Like, he's just – and he doesn't give up until it's done" (6CM(2). Long term vision to have an integrated approach to care, including an integrated medical record.	Y	
6PGP(1) is "used to" an integrated approach. Moved to town knowing the HealthOne was planned and has a long term interest in integrated care strategies	Y	
Majority of practice patients have been receptive to the integrated record and have provided consent for the their records to be shared through the IC strategy	Y	Y
A small town where everyone knows each other helps with management of the patient compared to metropolitan areas/hospitals where you don't have that ongoing relationship *(6AHP(Diet).*	Y	

7.2 Drivers, motivators (including regional/global influences)

Issue	Integration	Access
Targeted funding for integration activities: > IC strategy: provided funding for an integration coordinator (PN) and manager, upgrade of clinical record system to allow record sharing, funded time for PGP to work on the project. > PN is able to spend two hours doing health assessments which allows time to do a full assessment (6N-GEN(4). > IC strategy has provided direction, guidelines and accountability, and evidence for whether it is working (6ES-ML).	Y	
Use of PENCAT (by 6ES-ML) and the sharing of data sets between the practice and the LHD is now happening as part of the IC strategy: > Monthly site reports submitted to the IC Project and feedback provided that is shared with centre staff (6ES-ML). > Patient and program evaluation is being completed (6ES-ML).	Y	
Fee for service model for GPs limits opportunities for whole of system planning because, "if you're not seeing patients you don't get paid" (6PGP(1)).	Y	Y
Roles of PNs and CHNs partially driven by income that can be generated through the practice. Provides occasions of service/ funding for the LHD and frees up PNs and GPs for care plans		Y

and health assessments. "we have the practice refer probably 95% of their dressings to the community nurses to continue following up".		

7.3 Functional enablers (for access and integration)

Issue	Integration	Access
Local leadership group: PGP, CH/IC Manager, HSM, PN (IC strategy), Medicare Local.	Y	
Streamlined administration systems: Single reception desk and phone line for patients to access GPs, PNs, CHNs, AHPs, pathology. Single appointment system for core staff.	Y	Y
The centre is seen by patients as one organisation.	Y	Y
Shared record system (initiated by IC strategy) between practice and LHD staff allows to document in medical record for practice patients: Streamlines referral and feedback, provides timely access to patient information, reduces duplication, facilitates communication and care planning (6ES-ML).	Y	
Layout of centre promotes integration: > The back office is shared by practice and LHD staff, a common area for all staff to access reception > LHN and practice 'sides' are joined by 2 corridors and a common tea room	Y	
Co-location provides opportunities for informal collaboration about patients and has, "been a key thing integrating from the very beginning when Health One opened." (6N-GEN(4).	Y	Y
Large whiteboard in back office with names of staff, days of work and location if they are working in outreach towns.	Y	
Systems in place for sending reminder letters, and following up recalls, results and missed appointments. Recall action lists are checked daily.	Y	Y
Regular multidisciplinary team meeting as part of the IC strategy, "having all the team's input in the one place for that has worked really well" (6AHP(OT).	Y	
Case conferences (IC Strategy) are transcribed into patient record.	Y	
Two information systems used by centre staff: Double documentation required for AHPs and CHNs into Ferret and Best Practice.	Y	Y
Ferret system is slow and time consuming to use.	Y	
CH/LHD staff have permission to access BP as part of IC strategy but practice staff unable to access LHD records.	Y	

Not all GPs and PNs are able to attend the multidisciplinary team meeting. Need to work out strategies for communicating information to practice staff who aren't able to attend (6GP(2), 4N-GEN(4)).	Y	
"We're not probably maximising our IT as we should in the provider network, so we probably need to really think about the wider providers outside the HealthOne and how we can better communicate, data share and use the IT systems for a better care pathway." (6ES-ML).	Y	Y

7.4 Culture, teamwork & relationships

Issue	Integration	Access
The team approach: A willingness to work as a team to provide the best care and outcomes for patients (6AHP(Diet). eg.	Y	Y
Good working relationships and leadership at the management level, particularly between the IC Manager and PGP.	Y	Y
The IC Manager is well-known and respected by the hospital, community nurses and GPs, has been able to break down barriers between these organisations (6N-GEN(4).	Y	Y
Developed good working relationships between practice, CH and hospital staff. Established and strengthened over a period of time.	Y	
Private psychologist doesn't have time to interact with centre staff, "I do back to back consults, so I don't – unless I get a cancellation, I don't have any break to go out and sit for lunch, or anything…" (6ES-AHP(Psy)).	Y	
It can be difficult to change mindset of health professionals to be open to working with other disciplines and sharing information (6AHP(Diet)).	Y	
A hospital bus is available to help patients access health promotion programs however there have been problems getting drivers who need to be assessed and cleared (6N-GEN(CN)1.		Y

8. Impacts

8.1 What's been achieved

Implementation of the shared record system has been a long term goal of the centre and this has now been achieved through the IC strategy.

Good working relationships have been established and are developing between practice, LHD/CH and staff working in the local hospital. This appears to be having an impact on patient care (6CM(1)).

The model of care being implemented through the IC strategy seems to be working well.

> "I think we've certainly got a way locally that works." (6CM(1).

Staff have observed improved compliance from patients participating in integrated care strategy eg. turning up for appointments and accepting referrals to allied health and external providers. Patients are supportive of the new, team approach to their care *(6AHP(OT).*

Community is able to access a large range of health services locally.

The practice and community health staff have gradually been able to become more integrated as a team rather than operating as two separate teams in one building,

> "so the public quite often don't actually realise that we're two separate entities because of that transition is just so smooth regardless of who they're talking to, yeah." (6CM(1).
>
> "…certainly I've seen that shift come up here as well too…so the practice and the community centre are not working in silos either now." (6ES-HSM).

PNs are well-utilised and have transitioned over time from a task orientated role to one that is more focused on care planning and coordination (6N-GEN(4).

8.2 What's sustained/embedded

- 6PGP(1) has an action list system that reception staff can access and check daily. They can see what referral appointments are required and make the appointments. Other GPs will use letters. Reception staff will make the appointment and then contact the patient to confirm.
- Protocols for receiving new patients implemented consistently by reception staff.
- Reception staff routinely inform patients about out of pocket expenses for specialists, AHPs and tests.
- Practice policy that all new patients have a PN appointment at their first visit before they see the GP. The PN then enters the remaining clinical / medical history information in to their medical record.
- Procedures in place for reception staff to follow up and account for patients who have missed appointments, and for the follow up of urgent pathology results.
- Regular meetings: Practice, LHD, MD team (IC strategy), hospital.
- Liaising with the hospital about discharge planning of inpatients is becoming part of routine patient care.

CASE DESCRIPTION (CHS 7)

1. Overview

This large Community Health Service (CHS) centre emerged in its current form in 2014 and now operates as part of a network of centres. The centre is in an inner-urban area, with a Local Government Area population of 107,000. The LGA population is in the 9th decile of IRSAD, and thus at the top end of advantage. However, centre patients mostly come from socially disadvantaged backgrounds, with 51% health care card holders and a large refugee and asylum seeker clientele.

The centre is located within 300 metres of a major road, shopping strip, train station and bus stop. There is an older building with a new wing attached, which includes a sizable meeting room. Three main wings and three smaller wings of treatment and consultation rooms extend from the central waiting room. One wing is mainly used by GPs, another by nurses, and others by various AHP, nurses and specialists. No customer car parking on site (possibly some disabled sites). Physical access for disabled people is adequate. There is an associated dental clinic in a separate building next door.

The centre occupies an older building with new wing attached, including a sizable meeting room. There are three main wings and three smaller wings of treatment and consultation rooms that extend from a central waiting room. One wing is mostly used by GPs, the second wing by nurses, and other wings by various allied health providers, PNs and specialists. It is an accredited practice and regularly hosts GP registrars.

The centre is located in an area that is well-serviced in terms of health services. There are five other GP practices located within 1km of the centre which range from solo to large corporate practices, as well as two maternal and child health centres, two Chinese medicine centres, and an acupuncturist. There is a pharmacy (open until 9pm) and optometrist within 200m of the centre, and four physiotherapy practices within 2km. There are four major public hospitals within several kms of the centre.

After hours services are provided one day a week for some allied health – podiatry and physiotherapy. A recent trial of after-hours GP service provision was discontinued.

2. History and context

This centre opened in 1975 as part of the CHS initiative and has always included GP, PN and allied health services in a not-for-profit model. CHS7 has undergone two major structural changes; after merging with several other centres in 1996 and again in May 2014, it now operates as part of a network of over 30 centres.

Most GPs and many PNs and allied health professionals (AHP) have a long history in community health, at this site and others. There is no central manager for the whole site; instead governance structure is tripartite, with a CM for the GPs and PNs; an AHP manager, and a client services manager. They work closely together (7CM). These three report to other managers in the corporate structure.

3. Staffing and range of co-located services/health professionals

Table 1: Range of services:

Type of services	Y/N	Examples
Generalist primary clinical care	Y	
Regular clinics/programs within the centre (condition/population/risk factor based)	Y	Royal Women's Hospital shared care clinics, Royal Children's Hospital eczema clinic. Trial of diabetes clinic about the start.
Regular outreach clinics/program programs	Y/N	Not usually directly through this centre, but connected with other CHS services
Regular education/self-management/ support programs in the community	Y	E.g. women's health workshop.
Other	Y	Pathology collection

Table 2: Range of co-located services (other than GPs, PNs)

Category	Type
Range of allied health professionals:	AHP mostly HACC. Private allied health services included podiatry and physiotherapy.
Range of other health professionals/disciplines	Specialist nurses include community mental health, chronic disease and refugee. Centre employed AHP include: social workers, counsellors, physiotherapists, podiatrists, dietetics, diabetes educator, occupational therapists. There is a centre employed visiting infectious disease specialist. There is also an onsite pathology service. GPs and PNs salary provided from MBS item funding.

4. Vision

The primary vision at CHS 7 was closely linked to the traditional CHS philosophy; providing integrated services for marginalised groups in the community. This was well understood by core staff who chose to work at this site because they shared these values. However, with growth and mergers of CHSs across sites and a new more corporate leadership, this selection bias may become less significant over time.

> "Providing services for whom Medicare is not enough…people who have a higher level of disadvantage … not exclusive, [still] supply services to the local community …but, in particular … refugee and asylum health, [and] people who are involved in multiple services. … mental health … drug and alcohol, or homelessness, …these people often have multiple needs, … multidisciplinary" (GP1).
>
> "Our primary model of care is an integrated clinic where we focus on the marginalised members of our community" (CM)"

> "caring for the community, having quality service, beginning open to anyone that comes in, so I would say that they're the general ones. I think, the service here is also quite accepting of people who are different", 7AHP(MAN).
>
> "integrated health service is where you have all the services that talk to each other, communicate with each other and that clients can access without barriers being put up … we're here to provide accessible health services. And we don't discriminate; we're very accessible" 7N(CMH).

5. Importance of access and integration

Access

Meeting the needs of disadvantaged and vulnerable populations is core for CHS – so there is a high percentage of HCC holders, refugees and other migrants, people with mental health and addiction issues, homeless people.

Free (bulk-billed) or low cost (EPC, HACC funded) health care provision is a key measure for these populations.

There is no after-hours GP/PN provision, and limited EPC AHP clinics.

The books were closed to new patients for a time, but are now open again – access to appointments for existing patients was prioritised over accepting new patients.

Integration

Whilst integration of multidisciplinary care is a core value, there are organisational barriers to its implementation: separate management structures and patient record systems for GP/PN versus Allied Health. Parallel positions exist for care coordination – chronic disease nurse in medical; care coordinator in allied health.

> "it's amazing the way it's integrated. The doctors work well with the allied health professionals, the nurses are of an incredible support, at a level I've not ever experienced before. They, to enable the doctors to diagnose and manage effectively, they do a lot of their procedures and work either with them or for them. Integrated with allied health, brilliant. Homelessness" (7CM).

6. How access and integration are optimised

6.1 Major approaches for optimising access

Availability and accommodation

Vision – multidisciplinary care for local community, particularly disadvantaged - people who require multiple services: refugee and asylum, mental health, addiction, homeless.

- Wide range of AHP on site; ability to refer within CHS network
- Standard Monday to Friday 9.00-5.00 practice; trial of 8.30 closing one night per week did not continue – GPs already too busy and continuity problems if contract GPs for after-hours only. Prefer deputising service, who report well. There are visits to RACFs and homes.
- Joint CHS/University Medical Student clinic run on Saturday mornings during semester.
- GPs and AHPs will see priority1, emergency patients on the same day. Triage by reception, then nurse.
- Books were closed to new patients briefly – priority is to look after existing clients first. Most long-standing GPs will not take on new patients. New GPs will. Registrars will, rule is two per day.

- "Homelessness, … Indigenous groups, asylum seekers, they're all areas that we tap into extremely well. We have emergency numbers, emergency relief, food vouchers, …processes in place … for example, Heatwaves – we do have a water fountain, but will supply SPF 30, extra water bottles, ice blocks to help clients" (7CM)

Approachability

- Outreach activities: community events – local, White Ribbon, LGBTI; hospital open days; materials (printed, internet links) in community languages
- SMS reminders day before appointments
- Policy of 3 warnings for no-shows, then put to end of list – but in practice more lenient. May need to develop *a bit more support to get them into appointments*. 7AHP(MAN)
- "Priority of access for the homeless, mental health patients, Aboriginal and Torres Strait Islanders, yeah, the disadvantaged basically" (7AD(1)).
- Word of mouth referrals - refugee nurse by relatives, community members; CD nurse by previous clients for substance abuse etc.
- Homeless outreach in other part of CHS connects people to this centre.
- "scope to do home visits … also provision for taxi vouchers and things" (7AHP(DIET)).

2.3 Affordability

- Bulk bill all, except overseas residents.
- Low cost (HACC funded or EPC) health care provision for AHP.
- HACC – cost for AHP visit: with health care card $9; low page $14; then by salary.
- Refugee health – work hard to get around inadequacies in system – e.g. to get the necessary letters from Dept. Immigration for asylum seekers not eligible for Medicare.
- Few private referrals due to cost. Instead refer internally e.g. to MH nurses using ATAPS.

2.4 Appropriateness

- 7N(CMH) Accept mental health patients that others have banned, e.g. due to making threats. Arrange to avoid waiting times.

2.5 Acceptability

- Significant efforts to work with people from refugee, asylum seeker and CALD communities.
- Access to interpreters used regularly; materials in community languages
- Make mental health patients feel accepted – "We talk to them, we negotiate – especially the mental health nurses negotiate how we deal with the patients" (7GP(1)). Cup of tea.
- Accept loud or affected behaviours form mental health patients, but have worked to be less accepting of violence or threats.
- Some CALD people with Mental health issues will see the GP, but not a MH specialist due to stigma.

- 7AHP(POD) need to consider what patients will actually wear (shoes) “compromise that they will actually wear and be comfortable in that’s going to have the right health outcomes”.
- Participating in program to educate GP/Nurses around transgender health.

6.2 Major approaches for optimising integration

Organisational level

- Overall CHS network management are dominant over local staff.
- No general manager for the site – GP/PN, AHP and client services report to higher managers.
- AHPs salaried Centre staff, funded mainly by HACC. Some EPC items claimed by centre.
- Podiatrist employed elsewhere in CHS, but runs private EPC clinic at this centre.
- GPs: salary or FFS “Allied Health have access to Medical Director, so they can see the client’s file, … can drop their letters back into MD and the GP can see the updated information” (7AHP Man). But most AHP do not put case notes into MD, use TRAK.
- One GP also works for major State based refugee health organisation.
- “It'd be great if both disciplines, medical and allied, would all work from the one system. It'd be fantastic seeing as we're all one organisation, it'd be great if there was one system for everything but it doesn't work like that, does it?” (7AD(1)).

Professional level

<u>Internal integration</u>

Separate staff meetings between the three streams – not even a reporter – e.g. no GP/PN rep at AHP meeting or vice versa.

Care coordination: overlap between AHP Care Coordinator and Chronic Care Nurse positions. Also significant by refugee and CMH nurses.

Refugee nurse review 9 to12 months after initial assessment: check that all identified issues addressed – health, English language, health literacy, transport etc. – then discharged to mainstream. Asylum seekers stay on refugee nurse books until claim settled.

Separate patient record systems – Medical Director (MD) for GP/PNs; TRAK (aligned with LHN) for AHP.

MD and TRAK do not interact, even for appointments – so separate booking systems

Reception can access both MD and TRAK: usually one dedicated AHP receptionist.

AHPs can access MD, some examine GP/PN notes, paste in records (dietician), write summaries, load formal reports.

GPs do not access TRAK. Some PNs (esp. chronic health) do.

Formal communications similar to external AHP - GP. Informal communication closer – ability to have discussions with other clinicians greatly valued.

No effective internal messaging system – use external emails instead (insecure)

7N(REF) can make internal referrals to AHPs.

Q. Care plans reports for AHP?

> “Often it's quite a perfunctory one. So no, we don't really get reports back from allied health because, I mean, they might refer patients to us as much as

> we refer to them. It's never been a thing in community health centres officially because we're all here. You don't write a report to someone about someone you've seen for them. You talk to them" (7GP2).

External integration

Standard referral letters and feedback reports; mostly fax (print sent and e-received); little secure messaging other than pathology and Argus for some incoming referrals – no outgoing. Incoming messages, faxes, and fax confirmations alert GP and attached to patient MD file.

Often refer within CHS network, especially for disadvantaged clients.

> "(inner city) mental health service is a big one we deal with. Also community groups … YMCA or (inner city) Language and Learning, (local) neighbourhood house … we have relationships". (7AHP(Diet1)

7N(CD) - Connections with women's and men's refuges, housing estate workers, RDNS

1/3 AHP referrals come from outside centre, most within CHS.

CHS homeless outreach refers in to the centre.

Significant levels of coordination around social issues in addition to medical, especially by AHP Care Coordinator, refugee nurses

Clinical level

Strong GP-PN relationships.

Care plans: usually 45 minutes with the nurse, 15 minutes with the doctor

PNs have specified roles: General - initial measurements histories, wound care etc.; CMHN, Chronic disease – assessments, care plans, coordination; Refugee – assessments, follow up. Working autonomously at or near NP role.

Despite silos of GP/PN v AHP, appears to be significant multidisciplinary care provided.

Notable that GPs de-centred: Higher managers have organisational control; Nurse and AHP play significant care coordination roles.

Client review, or joint consultations, or sequential appointments with multiple clinicians organised on ad-hoc basis. 7AHP (CARE co-ord)*in the process of finding structures to support some sort of client review meetings again.*

7N(CD) has initiated a diabetes clinic trial, but there have been significant differences of opinion about how to run it. These reflect ongoing tensions:

> "sometimes I feel like I'm being sabotaged, sometimes I don't but that's a typical feeling that I've had for a few years". (7N(CD)).

Has used PEN-CAT and MD to develop a diabetes register.

6.3 Future plans/next steps/priorities

Higher management level reviews of multiple aspects of functioning: remuneration arrangements, co-location arrangements, IT etc.

7. Enablers and barriers

7.1 History and context (including vision, local context)

Issue	**Integration**	**Access**
<u>Enablers</u>		
General agreement on vision of centre amongst staff	Y	Y
Having long term, well known, experienced GPs, reception, and AHPs		Y
<u>Barriers</u>		
Merger into larger CHS network creating instability	Y	Y

7.2 Drivers, motivators (including regional/global influences)

Issue	**Integration**	**Access**
<u>Enablers</u>		
CHS overall resources for service provision, policy and procedure development	Y	Y
GP1 care plans and health assessments, and mental health plans are a large part of what had enabled this services … made a considerable difference to the integration levels. Employs the nurses	Y	
Incentive programs – nurse PIPs, MHNIP		Y
HACC funding for AHP: small fee for AHP clinicians, but not for care coordination, social worker or counselling. Salaried staff have to meet targets for number of clients and face-to-face time 7AHP(Man)		
DVA funding – a few GP2 DVAs are fantastic. You can get dental care, you can get specialist care really easily, you can get allied health years before the Medicare stuff and it isn't capped		Y
ATAPS for mental health provision		Y
<u>Barriers</u>		
Accreditation- "I question that that actually is an effective tool. …,… I question as to how we received accreditation last year when we don't have a health services permit in place, we didn't have certain things that we needed." (7CM(1)).	Y	Y

Funding issues Pressures from MBS item rebates inadequacy and requirements of HACC funding Concerns that MBS income will not be enough to support the management structure	Y	Y
Case conferencing not happening regularly. May be financially viable for AHPS – under HACC funding, as can record attendance for their targets.	Y	
Asylum seeker funding issues – in limbo for Medicare – bridging visas have not been renewed, and they cannot apply. Have to apply for supply letter from agencies like Red Cross (funded by Dept. Immigration).		Y
No AHP funding on EPC for interpreters, so they "borrow" the GPs codes to book.		Y

7.3 Functional enablers (for access & integration)

Issue	**Integration**	**Access**
<u>Enablers</u>		
High quality CM, receptionists, doctors, PNs with commitment to centre goals for serving disadvantaged communities, and team based care	Y	Y
Strong nurse roles in coordinating care; Mental Health; refugees	Y	Y
Regular within team (AHP, Medical, Client services) meetings; regular one-on-one supervision meetings (AHP, client services)	Y	Y
Lot of support for staff from "corporate" style management structure: processes and procedures and backup	Y	
<u>Barriers</u>		
Lack of shared patient records with AHP– so multiple systems for appointments. Plans to develop integrated systems for whole CHS	Y	
Separate staff meetings and management structures, for GP/PN, AHP and client services groups. No representatives from other groups at these meetings	Y	
Meetings less consultative than previously 7AHP (care co-ord)	Y	
Turnover of managers since merger	Y	
Top –heavy management structure takes decision-making away from clinic	Y	
Challenge to bring together the three prior organisations	Y	

7.4 Culture, teamwork & relationships

Issue	Integration	Access
Strong relationships between staff, across disciplines	Y	
Recent changes in local and remote management: "with the merger, again, there was a breakdown and a lack of continuity of processes. So we're just – it feels like we're just starting again" (7AHP(care co-ord).	Y	
"A lot of clients have said to me, "It's not as good as it was before" (7GP2). Dislikes the new, corporate name, instead of the old Aboriginal one.		Y
Staff may send information to outside bodies without considering legal implications – e.g. refugees claims with Dept. Immigration.		

8. Impacts

8.1 What's been achieved

- Maintained high quality service provision to vulnerable population groups
- Chronic disease Nurse and AHP care coordinator play important care coordination roles
- Refugee clients well serviced, especially for Women's and reproductive health
- Mental health clients well serviced
- Reasonable level of integration and coordination of care to target groups (7GP1)
- Increase in GP numbers, so can service more clients
- Low cost, welcoming centre

8.2 What's sustained/embedded

- Appointment letters in community languages
- Nurses see new patients first
- Refugee intake processes
- CMH nurse processes

Appendix 6: Results of the team functioning survey

	GP 1	GPSC 2	GPSC 4	GPSC 5	HO 6	CH 7
TCI sub-scores: Mean (SD)						
Vision & objectives	4.04 *(0.65)*	4.19 *(0.58)*	3.41 *(1.00)*	3.46 *(0.74)*	4.10 *(0.69)*	3.46 *(0.77)*
Participative Safety	4.25 *(0.65)*	4.04 *(0.55)*	3.72 *(0.78)*	3.65 *(0.84)*	4.38 *(0.55)*	3.82 *(0.77)*
Task Orientation	3.97 *(0.65)*	3.89 *(1.03)*	3.37 *(0.95)*	3.56 *(0.78)*	3.75 *(0.89)*	3.38 *(0.89)*
Support for Innovation	4.06 *(0.48)*	4.26 *(0.60)*	3.48 *(0.85)*	3.69 *(0.71)*	4.14 *(0.59)*	3.45 *(0.75)*
PHC sub-scores: Mean (SD)						
Team Roles	4.25 *(0.38)*	4.13 *(0.39)*	4.02 *(0.42)*	3.93 *(0.55)*	4.48 *(0.36)*	4.18 *(0.54)*
Reviewing Team Processes	3.85 *(0.57)*	3.70 *(0.49)*	3.03 *(0.96)*	2.99 *(0.66)*	3.64 *(0.62)*	3.24 *(0.83)*
Social Relationships	2.99 *(0.43)*	2.79 *(0.21)*	2.71 *(0.68)*	2.88 *(0.25)*	2.86 *(0.16)*	2.87 *(0.44)*

Appendix 7: Description of indicators and levels

ACCESS INDICATORS

Indicator	Level 1	Level 2	Level 3
Availability and accommodation			
Access to the centre, including transport and physical access for people with mobility difficulties.	Physical access difficulties limit access.	Some physical access difficulties to and/or within the centre but not a major impediment and alternatives available	Good physical access to and within the centre for all people wishing to use the centre's services
Onsite after-hours (ie after 6pm weekdays; weekend opening)	None or very limited weekday after-hours opening	Some weekday after-hours, no weekend opening	Some weekdays and weekend after-hours opening
Same day/walk-in GP appointments	Same day/walk in appointments rarely accommodated	Same day/walk in appointments sometimes accommodated	Same day/walk in appointments mostly accommodated
Point of patient entry (telephone and reception)	Separate patient point of entry for most co-located services.	Separate patient point of entry for some co-located services.	Single patient point of entry for most co-located services.
Approachability			
Information about the services (inc signage, webpage, other publically available information).	Basic information on opening hours and services.	Detailed information on services available, but signage not easily seen	Comprehensive information available on services, and good signage
Outreach (e.g. home/RACF visits) /programs	None/occasional home/RACF GP visits at discretion of individual GPs	Regular home/RACF GP visits OR Regular outreach programs.	Regular home/RACF GP visits and outreach programs and services
Affordability			
Patient co-payments for GPs	Patient co-payments waived at discretion of individual GPs.	No patient co-payments for concession card holders (GP patients).	No patient co-payments for most GP patients.
Patient co-payments for other co-located services.	Patient co-payments for all/most co-located services.	Patient co-payments for some co-located services.	No patient co-payments for most services.
Acceptability			
Centre identifies and responds to improving acceptability of its services.	No specific emphasis on hard to reach/'at risk' populations.	Centre explicitly targets and focuses on specific hard to reach /'at risk' populations.	Centre explicitly targets and focuses on a broad range of hard to reach /'at risk' populations.

Indicator	Level 1	Level 2	Level 3
Appropriateness			
Co-location of allied health professionals	2-3 different types of allied health professionals	4-5 different types of allied health professionals	More than 5 different types of allied health professionals
Co-location of medical specialists	0-1 types of medical specialists	2-5 types of medical specialists	More than 5 different types of medical specialists
Regular chronic condition specific MD clinics	None	1 or more regular CD clinics involving GPs & PNs	1 or more regular CD clinic(s) involving 3 different disciplines (eg allied health and medical specialists in addition to GPs & PNs)

INTEGRATION INDICATORS

Indicator	Level 1	Level 2	Level 3
Organisational integration			
Co-location of independent organisations/ practices (entities)	Loosely coupled: co-located entities maintain their external affiliation & independence, with co-location as the uniting feature	Joint structure: some co-located entities come together in an agreed structure to work together, but retain their separate affiliation	Tightly coupled: All/most co-located services are part of a single organisation
Professional integration			
Ongoing MD staff training involving co-located professional groups beyond GP/PNs. (Occurs and attended).	Doesn't occur	Occasionally	Regularly
Ongoing MD service planning and/or review involving co-located professional groups beyond GP/PN (Occurs and attended).	Doesn't occur	Occasionally	Regularly
Clinical integration			
MD care planning and review for patients with chronic conditions involves PNs	Rarely	Sometimes	Usually
MD care planning and review for patients with chronic conditions involves other co-located services	Rarely	Sometimes	Usually

Indicator	Level 1	Level 2	Level 3
Coordination of care for patients with complex care needs/receiving care from multiple professionals.	GP role	Care coordinator position/s defined, but non-specific patient groups.	Care coordinator position/s defined for specific population groups.
Functional integration			
Appointment system used by services	Used by GPs/PNs, but not other co-located staff	Used by GPs/PNs and some co-located staff	Used by GPs/PNs and most other co-located staff
Single centre-wide patient record system that can be used by most (i.e over 75%) co-located staff to read and to record/upload patient notes	No	In part	Yes
Recall system for patients with chronic conditions.	No	Used inconsistently	Used consistently

Appendix 8: Summary table of relationship between context and organisational factors and arrangements

	Model	Location	Ownership	Size	Uni rep	LHN engagement	Management structures	Stability
Access to	**GPSC (↑)** ↑*AH, transport* **State** ↑*Outreach, acceptability* **GP1 ↓** ↓*AH, outreach*	**Rural (↑)** ↑*AH, outreach*, **Urban (↓)** ↑*(Accept, GP co-pay)*	**Pte NFP (↓)** ↑*Accept, (GP co-pay)* **PPP (↑)** ↑*Outreach, AH (walk in)* **PFP (↓)** ↑(Info, entry)	**Small (↓)** ↑*Info, entry, walk in)* **Medium (↑)** ↑*(GP co-pay)* **Large (↓)** ↑ *(Accept)*	**Uni rep (↓)** ↑*Trans, AH* ↓*Entry, Info, GP co-pay, outreach* **No uni rep (↑)**	**Yes ↑** **No (↓)** LHN rep ↑*AH* ↑*Walk in* ↑*Outreach* LHN policy ↑*Accept*	**Single (↓)** ↑*Entry, info* ↓*Outreach*, ↓*Accept* **Multiple (↑)** ↑*Outreach (accept)*	**More (↑)** ↑*After Hrs* **Less (↓)**
Access in	**GPSC ↑** ↑*co-loc AHP, MS,* **State =** ↑*co-loc AHP* **GP1 ↓** ↓*co-loc AHP*, MS	**Rural (↑)** ↑*(co-loc MS)* **Urban (↓)** *(confounded with models)*	**PPP ↑** (*but significant differences between 2 sites)* **Pte NFP ↑** **PFP ↓** ↓*On all*	**Small ↓** ↓*On all* **Medium ↑** *Similar to large; except for MD clinics* **Large ↑** ↑*MD clinics*	**Uni rep ↑** ↑ co-loc MS ↓(co-loc AHP) **No uni rep (↓)**	**Yes ↑** **No (↓)** LHN rep *Not much difference* LHN policy ↑*MD clinics*	**Single ↓** ↓*Coloc AHP* **Multiple ↑** Wider range of services	**More ↑** ↑*Range of co-located allied health & MS* **Less ↓**
Integration	**GPSC ↓** **State ↑** ↑*All except care plans* (PN). **GP1 ↓** ↑*Systems* ↓*Most levels*	**Rural (↑)** ↑*MD training* ↑*Care plans (other),* ↑*Appoint & pat record systems* **Urban (↓)**	**PPP ↑** ↑*MD training, care plans (other)* **Pte NFP (↓)** ↓*Appoint & pat record systems* Pte FP & PPP ↑*Pat record systems* **PFP ↓** ↓*Most levels*	**Small ↓** ↓*Most levels* ↑*On appoint* **Medium ↑** ↑*(MD planning, care plans, other, care co-ord)* **Large (↓)** ↑*Pat record systems*	**Uni rep ↓** (↑org) ↑ Systems **No uni rep (↑)**	**Yes (↑)** **No (↓)** LHN rep ↑*Most prof & clinical level* ↑*Appoint & pat record systems* ↓*Recall system* LHN policy ↑*most except care plans (PN), appoint & pat records*	**Single ↓** ↑*Systems* ↓*all levels* **Multiple (↑)** ↑*All prof level* ↑*Care coord* ↓*Pat records*	**More ↓** **Less (↑)** ↓*Similar on most others*

Note: ↑ means >10% above the mean score for that item, **(↑)** means <=10% above**, =** means equals, **.↓)** means <=10% below and ↓ means >10% below

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