Primary Care Partnerships in rural Western Australia: nurse practitioners leading the way

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Abstract

Aims: To enhance access to effective multidisciplinary primary care for people with chronic complex conditions living in rural and remote areas in the Southern Inland catchment of Western Australia.

Methods: Under the Southern Inland Health Initiative, funded by Royalties for Regions, Primary Health Nurse Practitioners (PH NPs) have been contracted through Silver Chain to work in close coordination with local public and private health providers, especially General Practitioners and the regional Western Australian Country Health Services. They plan and coordinate clients’ care and monitor key health indicators to enhance seamless access to appropriate treatment options for chronic complex conditions in order to maximise wellness and prevent/reduce hospitalisations. Telemedicine innovations, including videoconference consults, electronic health records and home-based self-monitoring systems aimed at enhancing chronic disease management, are being used as part of an evaluated trial with appropriate clients.

Relevance: This will ensure that rural and remote West Australians have greater access to affordable and timely local health care, thereby enabling them to stay within their local communities while ensuring better health outcomes. Essential to the PH NP service model is their role in complex care coordination to enhance multidisciplinary interagency community-based consumer-centred care. PH NPs having access to relevant technology will enable timely and local diagnosis and care planning.

Results and conclusions: This partnership has enabled the development of a new service delivery model to enhance health care to rural and remote Australians and will inform the rollout of the Nurse Practitioner role nationally. The first year of operation has resulted in successful establishment of the role in one District, which will now be rolled out to three additional Districts over the next four years. The importance of the leadership and change facilitation activities of the PH NP have been recognised at the prestigious 2012 WA Nursing and Midwifery Excellence Awards by her winning the Emerging Leader award.

As the population health profiles and local health service context are different in each District, different project implementation strategies will be needed in each. These ‘sub-projects’ will be implemented with project direction and support supplied from within the Office of the Executive Director, Primary Health and Engagement. Separate plans will be created to detail project strategies for the development of integrated, consumer-centred primary health services to benefit health consumers living in the smaller communities of these four Districts.

Southern Inland Health Initiative Primary Health vision

The SIHI Primary Health vision is for communities to have fully integrated health services with shared policies and procedures that provide seamless service and the best health outcomes for individuals.

Primary health services* are recognised both nationally and internationally as a key factor in improving and maintaining the long term health of communities by:

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* Primary health services are mostly services based in the community. Primary health services are most effective when combining the efforts of health professionals including General Practitioners, Allied Health, Nurses and Nurse Practitioners and community workers. Examples of primary health services include child and community health, community aged care, General Practice, community mental health, and dental health. These services help to keep people healthy, assisting them to stay well and out of hospital and to allow them to return home with support or—in the case of aged care—live at home for as long as possible.

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• reducing the demand for hospital based services
• helping address the health issues of vulnerable groups such as the elderly, Aboriginal people, those with requiring mental health support
• promoting parental and child health.

In Australia, the Commonwealth and State Governments have committed to primary and secondary health reform to:
• address inequity
• better meet current and future health need
• develop a sustainable, responsive and joined up health system.¹

Health inequities between people living in country and metropolitan Western Australia (WA) are well established. People in country WA have a higher rate of mortality, illness and hospitalisation; a higher prevalence of risk factors; and conversely, less access to General Practitioners (GPs) and other primary health providers than their metropolitan counterparts.² The lack of GPs also results in an inequitable distribution of Medicare revenue for country WA compared to other jurisdictions.

Integrated and consumer centred primary health is required to keep people well, prevent hospitalisation and readmission, address inefficiencies, and provide opportunities for increased use of Commonwealth funding in rural areas (see Figure 1). Under the Southern Inland Health Initiative (SIHI)³, primary health services (both Government and non-Government) are being developed and aligned to the more traditional hospital based (secondary) services to deliver seamless, integrated consumer care that achieves the best health outcomes for individuals and communities. The enablers for action listed in green in Figure 1 inform the key strategies being used to facilitate service change through the SIHI Primary Health service initiatives (see Table 1).

Through initiatives such as the introduction of PH NPs, SIHI Primary Health is strengthening rural health services now and into the future by:
• addressing gaps in access to primary health services that are important to local communities and consumers
• facilitating service coordination between government, non-government and private primary health providers. In particular:
  – developing partnerships with non-government and private health providers, including General Practice, to build capacity and sustainability of primary health services
  – facilitating, and coordinating with, Commonwealth investment in primary health
  – enhancing integration between primary and secondary services to make every episode of care count toward better health, reduced hospitalisation and increased capacity for self-management. In particular, minimising hospitalisation by enabling consumers to access reliable primary health services in their local area
• using technology, including Telehealth, to maximise service access, efficacy, coverage and reliability
• using healthy community/healthy hospital and healthy consumer approaches to build community capacity to maintain health and wellbeing.
Figure 1    Relationship between primary and secondary services
### Table 1  Key enablers and related project implementation strategies

<table>
<thead>
<tr>
<th>Key enablers</th>
<th>Key implementation strategies</th>
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<tbody>
<tr>
<td>Partnerships, collaboration and communication. Commonwealth-State relations.</td>
<td>Support partnerships, collaborations, and better coordination between primary health services (including government, non-government, and private providers) and other parts of the health system to decrease duplication and wastage and improve seamless continuity of care for consumers, particularly those with complex care needs.</td>
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<td>System and service redesign</td>
<td>Build the capacity of existing services to deliver effective primary health care. This includes improving capacity for accessing MBS investment to build sustainable and reliable primary health services (especially in non-government and private services) and supporting small hospital model and service development to enable small hospitals and their staff to be part of the primary health continuum.</td>
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<tr>
<td>Infrastructure and collocation</td>
<td>Introduce and support access to technology, especially Telehealth, to facilitate service access, efficacy, coverage and reliability for consumers.</td>
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<td>Information Communication Technology</td>
<td>Test innovative primary health models of care, especially involving Nurse Practitioners and work with General Practitioners (GPs) to trial multidisciplinary and interdisciplinary models of care.</td>
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<tr>
<td>Community and consumer: Health Literacy, Capacity and Readiness</td>
<td>Identify and address immediate primary health service gaps.</td>
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Population health profiling and audits of existing services have helped determine the priority health needs of local communities. Innovative models of primary health service reform are being implemented to target local needs and local circumstances. This involves developing primary health services that respond to the needs of the whole community—those who are well, those at risk of disease/illness, those who are acutely unwell and those being rehabilitated.

**Southern Inland Health Initiative primary health nurse practitioners**

WA Country Health Service (WACHS) has partnered with Silver Chain’s Country Services through SIHI to provide PH NP services to the Wheatbelt Health Region and Central Great Southern Health District (see Figure 2). The PH NP role is new to country WA and is being used to improve services to individuals living in the small communities in this catchment by extending, augmenting and helping sustain the primary health services that already exist such as General Practice and Allied Health and Community Nurses in small hospitals. An essential element of the PH NP role is complex care coordination, supporting clients with high needs to navigate care pathways across the health continuum.
Key service principles
The following key service principles have informed the development of the role of the SIHI PH NP.

Multidisciplinary, interagency and professional integration
The SIHI PH NPs are working collaboratively with current and new Primary Care service providers in the four Districts to achieve integrated service delivery for clients as they journey across the health continuum.

This entails building relationships (including facilitating referral pathways and formal partnerships/memoranda of understanding) to improve coordination of service delivery between health and community providers to achieve consumer, family and community focused care as a journey across the health continuum. These partnerships also provide opportunity to build the capacity of local primary health care providers through education and mentoring.

Co-location
Where possible, and in the best interests of the service, the PH NPs have co-located with other Primary Care providers, or established collaborative outreach working arrangements (e.g. sharing home visits with workers from the local Aboriginal Health Service).

Priority populations
The SIHI PH NPs are targeting the high health needs groups in the Districts that have been identified through population health profiling and service audits. The service priorities are:
- improving care coordination and case management for clients with complex chronic conditions who have high health service needs, particularly Aboriginal people and those from culturally and linguistically diverse backgrounds who may struggle to access services
- enhancing the physical care of mental health clients with co-morbid physical chronic conditions
- strengthening community Aged Care services to enable clients to return home with support and/or live at home for as long as possible.

Sustainability
Silver Chain is undertaking performance monitoring and business planning with the SIHI PH NPs to develop strategies for achieving optimal access to Medicare Benefits Scheme funding and other Commonwealth Primary Health funding through Medicare Locals to ensure sustainability of the service after the SIHI funding ends.

Flexibility
The individual members of the SIHI PH NPs service demonstrate flexibility in their roles and responsibilities in response to the changing needs of local community members and service providers.

Accountability
SIHI PH NPs monitor and report on agreed key performance indicators and their contractual terms of engagement to ensure accountability and inform service quality improvement and business planning.

Significant achievements: how things have grown
During the first 18 months, the number of SIHI PH NPs has grown from one to four with another two soon to join the team. The service has expanded from its beginnings in the Eastern Wheatbelt Health District to cover the whole of the SIHI Primary Health catchment. This expansion has entailed substantial work by Silver Chain, WACHS, and SIHI staff to:

- negotiate and build informal and formal interagency and interdisciplinary working partnerships
- educate prospective clients and referrers regarding the role of the PH NP
- mentor and support the PH NPs in the development of their roles and the establishment of robust clinical governance.

Significant achievements in the first 18 months of the SIHI PH NP service include:

- Establishment of PH NP visiting clinics in General Practices, Aboriginal Health Services, and the Mental Health Service. A testimonial from a local General Practitioner who has been co-working with a PH NP reflects the positive outcomes from introducing this new workforce model: ‘I don’t know who those underworked rural doctors are who are worried about turf protection. I’m too busy celebrating the fact that there is someone else on the team who really knows her stuff and who can give such valuable insight into chronic disease management in communities. Not to mention the in-service for local hospital staff. Stay positive, some of us are cheering!’

- Collaborating with WACHS hospital, aged care, and community staff to establish Interagency Multidisciplinary Ward Round meetings to facilitate effective collaborative care for patients being transferred back to the community or residential care.

- Introduction of Telemonitoring to complement the chronic conditions care provided by the PH NPs. For example, a 90 year old patient with a history of chronic obstructive pulmonary disease, cerebrovascular accidents and falls. During his last hospital admission, placement in a residential care facility was being considered. The involvement of the PH NP in his care has enabled him to be
maintained at home with in-home services. Home Telemonitoring was initiated with a client-controlled ‘DOCOBO’ unit and peripherals such as a peak flow meter and blood pressure monitor. This information, uploaded using a telephone line, alerted the PH NP to deterioration in the client’s vital signs and enabled her to make timely medication adjustments and avert the need for a hospital readmission.

- Training and development of staff in primary health and hospital settings in key care issues (e.g. central line management, advanced wound care techniques).

- The PH NP in the Eastern Wheatbelt, Laura Black, won the 2012 WA Nursing and Midwifery Emerging Leader Award for improving links between health services, such as General Practices, nursing posts, hospitals and the Royal Flying Doctors in the Eastern Wheatbelt. The award recognises excellent clinical leadership, communication and focus on improving consumer care.

- Development of Well Women’s clinics to support existing General Practice services by the PH NP providing services such as pap smear, contraceptive and reproductive system advice targeting at risk groups of women. Providing these services enables the collaborating General Practitioner to undertake consults that require the full medical scope of practice.

- Development of a discussion paper based on business modelling regarding PH NP resourcing through the Medicare Benefits Scheme. This has been tabled at Bilateral State/Commonwealth discussion.

**Case studies**

The following case studies illustrate how the PH NPs have been able to facilitate client and family focused, collaborative, and coordinated multidisciplinary care for clients with complex care needs.

**A Leg to Stand On—Bill’s story**

This case study was received from Laura Black, PH NP in the Eastern Wheatbelt.

*Referral and demographic information*

Bill is a 62 year old man living in a small Eastern Wheatbelt town. He is married and lives with his wife who is very supportive and caring. They are both actively involved in the community. Their children are grown up and live in Perth. He still works full time in his own business and his work involves a lot of daily driving. Bill’s wife encouraged him to self-refer to the NP PH as he felt:

- helpless, out of control and depressed
- marital relations were strained as a result.

*Presenting problems*

Bill presented with:

- A 14 year history of Type II diabetes (he had never seen an Endocrinologist or been reviewed by a Dietitian or Diabetes Educator) with hyperglycemia, despite being on maximum doses of Metformin 1g TID and Glimepride 4mg daily as well as 44u of Lantus insulin at night.

- Over the past six to seven months, Bill has been experiencing intractable neuropathic pain in his right foot following three partial amputations due to osteomyelitis, MRSA infection and IV antibiotics via PICC line, and an ongoing chronic, hypergranulating, exudating wound on the amputation site. He has a poor fitting prosthesis in a heavy trainer type shoe which exacerbates his pain. He also reported poor sleep of only 3-4 hours per night due to pain.

- Low iron which requires investigation.
• Smokes 30 or more cigarettes per day.
• Gastro-Oesophageal Reflux Disorder managed with Rabeprazole 20mg daily.

**Intervention and Outcome 1**

The PH NP negotiated with two tertiary hospitals in Perth to transfer care from one hospital to another which has a high risk foot clinic and has a truly multidisciplinary approach with an Endocrinologist, Vascular team, podiatry, a wound care specialist, dietitian and links to orthotics.

Bill recommended an antibiotic regime and his foot wound was reviewed regularly by wound care specialists at the high risk foot clinic via Telehealth videoconferencing supported by the PH NP. Advanced wound care by the PH NP, who had travelled to Perth to learn the required skills from the high risk foot clinic team. Bill’s foot is now healed and his blood glucose levels are within normal range.

Bill is now under the care of an Endocrinologist who reviews his medication regime and Bill is plotting his daily dietary intake and blood glucose levels.

**Intervention and Outcome 2**

The PH NP undertook telephone liaisons with Pain Consultants for advice and faxed prescriptions for pain medications as there were no physical appointments available. She also provided a prescription for an antiemetic within the Nurse Practitioner formulary to manage the nausea caused by Bill’s analgesia.

Bill’s pain ratings reduced to 4/10 from his original rating of 16/10. His depression and lack of sleep have resolved. Bill and his wife are beginning to enjoy their relationship and their lives again.

**Intervention and Outcome 3**

The PH NP linked Bill with a General Practitioner in another town in the District. The General Practitioner is two hours’ drive away, but arrangements have been made for alternate consults to be made using Telehealth videoconferencing with PH NP support during consults.

The PH NP also made arrangements for Bill to have an endoscopy and colonoscopy at a hospital near to his children to aid with transport and accommodation.

**Intervention and Outcome 4**

The PH NP provided practical support and education for Bill on smoking cessation. Bill has now been a non-smoker for 8 months.

**Bill’s testimonial**

‘To whom it may concern.

I would like to make comment on the recent introduction of the Nurse Practitioner service to the Eastern Wheatbelt, in particular the Yilgarn Shire.

We, the people of the bush, feel like the forgotten people because it’s so hard to access services. Because progressive governments save money by cutting services to the bush.

In my case, I was in extreme pain after a partial foot amputation and had been, for six or seven months, having to drive 400 km one way to Perth Nedlands Hospital to be told ‘Here take a couple of sleeping pills you will be OK’.

Then early this year 2012 along comes a Nurse Practitioner service and straight away things begin to change, new doors start to open. We are seeing a new doctor 155 km away that’s a breath of fresh air. They arrange appointments at another hospital. Things start to happen. Within a month, hardly any pain and my foot is starting to heal, and I know lots of other people that are benefiting too. We can’t live without them.’

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Outreach, Educate, Collaborate—Jesse’s story
This case study was received from Neil McIntyre, PH NP in the Southern Wheatbelt.

Referral and demographic information
Jesse is a 58 year old Aboriginal woman. She lives with her three sons, one of whom is her nominated carer. All three sons have health issues (seizures) made worse by problematic alcohol and drug use, and this creates social and emotional wellbeing issues within the family home as well as taking an adverse toll on their health and ability to care for their mother. Jesse was referred by Indigenous Health—Primary Healthcare Narrogin as part of a shared care partnership established with the Silver Chain PH NP due to concerns regarding her complex care needs.

Presenting problems
Jesse presented with:
- chronic kidney disease requiring peritoneal dialysis. Jesse and her carer recently travelled to Perth to attend peritoneal dialysis training. However, they needed follow-up monitoring, support and education on managing dialysis
- poorly controlled type 2 diabetes
- chronic obstructive pulmonary disease
- Jesse is a smoker, which worsens her breathing difficulties
- chronic diarrhoea and associated low potassium
- postural hypotension causing dizziness on standing and associated risk of injury from falls
- depression made worse by worry about her sons and her struggles in managing her own health needs.

Intervention and Outcome 1
Through cultural vouching provided by the Aboriginal Health Worker, the PH NP was able to build a working rapport with Jesse and her sons and provide client and carer education. This gave Jesse and her sons a better understanding of her health care needs and gave Jesse a greater sense of self-esteem, self-empowerment, and control. The family has become more confident in managing her peritoneal dialysis. This means that Jesse can remain at home and close to family, as there are no alternative dialysis services in her Health District.

Intervention and Outcome 2
The PH NP liaised with Jesse’s General Practitioner and initiated referrals to a Renal Dietitian and an Occupational Therapist. This meant that Jesse’s care was multidisciplinary, took into account her multiple diagnoses, and good communication between members of her treating team resulted in a coordinated approach to her care. As a result, Jesse’s diarrhoea was resolved, her diet improved, and many of the distressing symptoms and feelings she was experiencing were resolved. She commented she was feeling ‘much better’. Also, Jesse now has grab rails in her bathroom and outside that give her greater confidence in moving around her home for activities of daily living.

Intervention and Outcome 3
After discussion with Jesse and her sons, the PH NP initiated a referral to the Narrogin alcohol and drug and mental health services for the three sons. Jesse’s sons have now engaged with alcohol and drug rehabilitation services.
The PH NP was able to undertake opportunistic screening to check the three sons’ phenytoin levels in relation to managing their seizure activity, which was being worsened by their binge drinking. He also initiated chronic disease checks for Jesse’s three sons and preventative fluvax and pneumococcal immunisation for whole family.

Holistic care for Jesse and her family has been achieved through negotiation, collaboration, and an inclusive approach. Providing a comprehensive, whole of family approach to care provided in close collaboration with other health services has resulted in Jesse being able to remain at home and improved health for the family.

Jesse’s testimonial

‘Little things make such a great difference—I feel a load has been lifted off my shoulders and my family are being cared for as well. I don’t feel as anxious and I have more control.’

Change management: critical success factors

Throughout the development of the SIHI PH NP service, Silver Chain, WACHS, and SIHI staff have worked actively to facilitate the changes involved in integrating this new workforce model with existing services. The following critical success factors have been identified and, coupled with the service principles outlined earlier, will inform future development of this role.

Culture

- Trust and engagement through collaboration.
- Executive endorsement from both the public and non-Government sectors backed up with operational consultation and facilitation.

Mentoring and training

- Building service development capacity in the PH NPs as this is a different skill set from their role as clinicians.

Service integration

- Both services achieve more for clients by working together than they could achieve separately (e.g. vouching and cultural security coupled with advanced clinical scope of practice for Aboriginal clients).
- Opportunistic screening.
- Enhanced care coordination to facilitate the respective roles of multidisciplinary team members involved in the client’s care plan.
- Shared care arrangements.

Person-centred journey

- Clinical handover between services and across sectors.
- Establishing systems to support communication and networking between services involved in transfer of care during the client’s journey.
- Establishing integrated client records and shared electronic health summaries (this has presented lots of challenges in negotiating inter-organisational memoranda of understanding/service agreements, and in implementing eHealth technologies, but it has been worthwhile in facilitating communication and expediting record keeping and performance monitoring).
Clinical standards

- High quality and safety in the transfer of care.
- Clinical governance framework for PH NP role.

- Establishment of a Nurse Practitioner Candidacy Program, ‘Growing our own’, for developing PH NPs. Copies of the Nurse Practitioner Strategic Framework and Nurse Practitioner Clinical Governance Guideline for the candidacy program are available on request from Lesley Pearson, co-author of this paper.

References

1. Australian and Western Australian Government National Health Reform Agreement 2011.

