



Health  
Illawarra Shoalhaven  
Local Health District



## The Rural Research Capacity Building Program 2010 Final report for research project

The role of practice nurses in their management of patients with Chronic Heart Failure in rural New South Wales and the potential for the expansion of this role

*'Connecting with practice nurses in rural New South Wales to enhance the management of patients with Chronic Heart Failure'.*

Principal Researcher:

Anne O'Neill

Clinical Nurse Consultant

Shoalhaven Heart Failure Service

Illawarra Shoalhaven Local health District

Nowra Community Health Centre

Nowra

Telephone: 02 44246300

Fax: 02 44246371

Email: [anne.oneill@sesiahs.health.nsw.gov.au](mailto:anne.oneill@sesiahs.health.nsw.gov.au)

## Table of Contents:

Contents	Page Number
Acknowledgements	1
Glossary of Terms	2
Abstract	3
Key Words	3
Executive Summary	4-5
Introduction	6
Demography and Background	7 - 8
Literature review	8 - 10
Aims of the research	10
Method	11 - 13
Findings and discussion	13-22
Limitations	22
Conclusions and recommendations	22 -23
References	24-26
Appendix – A Questionnaire: Practice Nurses	28 - 30
Appendix – B Questionnaire: General Practitioners	31 - 32
Appendix – C Interview guide	33

## Acknowledgements:

The author would like to sincerely acknowledge the following people and organisations for their professional support and assistance:

- The Health and Education Training Institute Rural Directorate for the opportunity to undertake this research project.
- Emma Webster and David Schmidt for their ongoing education, guidance and encouragement.
- The participants who gave their time freely and shared their experiences.
- Taylor Harchak, trainee biostatistician, for his assistance with the quantitative aspect of the study.
- Judith Burns, who has been the source of so much of my motivation and expanded my thinking with her knowledge and outstanding mentorship, and her encouragement for me to develop my own ideas.
- Bradley Scotcher, for his support of clinical research and his flexibility in rostering to enable the research to take place
- The author's 2010 RRCBP research colleagues, for their friendship and motivation.
- The Illawarra Shoalhaven Local Health District, Population Health and Planning staff, Research Governance Officer and the UOW & ISLHD Health and Medical HREC for their advice and support.
- Medicare Local, formerly The Shoalhaven Division of General Practice, for their assistance disseminating participant information packs and deidentified questionnaires.

**Glossary of Terms:**

<b>Medicare Local Formerly SDGP</b>	Shoalhaven Division of General Practice
<b>PN</b>	Practice Nurses
<b>GP</b>	General Practitioner
<b>SHFS</b>	Shoalhaven Heart Failure Service
<b>CHF</b>	Chronic Heart Failure
<b>CNC</b>	Clinical Nurse Consultant
<b>PHC</b>	Primary Health Care
<b>ISLHD</b>	Illawarra Shoalhaven Local Health District
<b>Care plan/GPMP</b>	General Practitioner Management Plan
<b>CDM</b>	Chronic Disease Management
<b>TCA's</b>	Team Care Arrangements
<b>Health Assessments</b>	For patients 75yrs and over or Aboriginal and Torres Strait Islanders patients 55 and over, annually
<b>LOS</b>	Length of Stay
<b>ARIA</b>	Accessibility Remoteness Index of Australia
<b>Clinician</b>	A professionally qualified, registered health care worker with direct patient contact
<b>HETI</b>	Health Education & Training Institute Rural Directorate
<b>IHD</b>	Ischaemic Heart Disease
<b>CVD/CHD</b>	Cardiovascular Disease, Coronary Heart Disease

**Abstract:**

To explore the role of practice nurses in their management of patients with Chronic Heart Failure in general practice in rural NSW and the potential for the expansion of this role.

**Background:**

The rising incidence of Chronic Heart Failure is increasingly outpacing health service provision, having adverse health budgetary impacts, and adversely affecting quality of life of both patients and carers.<sup>1</sup> Current models of care are no longer adequate to meet the needs of the increasing cohort of Chronic Heart Failure patients in the study area, the Shoalhaven. Effective use of health resources and clinical nurse consultant skills make it necessary to explore alternative models of care. General Practice targets patients with chronic disease, managed by an integrated, multidisciplinary team led by the general practitioner through care plan implementation and practice nurse collaboration making it an alternative model of care to consider devolution of care of this cohort of patients to.

**Aims:**

The aim of the study was to identify current usual practice by practice nurses and general practitioners in managing this cohort of patients. Specific objectives were adopted to explore existing roles of practice nurses and potential for development of their role in Chronic Heart Failure management.

**Method:**

A mixed methods study using Appreciative Inquiry as the primary methodology was undertaken. Questionnaires were distributed to all 75 PN's and 105 GP's in the Shoalhaven area to obtain predominantly quantitative data. This was followed by semi structured interviews of 6 general practitioners, 6 practice nurses and 2 key informants to produce qualitative data by exploring the issues in greater depth.

**Results:**

The overall response rate of returned questionnaires was 20% for practice nurses and, 15%, for general practitioners. The questionnaires revealed that practice nurses are in a position to expand their current role identifying, managing and referring Chronic Heart Failure patients, with their practice driven by patient empowerment. There was reported limited educational and training opportunities available in general practice for practice nurses, underpinning their ability to fulfil their current role and to foster potential for expansion. A reasonable team approach was reported but little confidence expressed by general practitioners for an extended role, or guidelines for practice nurses to assist in their management of Chronic Heart Failure patients. The one on one interviews with the principal investigator identified themes of the PN role consisting of 2 components, that of a prescriptive nature, for example the implementation of care planning and the other the opportunistic role that underpins their practice, for example an open door policy, being available to chat to patients, and situations where patients present for an appointment particularly unwell, and need to be seen as a priority. This study found that this patient cohort is being managed in general practice according to best practice with practice nurses keen to expand their existing role.

**Conclusions and Implications for practice:**

It is anticipated that the results of this study that general practice is an alternative model of care and well placed to accept devolution of care of this population group with an enhanced role for practice nurses underpinned by educational and training opportunities. Subsequent to initial discussion, collaboration with the Medicare Local, to progress the development of consistent guidelines for management of this population group across the district, is sought to enhance this model of care. These results would be replicable in like rural communities servicing patients with chronic disease.

**Key words:**

Chronic heart failure, general practice, rural, chronic disease, primary health care.

Anne has worked as Clinical Nurse Consultant for the Shoalhaven Heart Failure Service for the last 10 years. Her roles include coordinating a multidisciplinary group program and maintenance exercise program and liaisons with medical, nursing and allied health professionals across the continuum of care. Outcomes for those enrolled with the service include improved QOL and functionality with reduced presentations, admissions and length of stay to the acute sector.

## **Executive Summary**

### **Background:**

The study area the Shoalhaven is demonstrated with having the highest incidence of unplanned Hospital presentations, admissions and extended Length of Stay (LOS) in New South Wales for Chronic Heart Failure (CHF) patients.<sup>2</sup> Chronic Heart Failure, a disease of great burden to the community, is associated with high levels of utilisation of health services across a range of health care settings to manage their associated chronic and complex needs. The rising incidence of CHF is increasingly outpacing health service provision, having adverse health budgetary impacts, and adversely affecting quality of life of both patients and carers.<sup>3</sup> The Shoalhaven Heart Failure Service (SHFS) is no longer adequate to meet the needs of this increasing cohort of patients in the Shoalhaven and was the impetus for this study. General Practice targets patients with chronic disease via an integrated, multidisciplinary team led by the general practitioner through care plan implementation and practice nurse collaboration. The aim of the study was to identify current usual practice by PN's and general practitioners (GP's) in response to the needs of this cohort of patients in general practice and to ascertain how the Shoalhaven Heart Failure Service can best assist their management in the broader community.

### **Methods:**

A mixed methods study using Appreciative Inquiry as the primary methodology was used. Adoption of this methodology appears to separate this study from other studies, since the underlying principle is to explore and focus on current and past successes, with the impetus to act and generate change. Questionnaires were distributed to all 75 PN's and 105 GP's in the Shoalhaven area to obtain predominantly quantitative data. This was followed by semi structured interviews of 6 GP's, 6 PN's and 2 key informants to produce qualitative data by exploring the issues in greater depth. The questionnaires revealed that PN's are keen and in a position to expand their role identifying, managing and referring CHF patients, but report limited educational and training opportunities available in general practice to support their current role and that of an enhanced role. A reasonable team approach is reported but little confidence expressed by GP's for an extended role or guidelines for PN's to assist in their management of CHF patients. The one on one interviews with the principal investigator identified themes of the PN role consisting of 2 components, that of a prescriptive nature, for example the implementation of care planning and the other the opportunistic role that underpins their practice, for example, an open door policy, being available to chat to patients, and situations where patients present for an appointment particularly unwell, and need to be seen as a priority.

### **Findings:**

The findings of this study highlight that CHF patients are managed effectively in general practice by a multidisciplinary team, making it the logical solution to devolve increasing care of this cohort of patients. This alternative model of care has the potential for these patients to be managed from an earlier stage of their illness using a risk factor stratification approach, thus reducing the impact of the disease, with fewer exacerbations requiring hospitalisation.

PN's report their skills will be utilised more effectively as a result of the increasing number of deteriorating of patients with chronic diseases being managed in the PHC setting. This potential hospital avoidance strategy would benefit the patient, practitioners and Local Health District by reducing hospital health care utilisation.

Those interviewed felt that the Shoalhaven Heart Failure Service initiate a reference group, or become the contact point for advice and support in the transition to an extended role for PN's in managing this cohort of patients. Whether this is an option given the constraints of the SHFS and Clinical Nurse Consultant due to resource issues remains to be seen. Underpinning any suggestions of role enhancement for PN's is their educational and training needs, and available resources the highest priorities established through survey results and interviews. PN's and GP's agree this is the key initiative to up skill and ensure PN's have the expertise and tools to assist with their practice in managing patients in this population group,<sup>4</sup> and also to catalyse transition to an extended role.

PN's have alluded to the increased time associated with care plan initiation and implementation. This finding needs to be considered in the context of general practice starting to make inroads into the large domain of chronic disease

management; however, we are in the early stages of uptake of this incentives scheme which includes general practitioner management plans and team care arrangements.

### **Conclusions and recommendations:**

Disseminating the findings and recommendations of this study to the critical reference group is something that the Clinical Nurse Consultant would be instrumental in facilitating. Collectively this group has the capacity to influence and support effective integration and collaborative engagement through transition, of an alternative model of care to manage this CHF cohort of patients. Central to this is a commitment of resources, systems change and development of further partnerships.

The role of the CNC could be perceived as a liaison position, to facilitate potential change should research findings be accepted and implemented. Subsequent to initial discussion, collaboration with the Medicare Local to progress the development of consistent guidelines for management of this population group across this district will be undertaken. An extended role of PN's has the potential to enhance the management of patients with chronic heart failure, their carers and the broader community but this expanded role must be underpinned by additional education and resources.

There is a plethora of evidence to support disease-specific management of CHF. A review is suggested of the current funding model of the Shoalhaven Heart Failure Service to enable this service to assist general practice in further development of a collaborative role in managing CHF patients.

Appreciative Inquiry methodology has been an effective approach to identifying system strengths, as the basis for identifying opportunities to enhance both the patient experience and the effectiveness and efficiency of service provision. This approach may be a mechanism Health could consider utilising more, given its inclusiveness for clinicians, to inform policy makers and managers and to foster a collaborative approach which engages all stakeholders.

Those searching for a sound evidence base to guide the development and implementation of successful new models of integrated care for persons with chronic illness may look to this study for similarities realising that 'programs that are integrated into existing structures, and linked into existing positions and accountability processes are more likely to be sustained' (NSW Department of Health, 2001, p 5).<sup>5</sup>

## Introduction:

The research project aims to explore models of care to manage patients with Chronic Heart Failure (CHF) in the Primary Health Care (PHC) setting in a rural New South Wales (NSW) area, the Shoalhaven. The research objectives for this study are informed by the view that current models of care are no longer adequate to meet the needs of the increasing cohort of CHF patients in the study area; a view reinforced by the literature (see, for example, *Bureau of Health Information. Chronic Disease Care: A piece of the picture.*)<sup>2</sup> This report focuses on potentially avoidable admissions for NSW public hospitals, and hospital admissions that may have been avoided. The Shoalhaven area has the highest incidence of unplanned hospital presentations; admissions and extended length of stay (LOS) in NSW for CHF.<sup>2</sup> General Practice targets patients with chronic disease through an integrated, multidisciplinary team led by the general practitioner through care plan implementation and practice nurse collaboration making it an alternative model of care to consider devolution of care of this cohort of patients to. This PHC approach is incentivised via government funding of GP management plans and team care arrangements for this at risk group.

Chronic Heart Failure, a disease of great burden to the community, is associated with high levels of utilisation of health services across a range of health care settings to manage associated chronic and complex needs. The rising incidence of CHF is increasingly outpacing health service provision, having adverse health budgetary impacts, and adversely affecting quality of life of both patients and carers.<sup>3</sup> CHF continues to be a source of concern for government and community alike despite improvements in its management.<sup>6</sup> It is estimated to occur in 1.5 - 2% of Australians, affecting approximately 300,000 Australians at any one time, with increased prevalence with ageing.<sup>7</sup> The Shoalhaven's high concentration of Indigenous, ageing and retiree population<sup>8</sup> and incidence of socio-demographic risk factors contribute to the burden in this area. How to impact positively on these statistics remains a challenge, given the issues of service provision, increasing referrals, structural ageing of the population, increased level of chronic disease and budgetary restraints.

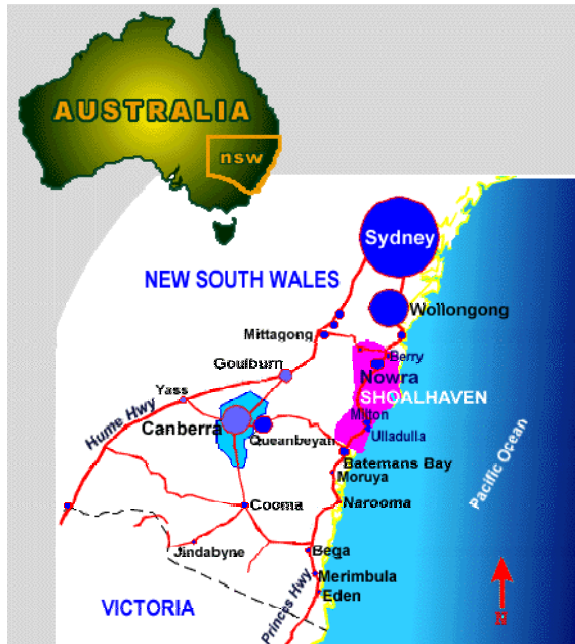
It is anticipated that this study will identify the positive interventions and innovations in the management of CHF patients by practice nurses (PN's) in general practice in rural NSW. Additionally, it is anticipated that the study will be able to assess the potential for expansion of this role. It is also hoped that working with PN's and general practitioners (GP's) throughout this study will enhance the collaborative approach to management of CHF patients in primary health care, benefiting all stakeholders in delivery of care to this population group to achieve better health outcomes with optimum use of resources. It is anticipated that the results of this study would be replicable in like rural communities servicing patients with chronic and complex needs as chronic disease management planning in general practice recognises and treats many chronic diseases of which CHF is only one.

The Shoalhaven Heart Failure Service (SHFS) was established in 2001 as a NSW Department of Health initiative to address increasing presentations, hospitalisations and length of stay in the acute hospital sector of CHF patients, and to improve the quality of life of patients and their carers. During the period to date, the Clinical Nurse Consultant role has involved establishing a network of valuable cohesive links with the hospitals in the area and nursing, medical and allied health staff employed at these facilities. This has led to the development of improved identification and referral processes for patients with CHF across the area to ensure appropriate, best practice follow up post discharge, and timely linkage with their GP. More importantly, this role has allowed the negotiation of professional partnerships with local GP's and specialists within the Shoalhaven area and tertiary centres to support the management of this condition within the community. Service statistics indicate that this collaborative approach has enabled improved patient outcomes, with reduction of patient admissions and readmissions within the Shoalhaven area due to multidisciplinary service provision, and education of patients in self-management strategies developed in my role as Clinical Nurse Consultant SHFS. Outpatient clinics in Milton Ulladulla Hospital situated in the southern Shoalhaven area, are now established and a proven successful innovation with uptake by both Indigenous and non-indigenous patients.

## Demography:

Remoteness Areas (RA's) is a system in place for classifying regions for purposes of statistical comparison between city and country in Australia into broad geographical categories. The Shoalhaven is classified as: RA2 - Inner Regional Australia (previously small rural centre, Rural, Remote and Metropolitan Area (RRMA) classification system) with the ARIA (Accessibility/Remoteness Index of Australia) index value  $>0.2 \leq 2.4$  (0 value - highest levels of access to goods and services 12 – highest level of remoteness).

Figure: 1



### The Shoalhaven, South Coast NSW, Australias:

The area of study, the Shoalhaven region is a largely rural area; located on the south coast of NSW covering 4660 square kilometres (see Figure 1) comprising 49 towns and villages, some isolative, with Nowra, population 18,104 at the time of The Bureau of Statistics (ABS) census 2011 the largest urban centre.<sup>9</sup> There are three public hospitals and one private hospital, community and Indigenous health care centres and 35 general practices. The area has a large resident indigenous population, (4% compared to 1.9% state average), structural aging with the Shoalhaven's population predicted to have a 64% increase in the 60 plus age group by 2016, with a projected population rising to 105,625 by 2016 from 88,405 ABS (Census 2006). The area has a relatively high level of socio-economic disadvantage with reduced employment opportunities and household income well below the state averages (SEIFA Index of disadvantage, Shoalhaven C 964.4), and increased retiree population, attracted to coastal areas.<sup>8</sup>

<http://www.southcoast.com.au/shoalhaven/21shvmap.htm>

## Background:

Chronic Heart Failure and its burden is a global issue and is the most prevalent reason for hospital admissions and general practitioner consultation for Australians aged 70 plus.<sup>10</sup> Thirty thousand people are diagnosed each year with this life-altering condition, at a management cost of \$1 billion<sup>7</sup> with half all potentially preventable hospitalisations arising from selected chronic conditions including CHF.<sup>11</sup> Chronic Heart Failure a complex clinical syndrome that suggest the efficiency of the heart as a pump is impaired, is caused by structural or functional abnormalities of the heart; with Ischaemic Heart Disease (IHD) the underlying cause, in the majority of cases.<sup>12</sup> This syndrome of CHF is characterised by symptoms such as breathlessness and fatigue, and signs such as fluid retention.<sup>13</sup> The Shoalhaven's population exhibits high levels of cardiac disease and its risk factors.<sup>14</sup> The Indigenous population is affected by CHD (coronary heart disease) twice the rate of the non-Indigenous population,<sup>15</sup> mortality from CHF three times higher<sup>4</sup> and hospitalisation rates for heart failure two to three times higher.<sup>8,16</sup> Socio-economic disadvantage, co morbid conditions, and structural aging, with increasing disability of CHF patients<sup>6</sup> contribute to this burden in the Shoalhaven area.

The Shoalhaven has many isolated areas and discreet communities of which Wreck Bay is one, with limited transport options a significant obstacle to providing effective health and related services<sup>17</sup> with potential for reduced access to general and specialist medical and diagnostic services, all adverse health outcome predictors,<sup>15</sup> 'with [populations at] increased likelihood of developing the condition but less likely to see their general practitioner'(McAlister, et al.,



2004, p 1).<sup>18</sup> There is a paucity of data on transportation issues, but it is known older population and indigenous groups are less likely to own a car or possess a driver's licence isolating them to an even greater degree particularly in the rural south coast, NSW setting.<sup>17</sup> Health concerns in these contexts tend to be<sup>19</sup> 'unique and relate directly to their living conditions, social isolation and distance from health services' (Sadkowsky, et al., 2001, p 2).<sup>20</sup>

These insights highlight the risk increase and predisposing factors that will see CHF and its increased prevalence continue to be the forefront of coordinated, sustainable and integrated service need in this area. Traditional models of health service provision have struggled to address inadequacies which can result from isolated areas with small dispersed populations<sup>21</sup> of which the Shoalhaven is one such area. Consequently, with limited resources available for usual care, recommendations for increased infrastructure to redress these inadequacies and alternative means of managing this cohort of patients are sought.

### **Search strategy:**

The search strategy used to examine the role of the practice nurse in general practice in rural Australia was a review of the Australian and international literature. These searches were limited to English language sources and to publication dates between 1996 until present day, with older articles consulted if relevant to this study. An initial literature review was undertaken using Clinical Information Access Portal (CIAP), on Medline and Embase, using the key word descriptors developed for each element and content area. Ovid books, Ovid and Ovid MEDLINE, PubMed, ProQuest, Nursing Research Centre, The Cochrane Library database. NSW Health and Australian General Practice Nurse policy documents, Australian College Of General Practitioners, theses/dissertations and research studies, and systematic reviews were sources for the citations. Reference lists from other studies and systematic reviews, in conjunction with updated readings from the PHC RIS e-bulletin were also used.

The keywords and mesh adopted were:

**Keywords:** rural, general practice, chronic heart failure, practice nurses, chronic disease management, cardiovascular disease, Australia, primary health care

**Mesh:** heart failure, primary health care, general practice.

### **Literature Review:**

The object of the literature review for this study was to develop an academic and practice context for the present research, with a view to informing the development of the project methodology (in particular, the questionnaires and interview guides), and to identifying gaps in knowledge relating both to CHF and chronic disease management and to the role of General Practice, with particular reference to PN's, to which the current research initiative might respond. A large percentage of patients enrolled with the SHFS are referred for secondary or tertiary prevention, have had an acute care crisis admission, or are in the declining, trajectory of their disease process (current SHFS service data). If care were devolved to general practice, interventions may be undertaken at a time when the patient is ready to initiate change<sup>22</sup> and possibly at an earlier stage of the disease process, particularly for the Indigenous population where CHF occurs at a much younger age.<sup>8</sup> This may reduce the severity of their disease by impacting positively on the participation and retention of patients for ongoing management and intervention.<sup>23</sup>

The focus of moving towards a primary health care model for chronic disease management offers 'greater efficiency, flexibility and focused, opportunistic care with 85% of Australians presenting to general practice each year'(Halcomb, et al., 2008, p 45).<sup>24</sup> 'This high rate of service utilisation places general practice in an ideal position to implement comprehensive screening, disease prevention and chronic disease management programs' (Halcomb, et al., 2007, p 270 )<sup>25</sup>, including risk factor stratification as part of a preventative health initiative. This would appear to put this model of care in the forefront for ongoing management of this population group, and this view is reinforced by the

Australian article by (Piterman, et al., 2005, p 549) 'most chronic disease burden of care lies with the GP'<sup>26</sup> since this is the context where 'chronic conditions such as congestive heart failure can be managed to prevent or reduce the severity of acute flare-ups to avoid hospitalisation' (Public Health Information Development Unit, 2007, p 6).<sup>27</sup>

Practice nurses are seen as a valuable, albeit underutilised, resource in the healthcare system where the<sup>28</sup> 'majority of nurses currently employed in general practices believe the PN role should be expanded to include autonomous functioning'. Exploration of this view is an objective of this study. A significant base of knowledge exists relating to the current role of practice nurses in Australia but it is less clear how this is translated into clinical practice.<sup>29</sup> Role enhancement is emerging and evolving with a large proportion of practice nurses keen for the expansion of their role now and in the future.<sup>30</sup> PN's are increasingly 'appearing to be the main recipient of workload shift for GP's' (Jenkins-Clarke, et al., 1998, p 1121),<sup>31</sup> with consumers confident in their care if they trust their general practitioner.<sup>32</sup> Retention of PN's does not appear to be a concern in rural general practice, which enhances a likelihood of increased continuity of care and service.<sup>33</sup> These factors would enhance support of this primary health care model.

Studies over the last ten years have looked into many aspects of practice nurses and nursing in general practice in Australia in both urban and rural settings. These have included studies of the roles of practice nurses in general practice,<sup>34,35</sup> their educational needs, clinical leadership,<sup>36</sup> teamwork<sup>37,38</sup> professional development,<sup>39</sup> policy development,<sup>40</sup> enhancement of current role<sup>41</sup> and the practice nurse - general practitioner relationship.<sup>28</sup> A sampling of the literature suggests Australian general practice continues to grow at a rapid rate as a consequence of government policy in response to the increasing burden of chronic and complex disease in the community'<sup>24</sup> with an enhanced role of practice nurses within general practice in rural NSW. Cardiovascular disease management in general practice is seen as an important opportunistic link for implementing disease management programs,<sup>24</sup> and it follows that practice nurse-provided intervention may also be suitable for patients with chronic heart failure. The literature indicates limited evidence of cardiovascular disease management and risk reduction data from general practices; limited studies or evidence documenting chronic heart failure management<sup>24</sup> or illustrating how CHF patients are identified in general practice. This review, then, leads to the conclusion that further consideration is needed of the role that 'practice nurses currently provide care for patients with CHF in the setting of general practice'.<sup>42</sup> This project is well placed to address these issues and enhance the body of evidence.

A recent study looked at the cost effectiveness of a general practice chronic disease management plan for CHD in Australia where with post myocardial infarction heart failure the outcome was less certain although may have at least comparable benefits.<sup>43</sup> This study also recognised that CHD patients have co-morbidities and one comprehensive care plan may be the way forward to incorporate this. These patients are best served by an integrated, multidisciplinary team approach to address CHF's lingering, incapacitating complexities. Such an approach is available in general practice 'under the Enhanced Primary Care (EPC) Package, including health assessments, GP management plans and team care arrangements (TCA's) and conferences as provided'.<sup>26</sup> This appears to be a more sustainable approach to chronic disease as it 'increases the range of people who are able to address health problems and particularly those that arise out of social inequity and social exclusion'<sup>44</sup> particularly relevant for this area.

This primary health care model is an opportunity to address inequities in health care provision to ensure all patients with CHF who access general practice have the same managed care. This ensures that effective interventions reach all those who most need them, with implementation of appropriate levels of health and social care interventions. This has proved a successful model in the management of patients with diabetes in general practice where care is defined to population groups<sup>42</sup> and whose chronic disease, like CHF, demands self-management and self-efficacy strategies to control exacerbations of ill health.

'There is extensive evidence to support the efficacy of self-management interventions which have been tailored to the needs of specific conditions...their success in assisting people improve their quality of life and reduce their health service use appears to hold irrespective of the approach taken (e. g, group versus individual-based intervention) or setting (city versus rural location) including CHF'.<sup>45</sup>

Care defined by population groups is not advocated by Dennis, et al 2008, who asserts 'patients should not be managed as if they had a series of separate chronic diseases but rather simplified to encourage chronic disease management'.<sup>46</sup> This, together with chronic disease registers for recalls, proactive follow up, and audits, may be something for consideration and integration within existing scope of general practice.<sup>47</sup> Earlier studies in this area have recommended further research to:

'more fully explore how such a nurse led intervention as a component of multidisciplinary general practice care team approach can improve patient outcomes with regard to cardiac risk factor reduction'.<sup>25</sup>

and to explore further the phenomena that practice nurses are reportedly less confident discussing cardiac issues, education or responding to patient concerns. Mills et al, 2007 whose action research study explored issues of practice nurse education, communication and teamwork, leadership and capacity to implement change prior to implementation of a PN role, was significant, but may have been limited by its lack of generalisability and small sample size. It reported practice nurse champions key to implementing new models of care in primary care with discussion of funding models relying on task allocation and the genderisation issue of the PN and women's health. Even so, this study could be a pilot for a larger study taking in wider geographical boundaries.<sup>48</sup>

### **Aims and objectives:**

The aims of the study were to identify current usual practice by PN's and GP's in response to the needs of this cohort of patients in general practice, and to ascertain how the Shoalhaven Heart Failure Service can best assist their management in the broader community. Specific objectives adopted with a view to achieving the aims were:

- To explore the range of existing roles of practice nurses in different contexts
- Identify the constraints which affect the practice nurses' ability to fulfil their role
- Explore the potential for development of the practice nurses role in chronic heart failure management
- Explore the clinical nurse consultant role and ascertain if it can support practice nurses within the existing capacity of the role

The approach in seeking to fulfil these research objectives has been informed by the Appreciative Inquiry Methodology. It is anticipated that the outcomes of this research will enhance the ability of GP's to focus more on higher order activities

### **Critical reference group:**

This study is intended to interest those involved in the care and management of patients with CHF across health services and include practice nurses, general practitioners, generalist community nurses, nurse managers, policy makers, Medicare Local, chronic disease managers, heart failure specialist nurses and allied health professionals. To positively engage and be a catalyst for further discussion and research among these health professionals, aligned with decision makers may well add to the findings of this study. Collectively these groups have the capacity to influence and support effective integration and collaborative engagement through transition, of an alternative model of care to manage this CHF cohort of patients. Central to this is a commitment of resources, systems change and development of further partnerships.

## **Methods and Methodology:**

### **Ethics:**

The conduct of this study was governed by the key principles of informed consent and voluntary participation. This study was approved by the University of Wollongong /Illawarra Shoalhaven Local Health District and Medical Human Resources Ethics Committee (Reference HE11/440 on the 3/11/2011) and the Site Specific application was approved by the HREA on the 4/11/2011.

### **Initial inquiries:**

Informal meetings with members of the SDGP (Shoalhaven Division of General Practice), including Chief Executive Officer (CEO), general practitioner and practice nurse support person for preliminary enquiries were undertaken to explore their interest to participate in this research project. The enquiry had the support of the Research Governance Officer (RGO) who verbally approved that I could proceed on the proviso that I informed those to whom I spoke in casual conversation, that the research was the subject of an ethics application, that there would be a formal interview process following, and that at this stage I was looking at substantive usual practice

The outcome was that this project was worthwhile, had clinical involvement by the principal researcher, was seen as an opportunity to support the principal premise of the study; addressed a relevant clinical issue, and had the support of members of the Division. Potential to change current practice and model of care to ensure all patients with CHF in the Shoalhaven area have access to a service that meets their needs was a significant factor in progressing the study, together with the fact that research was intended to remain close to practice, 'aligning practice with evidence at the point of care'.<sup>49</sup>

### **Study Design:**

The sequential mixed methods design has two components: questionnaires to obtain predominantly quantitative data, followed by semi structured interviews with a purposive sample of consenting questionnaire respondents to produce qualitative data which explores the issue in greater depth.

It was my initial thought after studying the questionnaire data to interview PN's and GP's from varied general practice settings including those who do not employ practice nurses, those with fewer to more PNs and GPs per surgery and those from across the geographical area. The other variable I thought may have some impact on care provided was distance from the main hospital and I sought to determine if this was the case.

### **Survey design and piloting:**

The questionnaires were specifically designed for this study as no known validated equivalent tool was found that could provide sufficient, relevant information to guide interviews based on the appreciative inquiry methodology. The questionnaires consisted of 12 closed questions and three 5-point likert scaled questions for the GP's and 16 closed and two 5-point likert scaled questions for the PN's, including the choice of a not sure option, to avoid respondents feeling obliged to respond to a question and minimising incomplete dataset ('not sure' responses was given a zero value). The likert scale was used to rate the level of agreement or disagreement with the premise of the question (1=strongly agree to 5=strongly disagree).

The questionnaires were pilot tested in three general practices outside the study area to clarify readability, assess time to complete forms and confirm clarity of questions asked. The forms were amended accordingly, and reviewed

by my academic mentor prior to finalisation and administration to the sample group. The analysis of the questionnaire responses guided the interview questions, consistent with the premise that 'the art of practice of asking questions that strengthen a systems ability to anticipate and build on its successes and positive potential'<sup>50</sup> (a copy of questionnaires is shown in Appendix A and B).

The interview guides for PN's included 14 AI based questions and seven questions to gain role information data. GP interview guides comprised 12 AI based questions and 4 questions to explore GPs' perceived role of PN's. The interview questions were piloted within community health, due to their accessibility, reviewed by my academic mentor, and modified accordingly before ensuing use in the study (a copy of Interview guide Appendix C).

## **Methodology:**

The questionnaires were designed to provide as much information about roles, practices and needs as possible, with which to inform the semi-structured interviews. Two questionnaires were developed: one to collect data from GP's and one, from PN's. Variables explored were their preferences and practice for managing patients with CHF, and demographic data was obtained. Six PN's, six GP's and two key informants were interviewed. This represents recruitment from 10 General Practices out of a total of 35 in the Shoalhaven. These practices, on average, comprise two PN's and three GP's. The interviews were held in the workplace (general practice), in community health and at a location of the participants' choosing at a time most suitable for the participant, consistent with interpretive epistemology where 'meaning is constructed in the researcher participant interaction in the natural environment'.<sup>51</sup>

The interviews took between twenty to sixty five minutes, were audio recorded with brief written notes of key points kept to supplement verbatim transcripts. Six GP's, one lost to follow up, six PN's and two key informants (KI's) were interviewed at which point no new themes emerged. All participants who agreed to be interviewed were included. Participants were informed they could be sent a copy of their interview transcription.

Recursive interviews were conducted by the primary investigator selecting key points from the previous interviewee to inform discussion with the next interviewee to allow a deeper understanding of the individual's experiences and interpretation of the PN and GP relationship. All interviews that were scheduled took place without issue with participants appreciative of the opportunity to contribute to this study. Interview transcriptions were given to those three participants who requested them, and were validated as accurate accounts of the interview.

After the interview tapes were reviewed, the transcriptions were subjectively, manually and textually analysed in the original language line by line. Rereading and re listening to transcriptions I commenced writing what Charmaz (2006)<sup>52</sup> calls memos which were the catalyst for my concept coding, where shared experiences were sufficiently consistent to identify emergent themes. These themes were then reduced to a minimum number that adequately captured all the data. These themes or categories were given codes or titles, which clearly described the meaning of the theme and could be cross referenced to the data. I have tried to 'raise the categories that render the data most effectively'.<sup>52</sup> The more memo writing I did the more commonalities and patterns emerged. Selection of codes was based on those themes of most significance to the research question and those that recurred most often. It seemed an easier process coding the PN transcriptions than the GP's transcriptions. Initial coding of the GP's transcriptions was straightforward but axial coding proved problematic. This may have been due to the relative consistency of the information gathered, with less data available for analysis. Interview times for GP's were shorter than those of PN's, as they were scheduled as part of the GP's appointment diary.

Appreciative Inquiry was chosen as the qualitative methodology to explore how patients with CHF are managed by general practices and the roles of the PN's in this process. This strength-based approach is consistent with the premise:

'research over the last 20 years has found people will have more intrinsic motivation to act and change when they focus on past successes and use positive images to create a desired future'.<sup>53</sup>

This is particularly appropriate for this study, which attempts to identify dimensions of care and treatment that matter to health care recipients, albeit indirectly, and those that influence health care decision making and treatment.<sup>54</sup> The data generated by both participant groups explored best aspects of their roles by identifying what is working well, 'what we can do more of and what we can do better'<sup>55</sup> a core element of Appreciative Inquiry methodology.

### **Setting, sample and sampling:**

The study sample consisted of practice nurses, general practitioners, and key informants across the Shoalhaven area, providing a fair representation in terms of geographical distribution. Information about the proposed study was placed in both the practice nurse and general practitioner newsletters once ethics and site specific approval was granted. An in-service was held at a PN education session at the Shoalhaven Division of General Practice to allow open discussion about the study, and answer questions or concerns that those present had. This approach was supported by evidence that 'contacting participants before sending questionnaires increased response'<sup>56</sup> with a possibility of reducing response rate potential bias. The Shoalhaven Division of General Practice distributed the participant information sheet through its networks to the sample group and de-identified questionnaires. This method was chosen to ensure voluntary consent. A reply paid return addressed envelope was provided with each questionnaire for return to the principal investigator, with a reminder email sent four weeks after the initial mail out as a strategy to increase response rate. At the conclusion of the questionnaire participants were invited to volunteer for a semi-structured interview. Written consent was given by interview participants prior to commencement of each interview. Two key informants, one a strategic manager for a number of general practices in the area and the other a practice nurse support person who was employed by the SDGP for many years, were included in the interview sample. Their overarching and insightful knowledge of general practice further enhanced confidence in the results through allowing a process of triangulation with GP and PN questionnaire and interview responses.

### **Results:**

#### **Data analysis:**

Of the 105 GP questionnaires distributed, 16 were returned, giving an overall response rate of 15%. Of the 75 PN questionnaires, 15 were returned giving an overall response rate of 20%. The response rate to the PN and GP questionnaires is much as one might expect given the competing demands on GP's and PN's. The de-identified data was inputted into data collection spread sheets linked to data dictionary The Human Services Network (HSNet).

Selected cross tabulations found little evidence of variation in distance from nearest referral hospital or the size or makeup of the practices influencing any of the responses in the questionnaires. Although the sample size was small, confidence in the results is enhanced by the even spatial distribution of PN and GP informants, both to questionnaires and to interviews across the study area.

The number of participants interviewed, were 6 PN's and 6 GP's and 2 key informants. Even so, the six PN's interviewed represent practices which comprise a total of 42 PN's (of a total of 75 PN's in the Shoalhaven), and the six GP's interviewed represent practices which comprise a total of 77 GP's (of a total of 105 GP's in the Shoalhaven). There are thirty five general practices in the Shoalhaven, with recruitment for this study from 10 practices.

Table 1 presents a demographic and practice profile of questionnaire respondents. Tables 2 and 3 present data derived from questionnaire responses concerning roles, responsibilities, needs and opinions of PN's and GP's respectively, in relation to care of CHF patients.

**Table 1.****Demographic characteristics of practice nurse and general practitioner questionnaire respondents**

Demographic characteristics	Percentage PN's (N = 15)	Percentage GP's (N = 16)
<b>Age</b>		
22-49	47	62.5
50-65	53	37.5
<b>Sex</b>		
Male	0	73.3
Female	100	26.7
<b>Employment</b>		
Full-time	14.3	87.5
Part-time	57.1	12.5
Casual	28.6	0%
<b>Years in general practice</b>		
0-5	66.7	18.75
6-10	13.3	12.5
11-15	20	25
16-25	0	25
26+	0	18.75

Note. PN = practice nurse, GP = general practitioner

This demographic information confirms previous study data<sup>5756565657</sup> that PN's are female, mainly work part time, age consistent across groups, most years in practice 0-5years. GP's are mainly male, mainly work full time, majority in the 22-49 age group, years in practice consistent across groups.

**Table 2.****Proportion of practical nurses (PN's) reporting responsibilities and opinions relating to patients with Chronic Heart Failure (CHF). n = 15**

Topic	%
<b>Involved with</b>	
Identification of CHF	48
Care and management of patient	93
CHF education	79
Referral to other services	87
<b>Initiating referral</b>	
By PN	7
By GP	33
By either nurse or GP	20
Both nurse and GP	40
<b>Thought PN's have a team approach with GP's in managing patients with CHF at their practice</b>	55

Thought responsibilities relating to patients with CHF could be expanded	87
<b>Which factors are importance in managing patients with CHF</b>	
Previous experience with patients with CHF	0
Professional interest	20
Family history	20
Confidence in working with patients with CHF	27
Commitment to patient empowerment	73
Theoretical knowledge	0
Professional relationship with GP	33

This table suggests that PN's are in a position to expand their current role identifying, managing and referring CHF patients, with their practice driven by patient empowerment, with educational and training opportunities identified as the highest priority to achieve this.

**Table 3.**

**Proportion of general practitioners (GPs) reporting responsibilities and opinions relating to patients with Chronic Heart Failure (CHF).n = 16**

Topic	%
Involved with	
Referral to other services	75
<b>What education have you provided to PNs in your practice regarding patients with CHF?</b>	
In-service	44
Training with a GP	38
External course	0
No instruction	6
<b>Thought GPs have a team approach with PNs to managing patients with CHF at their practice</b>	
Thought it was important to have guidelines in place for PNs assisting with management of patients with CHF	38
Thought responsibilities of PNs relating to patients with CHF could be expanded	33

This table suggests limited educational opportunities available in general practice for PN's, there is a reasonable team approach but little confidence expressed by GP's for an extended role or guidelines for PN's to assist in their management of CHF patients.

**Interviews:**

**Themes:**

**Role of the practice nurse:**



PN and GP interviews reveal two distinct roles that practice nurses perform in rural general practice. The first is well articulated and prescriptive: the initiation and implementation of the patient care plan, the second less well defined being the opportunistic role that underpins practice: a role that is highly valued.

The majority of PN's and GP's surveyed and interviewed are of the opinion that the PN role is now focused mainly on the incentivised care plans. This task of care planning is a multifaceted and time consuming process, but one that most PN's agree 'works' (PN4). This appears to be due to its central element: the communicative process it fosters between the patient, PN, the GP 'and everyone else' (GP3), as a generic plan of practice that articulates the needs of individual patients. This approach enables PN's to undertake health promotion in an area that general practitioners:

'... made nurses a prominent part of in the chronic disease management when it was first made available in this setting as they felt it gave nurses the opportunity to be broad based in their care. (GP5).

The second and latter role appears to be an integral aspect of nursing in general practice and encompasses,

'...an open door policy... being available to chat to patients... incidental things... listening... explaining things to patients in a language they understand... and situations where patients present for an appointment particularly unwell, and need to be seen as a priority' (PN's 2, 5).

PN's regard this aspect as intrinsic to the flexibility of their role.

### **Patient centred approach:**

The patient centred approach is fundamental, as the needs and preferences of patients are listened to, with both PN's and GP's focused on fostering the involvement of patients in their health care and taking responsibility for their health. Communication styles are adjusted to meet the patient's needs, so they are not constrained by lack of knowledge. The PN's surveyed claim that empowerment of the patient was the main factor that influences their practice of managing this cohort of patients.

The care plan, usually a chronic disease management plan (CDM) and/or team care arrangement (TCA) seems to be the main method of identifying patients with CHF in general practice. These plans coordinate the management of patients with chronic disease and enable individuals to better manage and stabilise their condition. This collaborative approach involves appropriate allied health professionals with 'PN's as the gatekeeper allowing greater learning' (PN3). PN's mostly see patients first in this process of collaborative coordinated care, creating an opportunity for,

'Time to talk, a lot of patients will open up to a nurse rather than a doctor so it's ideal we see them first, if we see them as well, not so fearful of seeing a doctor, build the rapport' (PN5).

The initial assessment is the point at which referral to other services is undertaken with recommendations by the PN, in consultation with the patient, offering patients increased control over which services will be accessed. The GP makes the final decision, and is usually supportive of the PN recommendations (and hence patient preferences). Patients are then scheduled regular appointments with both PN and GP and others as prescribed with additional appointments in times of crisis, with recall if they do not attend appointments. 'This proactive follow up is what we do and get them in more often in crisis' (PN4).

Seeing patients first has been an area that PN's have been keen to explore as they report it exposes patients to care and available services they may not have been aware of, or have been reluctant to use. Recent research claims only

13% of patients are seen first by PN's<sup>58</sup>, but the present study found, encouragingly, that PN's see patients first in most instances.

Some GP's were not so certain about care plans, reporting that there are flaws in this model: perhaps suggesting some underlying resentment to this government-incentivised tool,

'A lot (of patients) don't benefit, soak up resources' (GP2);

'they already have this accumulated information in their notes and then you have to pay a nurse, generate work, get the oldies in, do it all and call it a care plan' (GP6).

### **Team Environment:**

Central to care planning is the practice team composition that varies depending on the size of the practice, demographics and availability of a range of medical and allied health professionals. It was suggested that patients 'feel more value when they know we are all a team' (GP1). Nurses draw on teamwork skills that were part of their practice in hospital nursing with good team spirit and peer support of paramount importance. GP's frequently report a team oriented workplace that values 'practice nurses' contributions to general practice' (GP 4). This team approach is underpinned by good communication and leaders that are cohesive and approachable. This approach is an area that most PN's agree is essential in developing their autonomous role. Practice management was, however, reported by PN's as falling short of the mark by not fostering a team approach that is central to these processes, to ensure collaboration of all disciplines involved in managing CHF patients. Examples of this are:

'Practice meetings for medical and nursing staff are often rushed, scheduled at times inconvenient to allow a fair representation of both vocations, and cancelled without notice and devoid of case discussion or brain storming' (PN1).

In addition to more productive team meetings, PN's would like further dialogue with GP's in their practice of managing these patients. Both vocations highlighted they would like more information on their colleagues' management of CHF patients, with PN's suggesting that these issues be placed 'on the agenda' at a scheduled meeting which both PN's and GP's attend. Practice nurses reported champions are those part of the team who bring their area of expertise to general practice with the encouragement of GP's, and take on the role of mentor and resource person.

### **Potential extended practice nurse role:**

Practice nurses work in a busy environment, 'but usually have the time and space to see patients even for unplanned presentations' (PN4). PN's see this as 'exciting' part of the extension of their current role where 'their skills can be utilised more' (PN2), where assessing a deteriorating patient is increasingly common given the prevalence of chronically ill patients and their complex needs in the community. This may possibly be facilitated by development and expansion of treatment rooms in general practice, 'which is now the norm in most practices' (PN5), increasingly set up to manage more acute, deteriorating patients who would usually require hospital care. If patients are deemed suitable for intervention in this context, with consumers being treated in general practice under the care of their usual attending doctor there is an enhanced potential to prevent admissions to hospital, so this approach may well be considered a hospital avoidance strategy (PN1). This has the potential to reduce presentations to the acute sector with patients returning to their own home following treatment, followed up by general practice with less adverse effect on patients' usual routine and quality of life. This approach is clearly still a work in progress, key informant

reporting “we’re not there yet” (K11).

The questionnaires revealed 33% of GP’s did not see an opportunity for increasing the role of PN’s in managing patients with CHF in contrast to those interviewed who expressed that they were open to suggestions and supportive if increased dialogue around the issue was undertaken. As one GP respondent observed:

‘Coordination if nurses have a set of protocols, we could be more rigid and universal involving team care, more a specific attention paid to FDR, if we were able to get practice staff feeling confident about implementation or support of that sort of regime I think that would be great’ (GP6).

### **Holistic care:**

A common theme throughout the PN interviews has been the holistic approach to care that has developed in general practice. This is in contrast to that of the acute sector where nursing practice predominantly revolves around episodic care. The holistic approach appears to have developed as a response to patients with CHF and other chronic illnesses who have presented as:

‘Fearful, frightened, shocked at their diagnosis, not managing their health and representing to the hospital, who needed lots of positive and motivational nursing’ (PN5).

This was reported as a contributing factor for the now common motivational interviewing that PN’s engage in with this cohort of patients. This form of interviewing works on facilitating and engaging intrinsic motivation within the patient in order to change behaviour, at a time when the patient is ready: ‘if they are not ready they will not change’ (PN5). PN’s report that motivational interviewing is more focused than traditional counselling; goal orientated requiring the capacity for reflective listening. This practice could be part of the PN’s opportunistic role.

‘Between the nursing staff and patients develops a sense of team care that is very useful, they look to us for motivation, it puts more ownership onto the patients as opposed to this traditional model, where it’s all whatever the doctor says, we get the benefit of an allied practitioner who is genuinely part of a team with patients feeling it’s a caring environment’ (GP5).

Most PN’s agree it is important to build to a relationship in the first instance, for this to ensue. This influences how these patients managed their health, and has been the catalyst for this change process in recent years, with reports of increased confidence of patients in their self-management and self-efficacy strategies as a result of PN tutelage. PN’s are known to provide effective health care particularly in enhancing patient knowledge and self-management support, a result of this engagement.

‘General practice ‘looks for these prospective qualities of positive and motivational nursing to impart to patients as central to self-management when recruiting new staff, and not so much experience or skills’ (K11).

GP’s share these views, ‘we are not just technicians’, ‘we have to talk to patients, get to know them, their family, their family history and what the situation is like at home’ (GP2).

### **The community:**

A characteristic of rural and remote nursing within small communities is 'knowing the community, patients and their families' (PN2). PN's rate this aspect as very important as it gives them insight into areas that may impact on how they manage patient health. In contrast, some patients find it inhibits them seeking medical care due to lack of anonymity. Confidentiality remains a priority in general practice given this issue.

Indigenous patients enrolled with the Aboriginal Medical Service are seen on a regular basis following admission to the hospital to 'build on the knowledge slowly' (GP4). A GP states that the two things that have made the most difference with management of Aboriginal patients with severe chronic disease in the community are the employment of an outreach health worker, and the Closing the Gap initiative.

'Previously I thought some patients were compliant with their medication scheduling but when this initiative was introduced I saw a drop in blood pressure readings and lowered cholesterol readings, had to reduce all these medications, which I can only attribute to the fact that they are now medicating more effectively' (GP4).

This initiative allows registered Aboriginal patients access to medications at lower cost or nil co-payment. Anecdotally, this has resulted in cases of marked clinical improvement, improved self-management; with fewer crisis events,

'Less calls to the surgery by patients for crisis intervention, not calling ambulances as much, which I attribute to these interventions' (GP4).

Increases in the population proportion of groups from lower socioeconomic status remain a challenge for all domains of health, including General Practice in the Shoalhaven. Assistance with home, community and social services, transport to attend appointments, are key areas in assisting these patients to remain independent and supported in their own homes for as long as possible.

'Situations have arisen where there have been difficulties accessing services to match a patient needs, an extended waiting period or service that is not available locally, raising these issues is seen as part of the care plan' (PN3).

#### **Potential for educational advancement:**

PN's report education for specific conditions is usually facilitated by 'pharmaceutical companies', with no suggestion that there was anything unusual or potentially problematic about this. This may reflect the indicator that PN's have a need for education and the networking among peers that these sessions offer, and that this source of professional development is valued. Information from the interviewees and key informants cited education in the areas that would directly support their current work activities as fundamental to achieving improved patient compliance, and also providing an inroad to assisting the transition to an extended role for PN's. PN's 'are excited' about the prospect of role extension with suggestions by those interviewed for a reference group, or contact point for advice and support with consistent guidelines to drive the transition period of managing patients with CHF.

PN's report access to online educational material including guidelines, journal articles, short courses helpful (e.g., diabetes course), with recent improvement in the relevance of information available that has assisted in their day to day activity in general practice. Suitable educational delivery options are needed in this area, with consideration of distance of travel to access, appropriateness to the general practice setting, and suitable timing to engage PN's.

## **General practitioners:**

Respondents indicated that the domain of GP's in the management of patients with CHF is largely medical management, driven by guidelines, peer review and discussion but mainly by recommendations of the patient's treating specialist. Of those GP's surveyed (N=16), 87.5% reported access to a cardiologist, and 50% reported access to a physician, to assist in management of these patients. The cardiology/physician cover for this area is excellent and not likely to be duplicated in many other rural centres, giving this cohort of patients' access to evidence based best practice medicine with improved outcome potential.

GP's identified the values they place on their care of these patients as one of an accurate diagnosis of CHF, access to best practice medication schedule with early intervention to improve their symptoms, and prevention of an exacerbation of their illness. GP5 stated that there was 'an emotional reward with CHF patients as opposed to patients with other conditions'.

An unexpected finding was the references made to diabetes when discussing care plans, CDM plans and TCA's, intimating that if all other chronic diseases were managed as well as diabetes, with the processes in place in general practice, the job ahead would prove less onerous. There appears to be an underlying proposition that care plans are useful in a diabetes population group, with no extension of the logic to a conclusion that this practice may be transferable to other disease groups, for example, CHF patients.

## **Discussion:**

The study found that CHF patients are managed effectively in general practice by a multidisciplinary team, through GP and PN collaboration. General practice is an accessible, consumer preferred, funded model of care approach, PN enhanced, making it the logical solution for increasing devolution of the care of CHF patients. Findings in relation to the effectiveness of general practice team management are consistent with previous studies such as Halcomb, et al (2009).<sup>59</sup>

Underpinning any suggestions of role enhancement for PN's is their educational and training needs, the highest priority established through survey results and interviews. PN's and GP's agree this is the key initiative to up skill PN's and ensure that they have the expertise and tools to assist with their practice in managing patients in this population group,<sup>60</sup> and also to facilitate transition to an extended role. This includes ensuring the availability of evidence based guidelines to direct PN's' practice in management of this cohort of patients. This has been on the agenda for PN's for some time with some noted improvements but still an issue in this area due to isolative issues. More discussion around appropriate education, requiring forward planning to attract PN's is needed to address this important matter.

Practice nurses' alluded to lack of confidence as the main factor in preventing them from educating patients with CHF, particularly with regard to their medications, and is consistent with similar findings in a study by Holcomb E. et al 2007.<sup>25</sup> Practice nurses', also report that having champions in the surgery they work acting as resource persons improves the care they give to patients due to increased confidence and education which supports the study by Mills et al, 2007.<sup>48</sup>

Practice nurses' in this study value the opportunity to see patients first as part of the care plan process, and reported this occurred in most instances, in contrast to previous research where only 13% of patients were seen by a PN first.<sup>58</sup>

Practice nurses' reveal this gives them an opportunity to begin a relationship with patients, build rapport, often at the beginning at the patient's disease trajectory.

The incentivised care plan drives this prescriptive approach to care management. PN's use this tool as an opportunity to engage patients holistically, to motivate and promote self-management and self-efficacy. This PHC alternative model has the potential for this patient cohort to be managed from an earlier stage in their illness trajectory with risk factor stratification, reducing the impact of the disease, with fewer exacerbations requiring hospitalisation. Central to this is active follow up for those identified as having risk factors or early markers of the disease.<sup>42</sup> This is usual practice with PN's utilising scheduled appointments as opportunities to undertake health promotion activities.

The emergence of larger treatment rooms in general practice equipped to manage chronic disease patients with a deteriorating condition appears to be a new phenomenon in this rural area, and one that encourages PN's to feel their skills will be utilised more effectively as a result. This potential hospital avoidance strategy could be expected to benefit the patient, practitioners and Local Health District by reducing hospital health care utilisation. This initiative appears to be closely aligned with the possible expansion of the PN role in the PHC setting for managing patients with CHF or other chronic illnesses.

A worthwhile suggestion by those interviewed was for the SHFS to initiate a reference group, or contact point for advice and support in the transition to an extended role for PN's managing this cohort of patients. How this might be operationalised given the constraints of the SHFS and CNC due to resource issues is a challenge yet to be overcome. A review is suggested of the current funding model of the Shoalhaven Heart Failure Service to enable this service to assist general practice in a collaborative role in managing CHF patients. Addressing these issues ensures research remains close to practice 'aligning practice with evidence at the point of care'.<sup>49</sup>

PN's have alluded to the increased time associated with care plan initiation and implementation. This finding needs to be considered in the context of general practice starting to make inroads into the large domain of chronic disease management; however, we are in the early stages of uptake of this incentives scheme. This replicates the findings of a study by Dubois CA, Singh D, 2009 'shifting work from higher to lower skilled groups can lead to excessive workloads for the latter and simply transfer the problem of workforce shortage from one professional group to another'.<sup>60</sup>

The methodology of Appreciative Inquiry appears to separate this study from other studies where the underlying principle is to explore and focus on current and past successes, with the impetus to act and generate change. This is in contrast to the observation in the literature that the 'public health field is very good at measuring problems and strategies'.<sup>44</sup> The Appreciative Inquiry approach promoted early engagement with the participants in a notably positive way and appeared to allow free flow of conversation during the interviewing process.

An efficient patient referral system, to ensure a timelier process as part of care planning across the Shoalhaven and Illawarra Areas is something both PN's and GP's agree would benefit patients. This system would inform practitioners of available services, contact details, waiting lists, and be more widely accessible with potential to improve service provision this cohort of patients. The increase of bulk billing practices with allied health professionals and other services co-located is suited to this rural environment.

How can we make CHF management more like diabetes management for further patient care? Knowledge synthesis suggests that – 'is there a core set of measures applicable to most settings increasing likelihood of success'<sup>61</sup> and if this approach works for diabetes, why might it not work equally well for CHF? From the patient perspective is there a variation in the management of chronic heart failure depending on which practice you attend for your usual care and

where you live. What will assist to make this variability less likely to occur? There is a plethora of evidence to support disease-specific management of CHF.

The multifactorial outcomes of this study are significant if measured simply by the voices of the PN's and GP's. There can be little doubt that an approach based upon a consensus view of stakeholders with frontline experience in the increasingly challenging environment of CDM will achieve the shared goals of all parties involved through increased confidence in and collaboration between team partners.

### **Potential issues for further research not included in the scope of this study have emerged in the course of the study:**

It has been suggested in discussions of the PN role that less experienced nurses are less adaptable to the general practice environment. Whether this may be an individual, organisational or other issue is worthy of further exploration.

There was some discussion regarding recent Medicare rebate policy change for PN's this year with adverse comments of how it has undermined their role, and confidence with what may transpire in the future, including job security. This new change resulted in apparent controversy among PN's and may necessitate new research to explore this important issue further.

Kirby, (2008, p 77) suggests, 'GP's did not value the opinion of allied health professionals and referred patients to them to fulfil a process (either for TCA's or at the patients request)'.<sup>62</sup> GP interviews for the present study hinted (for example, in discussions about the use of care plans) that such attitudes may arise due to a underlying broader issue of aversion to or fatigue caused by system changes, and this could also be followed up.

Finally, discussion of the extent of the PN role in this study might usefully be augmented by closer attention to the broader issue of power relations within the general practice team.

### **Limitations:**

Although the sample size was small, confidence in the results is enhanced by the even spatial distribution of PN and GP informants, both to questionnaires and to interviews across the study area.

A limiting factor of this study has been the lack of voice from the recipients of this care: the patients. There is clear opportunity to include patient voices in future studies and evaluative processes.

### **Conclusion and recommendations, Implications for clinical practice:**

Disseminating the findings and recommendations of this study to the critical reference group is something that I would be instrumental in, given that health research recommendations rarely translate to clinical change 'the implementation of the results of research into some form of pragmatic outcome is a growing source of angst in both the research and clinical communities' (Pearson, et al., 2011, sec 1).<sup>49</sup> Assuming that 'simply generating and disseminating new research evidence is rarely sufficient to successfully change practice'<sup>63</sup> the task ahead will be to do just that. Subsequent to initial discussion, collaboration with the Medicare Local, to progress the development of consistent guidelines for management of this population group across this district will be undertaken.

This study found that an extended role of PN's has the potential to enhance the management of patients with chronic heart failure, their carers and the broader community, but role extension needs to be underpinned by additional education and resources. The role of the Clinical Nurse Consultant could be perceived as a liaison position, to facilitate potential change should research findings be accepted and implemented. Both PN's and GP's interviewed suggested that the Shoalhaven Heart Failure Service initiate a reference group, or become the contact point for advice and support in transition to an extended role for PN's in managing this cohort of patients.

Gathering data to evaluate the effectiveness of PN interventions is recommended to decide the most efficient process to direct their future practice (see Proudfoot et al 2009: 'It is incumbent upon practices and the organisations supporting them to assess the structure and quality of teamwork in order to maximise the quality of patient care'.)<sup>64</sup>

Appreciative Inquiry methodology may be a mechanism Health could consider utilising more, given its inclusiveness for clinicians, to inform policy makers and managers and to foster a collaborative approach which engages all stakeholders.

Those searching for a sound evidence base to guide the development and implementation of successful new models of integrated care for persons with chronic illness may look to this study for similarities, on the basis that 'programs that are integrated into existing structures, and linked into existing positions and accountability processes are more likely to be sustained'.<sup>44</sup>



## List of references:

1. Hodges P. Factors impacting readmissions of older patients with heart failure. *Critical Care Nursing Q.* Vol 32. United States 2009:33-43; quiz 44-35.
2. information BoH. The Insight Series Chronic Disease Care: A piece of the picture. 2011.
3. Hodges P. Factors impacting readmissions of older patients with heart failure. *Crit Care Nurs Q.* Vol 32. United States 2009:33-43; quiz 44-35.
4. Dubois CA, Singh D. From staff-mix to skill-mix and beyond: towards a systemic approach to health workforce management. *Human Resources for Health.* Vol 7. England 2009:87.
5. NSW Health Department. A Framework for Building Capacity to Improve Health,. In: Department NH, ed. Gladsville: Better Health Centre - Publications Warehouse; 2001:28.
6. NHF. National Heart Foundation of Australia (report by Vos T and Begg S, Centre for burden of disease and Cost-effectiveness, University of Queensland School of Population Health) The burden of cardiovascular disease in Australia for the year 2003, 2006. In: Centre for burden of disease and cost-effectiveness, ed.
7. NHF. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand (Chronic Heart Failure Guidelines Expert Writing Panel). Guidelines for the prevention, detection and management of chronic heart failure in Australia. Updated October 2011. 2011:pp. 7.
8. Clark RA, McLennan S, Eckert K, Dawson A, Wilkinson D, Stewart S. Chronic heart failure beyond city limits. *Rural & Remote Health.* Oct-Dec 2005;5(4):443.
9. Shoalhaven City Council. Shoalhaven Community Profile, Nowra 2008 cited 2/02/2012.
10. National Heart Foundation. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand, (Chronic Heart Failure Guidelines Expert Writing Panel). Guidelines for the prevention, detection and management of chronic heart failure in Australia. Updated October 2011. 2011:pp. 7, 10.
11. Australian Institute of Health and Welfare. AIHW, Australian Institute of Health and Welfare 2009, Australian hospital statistics 2007-08. Health services series no. 33. Cat. no. HSE 71. Canberra,. In: Australian Government of Health and Aging, ed. 2009 2009.
12. National Heart Foundation. National Heart Foundation of Australia, (report by Vos T and Begg S, Centre for burden of disease and Cost-effectiveness, University of Queensland School of Population Health) The burden of cardiovascular disease in Australia for the year 2003, 2006. In: Centre for burden of disease and cost-effectiveness, ed:pp, 2.
13. National Institute for Health and Excellence. NICE Clinical Guideline 108 Chronic Heart Failure: Management of Chronic Heart Failure in adults in primary and secondary care,. London 2010:pp. 4.
14. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology.* 2006;3(2):77-101.
15. Smith KB, Humphreys JS, Wilson MG. Addressing the health disadvantage of rural populations: how does epidemiological evidence inform rural health policies and research? *Aust J Rural Health.* Vol 16. Australia 2008:56-66.
16. AIHW. Australian Institute of Health and Welfare (AIHW) 2004. Heart, Stroke and Vascular Diseases - Australian facts 2004. AIHW Cat. No CVD 27,. Canberra: AIHW and National Heart Foundation of Australia (Cardiovascular Disease Series No. 22). 2004.
17. Sarah Fogg SPO, NSW Committee on Ageing. Driving Miss Daisy in Country NSW, Extending the transport options of older people living in rural NSW. In: Ageing TNC, ed 2000.
18. McAlister FA, Murphy NF, Simpson CR, et al. Influence of socioeconomic deprivation on the primary care burden and treatment of patients with a diagnosis of heart failure in general practice in Scotland: population based study, *BMJ*, doi:10.1136/bmj.38043.414074.EE (published 23 April 2004), cited 6/03/2012. *British Medical Journal.* May 8 2004;328(7448):1110.

19. Clark RA, Eckert KA, Stewart S, et al. Rural and urban differentials in primary care management of chronic heart failure: new data from the CASE study. *Medical Journal of Australia*. May 7 2007;186(9):441-445.
20. Sadkowsky K, Hagan P, Kelman C, Liu C. Health services in the city and the bush: Measures of access and use derived from linked administrative data. In: care. CDoHaA, ed2001.
21. Wakerman J, Humphreys JS, Wells R, Kuipers P, Entwistle P, Jones J. Primary health care delivery models in rural and remote Australia: a systematic review. *BMC Health Serv Res*. 2008;8:276.
22. Halcomb E, Moujalli S, Griffiths R, Davidson P. Effectiveness of general practice nurse interventions in cardiac risk factor reduction among adults. *International Journal of Evidence-Based Healthcare*. Sep 2007;5(3):269-295.
23. Kelly CW. Commitment to health theory. *Research & Theory for Nursing Practice*. 2008;22(2):148-160.
24. Halcomb EJ, Davidson PM, Griffiths R, Daly J. Cardiovascular disease management: time to advance the practice nurse role? *Australian Health Review*. Feb 2008;32(1):44-53.
25. Halcomb E, Moujalli S, Griffiths R, Davidson P. Effectiveness of general practice nurse interventions in cardiac risk factor reduction among adults. *Int J Evid Based Healthc*. Sep 2007;5(3):269-295.
26. Piterman L, Zimmet H, Krum H, Tonkin A, Yallop J. Chronic heart failure--optimising care in general practice. *Aust Fam Physician*. Jul 2005;34(7):547-553.
27. Public Health Information Development Unit TUoA, South Australia,. Population health profile of the Shoalhaven Division of General Practice: supplement,. PHIDU, The University of Adelaide: PHIDU, The University of Adelaide; March 2007.
28. Willis E, Condon J, Litt J. Working relationships between practice nurses and general practitioners in Australia: a critical analysis. *Nursing Inquiry*. Dec 2000;7(4):239-247.
29. Halcomb EJ, Davidson PM, Patterson E. Exploring the development of Australian general practice nursing: where we have come from and where to from here? *Contemporary Nurse*. Aug 2007;26(1):145-153.
30. Senior E. How general practice nurses view their expanding role. *Australian Journal Advanced Nursing*. Sep./Nov 2008;26(1):8-15.
31. Jenkins-Clarke S, Carr-Hill R, Dixon P. Teams and seams: skill mix in primary care. *Journal of Advanced Nursing*. Nov 1998;28(5):1120-1126.
32. Price K, Patterson E, Hegney D. Being strategic: utilising consumer views to better promote an expanded role for nurses in Australian general practice. *Collegian: Journal of the Royal College of Nursing, Australia*. Oct 2006;13(4):16-21.
33. Hegney D. Practice nursing in rural Australia. *Contemporary Nurse*. Aug 2007;26(1):74-82.
34. Price K. Nurses in general practice settings: roles and responsibilities. *Contemporary Nurse*. Aug 2007;26(1):7-14.
35. Halcomb EJ, Patterson E, Davidson PM. Evolution of practice nursing in Australia. *Journal of Advanced Nursing*. Aug 2006;55(3):376-388; discussion 388-390.
36. Pascoe T, Hutchinson R, Foley E, Watts I, Whitecross L, Snowdon T. General practice nursing education in Australia. *Collegian: Journal of the Royal College of Nursing, Australia*. Apr 2006;13(2):22-25.
37. Chan BC, Perkins D, Wan Q, et al. Finding common ground? Evaluating an intervention to improve teamwork among primary health-care professionals. *International Journal for Quality in Health Care*. Dec 2010;22(6):519-524.
38. Xyrichis A, Lowton K. What fosters or prevents interprofessional teamworking in primary and community care? A literature review. *International Journal of Nursing Studies*. Jan 2008;45(1):140-153.
39. Halcomb E, Meadley E, Streeter S. Professional development needs of general practice nurses. *Contemporary Nurse*. Apr-Jun 2009;32(1-2):201-210.
40. Pearce C, Hall S, Phillips C. When policy meets the personal: general practice nurses in Australia. *Journal of Health Services & Research Policy*. 15 Suppl 2:26-34.

41. Phillips CB, Pearce C, Hall S, et al. Enhancing care, improving quality: the six roles of the general practice nurse. *Medical Journal of Australia*. Jul 20 2009;191(2):92-97.
42. Practitioners TRACoG. The team approach to diabetes in general practice A guide for practice nurses. College house, I Palmerston Crescent, South Melbourne, Victoria: The Royal Australian College of General Practitioners; 2010:29.
43. Chew DP, Carter R, Rankin B, Boyden A, Egan H. Cost effectiveness of a general practice chronic disease management plan for coronary heart disease in Australia. *Aust Health Rev*. May 2010;34(2):162-169.
44. Department NH. A Framework for Building Capacity to Improve Health. In: Department NH, ed. Gladsville: Better Health Centre - Publicaions Warehouse; 2001:28.
45. **Zwar N HM, Griffiths R, Roland M, Dennis S, Powell Davies G, Hasan I. A Systematic Review of Chronic Disease Management,** [http://aphcri.anu.edu.au/sites/aphcri.jagws03.anu.edu.au/files/research\\_project/251/approved\\_3\\_zwar\\_pdf\\_16757.pdf](http://aphcri.anu.edu.au/sites/aphcri.jagws03.anu.edu.au/files/research_project/251/approved_3_zwar_pdf_16757.pdf) cited 20/06/2012.
46. Dennis SM, Zwar N, Griffiths R, et al. Chronic disease management in primary care: from evidence to policy. *Medical Journal of Australia*. Apr 21 2008;188(8 Suppl):S53-56.
47. **Zwar N, Harris M, Griffiths R, et al. A Systematic Review of Chronic Disease Management** [http://aphcri.anu.edu.au/sites/aphcri.jagws03.anu.edu.au/files/research\\_project/251/approved\\_3\\_zwar\\_pdf\\_16757.pdf](http://aphcri.anu.edu.au/sites/aphcri.jagws03.anu.edu.au/files/research_project/251/approved_3_zwar_pdf_16757.pdf) cited 20/06/2012.
48. Mills J, Fitzgerald M. The changing role of practice nurses in Australia: an action research study. *Australian J Advanced Nursing*. Sep./Nov 2008;26(1):16-20.
49. Alan Pearson, Zoe Jordan, Zachary Munn. Alan Pearson, Zoe Jordan, and Zachary Munn, "Translational Science and Evidence-Based Healthcare: A Clarification and Reconceptualization of How Knowledge Is Generated and Used in Healthcare," *Nursing Research and Practice*, vol. 2012, Article ID 792519, 6 pages, 2012. pp.1 doi:10.1155/2012/792519. Adelaide2012.
50. Richer M-C, Ritchie J, Marchionni C. 'If we can't do more, let's do it differently!': using appreciative inquiry to promote innovative ideas for better health care work environments. *Journal of Nursing Management*. Dec 2009;17(8):947-955.
51. Bunniss S, Kelly DR. 'The unknown becomes the known': collective learning and change in primary care teams. *Med Educ*. Dec 2008;42(12):1185-1194.
52. Charmaz K. *Constructing Grounded Theory: A practical guide through Qualitative Analysis 2006*. Thousand Oaks, CA : Sage2006.
53. Edwards P, Roberts I, Clarke M, et al. Increasing response rates to postal questionnaires: systematic review. *British Medical Journal*. May 18 2002;324(7347):1183.
54. Murray J. *Qualitative methods, Section of Epidemiology and General Practice, Institute of Psychiatry, London UK*. 1998.
55. Havens DS, Wood SO, Leeman J. Improving nursing practice and patient care: building capacity with appreciative inquiry. *Journal of Nursing Administration*. Oct 2006;36(10):463-470.
56. Edwards P, Roberts I, Clarke M, et al. Increasing response rates to postal questionnaires: systematic review. *BMJ*. May 18 2002;324(7347):1183.
57. AGPN. National Practice Nurse workforce survey report 2009. In: Network AGP, ed. ACT2009.
58. Kenealy T, Docherty B, Sheridan N, Gao R. Seeing patients first: creating an opportunity for practice nurse care? *Journal of Primary Health Care*. Jun 2010;2(2):136-141.
59. Halcomb EJ, Davidson PM, Daly JP, Griffiths R, Yallop J, Tofler G. Nursing in Australian general practice: directions and perspectives. *Australian Health Review*. May 2005;29(2):156-166.
60. Dubois CA, Singh D. From staff-mix to skill-mix and beyond: towards a systemic approach to health workforce management. *Hum Resour Health*. Vol 7. England2009:87.

61. Proudfoot JG, Bubner T, Amoroso C, et al. Chronic Care Team Profile: a brief tool to measure the structure and function of chronic care teams in general practice. *Journal of Evaluation in Clinical Practice*. Vol 15. England2009:692-698.
62. Kirby SE, Chong JL, Frances M, et al. Sharing or shuffling--realities of chronic disease care in general practice. *Medical Journal of Australia*. Jul 21 2008;189(2):77.
63. Eccles M, Mittman B. Welcome to Implementation Science. *Implementation Science*2006.
64. Proudfoot JG, Bubner T, Amoroso C, et al. Chronic Care Team Profile: a brief tool to measure the structure and function of chronic care teams in general practice. *J Eval Clin Pract*. Vol 15. England2009:692-698.

**Questionnaire: Practice Nurses – Stage 1**

**This questionnaire will seek to gain initial information of the role of practice nurses in regard to their management of patients with Chronic heart Failure (CHF) in rural NSW general practice**

**This is about your practice**

**Q1** Do you in your role as a practice nurse or does the general practitioner, identify patients with chronic heart failure when they attend the surgery for an appointment?

- I do       GP does       Both       Neither

**Q2** Would you be able to estimate how many patients with chronic heart failure that you would see in a week? .....

**Q3** In your role as a practice nurse are you involved in the care and management of patients with chronic heart failure?

- Yes       No – go to Q7

**Q4** Are you involved in educating these patients about their condition?

- Yes       No – go to Q7

**Q5** If yes, does this education involve discussing:

- a The importance of daily weighing and recording       Yes       No
- b Fluid restriction       Yes       No
- c Salt restriction       Yes       No
- d Assisting these patients if they are in crisis       Yes       No
- e Other .....

**Q6** What instruction have you been given to assist you with this task of educating these patients?

- a In-service education in general practice or at the Shoalhaven Division of General Practice       Yes       No
- b A course run externally       Yes       No
- c Training with a general practitioner       Yes       No
- d No instruction       Yes       No

**Q7** In your role as practice nurse are you involved in referring chronic heart failure patients onto other services?

- Yes       No

**Q8** Is this referral initiated by you or the general practitioner?

- by me       by the GP       either       both

**Q9** If by you, what services have you referred patients to:

- Diabetes       Mental Health
- Aboriginal Health       Dietitian

- Heart Failure Service
- Exercise program
- Other .....
- Psychology
- Cardiac Rehabilitation

Please read each question carefully and circle the number that best describes your answer

**Strongly Agree = 1   Agree = 2   Neutral = 3   Disagree = 4   Strongly Disagree = 5**

**Q10** There is a team approach between practice nurses and general practitioners in managing patients with chronic heart failure?

**Strongly Agree   1                      2                      3                      4                      5   Strongly Disagree   (not sure )**

**Q11** I think practice nurses could do more in managing patients with heart failure in general practice?

**Strongly Agree   1                      2                      3                      4                      5   Strongly Disagree   (not sure )**

**Q12** How important are these factors in shaping **your** practice of managing patients with chronic heart failure?

Please score your answers from **1** to **5** with **1** being of little importance and **5** being of greatest importance

- a. Previous experience with chronic heart failure patients.....
- b. Professional interest.....
- c. Family history.....
- d. Confident in working with chronic heart failure patients...
- e. Commitment to patient empowerment.....
- f. Theoretical knowledge.....
- g. Professional relationship with general practitioner.....

**This is about you**

**Q13** How many years have you been employed as a practice nurse in rural NSW? .....

**Q14** Are you an enrolled or registered nurse? **Please circle**

**Q15** Is your employment:

- full-time
- part-time
- casual

**Q16** How many practice nurses are there in your workplace? .....

**Q17** How many general practitioners are there in your workplace? .....

**Q18** What age group do you fit into?

- 20-30
- 30-40
- 40-50
- 50-60
- 60-65
- 65+

**Thank you for your time in completing this questionnaire.**

Researcher: Anne O’Neill

**Stage 2** of this study is to conduct one-on-one interviews with those who agree to be interviewed. This will enable me to use the results and themes of the questionnaires and further explore the research question. Not everyone will be invited to participate in an interview.

**Are you willing to participant in a one-on-one interview?**

Yes                      No                      (please circle and initial)

**Are there any things you would like to ask me about this study before you consider being interviewed?**

Yes                      No                      (please circle and researcher to initial)

**Name:** .....

**Address:** .....

**Contact details:** .....

**Preferred method of contact:** .....

**Best day and time to contact me:** .....

**Questionnaire: General Practitioners – Stage 1**

**This questionnaire will seek to gain initial information of the role of practice nurses in regard to their management of patients with Chronic Heart Failure (CHF) in rural NSW general practice.**

**This a about your practice**

**Q1** Would you be able to estimate approximately how many patients you would see on a weekly basis in your practice that have a diagnosis of chronic heart failure? .....

**Q2** In your management of these patients with chronic heart failure which of the following would you usually discuss with them in the management of their disease?

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Daily weighing and recording | <input type="checkbox"/> Action Plan                            | <input type="checkbox"/> Salt restriction  |
| <input type="checkbox"/> Fluid restriction            | <input type="checkbox"/> Flexible diuretic regime               | <input type="checkbox"/> Smoking cessation |
| <input type="checkbox"/> Flu/pneumo vaccinations      | <input type="checkbox"/> Reduction in their alcohol consumption |  |
| <input type="checkbox"/> Other .....                  |   |  |

**Q3** Are you involved in referring chronic heart failure patients onto other services?

- Yes       No

**Q4** If yes, what services do you routinely refer patients to:

- |  |   |
|--|---|
| <input type="checkbox"/> Diabetes              | <input type="checkbox"/> Mental Health          |
| <input type="checkbox"/> Aboriginal Health     | <input type="checkbox"/> Dietitian              |
| <input type="checkbox"/> Heart Failure Service | <input type="checkbox"/> Psychology             |
| <input type="checkbox"/> Exercise program      | <input type="checkbox"/> Cardiac Rehabilitation |
| <input type="checkbox"/> Other .....           |   |

**Q5** Do you have access to a senior medical clinician to assist you with management of these patients?

- Cardiologist       Physician

**Q6** What education have practice nurses in your practice been given to assist them in their care, management and education of these patients?

- |   |   |                              |                             |
|---|---|------------------------------|-----------------------------|
| a | In-service in the workplace or at the Shoalhaven Division of General Practice | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b | Training with a general practitioner  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c | A course run externally   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d | No instruction  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If practice nurses in your practice are provided with education is it:

- Chronic Heart Failure Specific       Chronic Disease Management



Please read each question carefully and circle the number that best describes your answer

**Strongly Agree = 1    Agree = 2    Neutral = 3    Disagree = 4    Strongly Disagree = 5**

**Q7** In my practice there is a team approach between practice nurses and general practitioners in managing patients with chronic heart failure.

**Strongly Agree    1                      2                      3                      4                      5    Strongly Disagree    (not sure )**

**Q8** In my practice there are guidelines in place for practice nurses in assisting in the management of chronic heart failure patients.

**Strongly Agree    1                      2                      3                      4                      5    Strongly Disagree    (not sure )**

**Q9** I see an opportunity for increasing the role of practice nurse in managing patients with chronic heart failure in my practice.

**Strongly Agree    1                      2                      3                      4                      5    Strongly Disagree    (not sure )**

**This is about you**

**Q10**        How many years have you been employed as a GP in rural NSW? .....

**Q11**        How many general practitioners are there in your practice? .....

**Q12**        How many practice nurses are in there in your practice? .....

**Q13**        What age group do you fit into?

- 20-30         30-40         40-50         50-60         60-65         65+

**Q14**        Are you male or female? Please circle

**Q15**        Is your employment:

- full-time         part-time         casual

**Thank you for your time in completing this questionnaire.**

Researcher: Anne O'Neill

**Stage 2:** of this study is to conduct one-on-one interviews with those who agree to be interviewed. This will enable me to use the results and themes of the questionnaires and further explore the research question.

**Are you willing to participant in a one-on-one interview?**

Yes                      No                      (please circle and initial)

**Are there any things you would like to ask me about this study before you consider being interviewed?**

Yes                      No                      (please circle and researcher to initial)

**Name:** .....

**Address:** .....

**Contact details:** .....

**Preferred method of contact:** .....

**Best day and time to contact me:** .....

## INTERVIEW GUIDE

### Explore the role of practice nurses in their management of patients with chronic heart failure in general practice in rural NSW and the potential for the expansion of this role.

#### LEADING QUESTIONS: examples

1. We have done a preliminary analysis of the questionnaires, and most nurses say.....can you explain why this is so?
2. Our analysis of the questionnaires also showed that most nurses say..... can you explain this?

#### THEMES TO BE EXPLORED

- Your experiences in your practice in managing patients with a chronic disease.
- Is this similar to your current management of patients with cardiovascular disease?
- Is it similar to your management of patients with chronic heart failure If it isn't could it be? How do you identify patients in your practice with chronic heart failure?
- Is there a teamwork approach to managing patients with chronic heart failure in general practice? Could you explain to me how this works? Who is part of this team?
- Explore a time when the **management** of a chronic heart failure patient was better than good. What made it so? What was it about you, the workplace, and the specific care that made it so good?
- What is it that may prevent you from managing patients with chronic heart failure well?
- Describe **teamwork** that you have been a part of, where you accomplished more than you expected. What made it happen? What did you contribute?
- What you **value** about yourself as a nurse or GP in general practice.
- What do you value about your colleagues? The nature of your work?

**Thank you for your time today.**