



## **Implementing Care Coordination in General practice: Embedding New Methods**

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**Implementing Care Coordination in General Practice:  
Embedding New Models**

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Doctor of Philosophy

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*The range of what we think and do  
Is limited by what we fail to notice  
And because we fail to notice  
That we fail to notice  
There is little we can do  
To change  
Until we notice  
How failing to notice  
Shapes our thoughts and deeds*

*R.D. Laing*



## **Originality of Thesis**

I hereby certify that this work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

---

Carolyn Elsie Ehrlich



## **Publications arising from or related to this Thesis**

Ehrlich, C., Kendall, E., Muenchberger, H., & Armstrong, K. (2009) Coordinated Care: What does it really mean? *Health and Social Care in the Community*, 17(6), 619-627. doi: 10.1111/j.1365-2524.2009.00863.x

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## Table of Contents

Thesis Overview .....	1
Chapter One.....	5
Chronic Condition Care Coordination in the Australian Context .....	5
Chronic conditions in the Australian context. ....	5
The complexity of the Australian health system. ....	6
General practice as an ideal context for managing chronic conditions. ....	7
Embedding practice—Normalization Process Theory. ....	9
Conclusion.....	14
Chapter Two .....	17
Chronic Condition Care Coordination in the General Practice Context .....	17
Medicare funding.....	17
Divisions of general practice program.....	19
Coordinated care trials.....	21
The response of general practice to Medicare funding incentives for chronic condition care coordination .....	23
The role of RNs in chronic condition care coordination in general practice.....	24
Conclusion.....	27
Chapter Three .....	29
Method.....	29
Study background.....	29
Design.....	30
Strengths and limitations of action research.....	31
Action research cycles. ....	31
Overall recruitment approach. ....	39
Research site 1.....	39

Research site 2.....	40
Research site 3.....	40
Action Research Cycle 1: Pre-implementation Studies 1—4.....	41
Study one—concept analysis of chronic condition care coordination. ....	41
Systematic search strategy.....	41
Data analysis.....	42
Study two—mapping usual chronic condition care.....	43
Recruitment. ....	44
Data collection.....	44
Data Analysis.....	44
Study three—chronic condition care coordination in practice. ....	45
Recruitment. ....	46
Data collection.....	46
Data analysis.....	46
Study four—supporting nurses to provide chronic condition care coordination. ...	47
Recruitment. ....	47
Data Collection.....	48
Data analysis.....	49
Action Research Cycle 2 .....	49
Study five—implementing chronic condition care coordination .....	51
Recruitment. ....	52
Data collection.....	52
Data analysis.....	53
Rigour. ....	53
Positioning the researcher—self as researcher. ....	53
Credibility and validity.....	54
Member checking. ....	55

Ethical Considerations.....	56
Integrity.....	56
Justice.....	57
Beneficence.....	57
Respect for human beings.....	60
Conclusion.....	61
Chapter Four.....	63
Results of Study 1—Concept Analysis of Care Coordination.....	63
Client level chronic condition care coordination.....	66
Concepts relating to the health care team.....	68
System level chronic condition care coordination.....	69
Summary of the literature.....	71
Conclusion.....	71
Chapter Five.....	73
Results of Study 2—Mapping Usual Chronic Condition Care.....	73
Participants.....	73
Results.....	74
General practice 1.....	75
General practice 2.....	76
General practice 3.....	77
General practice 4.....	78
General practice 5.....	80
General practice 6.....	82
General practice 7.....	83
General practice 8.....	84
General practice 9.....	85
Conclusion.....	86

Chapter Six .....	89
Results of Study 3—Coordinated Chronic Condition Care in Practice .....	89
Participants. ....	89
Results. ....	90
Theme one: moving beyond usual practice by spanning boundaries. ....	91
Spanning cultural boundaries. ....	91
Spanning knowledge boundaries. ....	94
Spanning settings boundaries. ....	96
Theme two: relationship-based care. ....	98
Theme three: agreed roles and routines. ....	100
Theme four: committing to chronic condition care coordination. ....	102
Conclusion. ....	104
Chapter Seven.....	107
Results of Study 4—Supporting Nurses to Provide Chronic Condition Care Coordination .....	107
Participants. ....	107
Results. ....	108
Theme one: conceptual confusion. ....	109
Theme two: cultural change. ....	110
Theme three: trusted and tested partnerships. ....	111
Theme four: business models and the financial context. ....	114
Theme five: professional definition, development and recognition. ....	115
Designing and implementing an intervention: Findings from Studies 1 – 4.....	117
Conclusion. ....	119
Chapter Eight.....	121
Results of Study 5—Implementing Chronic Condition Care Coordination.....	121
Participants. ....	121

Results. ....	122
Theme one: pre-requisites of RN-provided chronic condition care coordination. .....	123
Funding chronic condition care coordination.....	123
Engaging power-brokers.....	126
Leadership and a shared vision.....	129
The value of RNs broad skill base.....	133
Theme two: the intervention in context.....	135
Allocating time for RN-provided chronic condition care coordination. ....	137
Mentoring and support. ....	139
Theme three: achieving outcomes and transforming professional practice. ....	140
Summary—challenge, conflict, rewards. ....	145
Conclusion.....	147
Chapter 9 .....	149
Embedding RN Provided Chronic Condition Care Coordination .....	149
Evidence of normalization mechanisms in the literature (Study 1).....	150
Evidence of normalization mechanisms in usual care (Study 2).....	152
Evidence of normalization mechanisms in care coordination (Study 3). ....	153
Support for RN-provided chronic condition care coordination (Study 4).....	155
Implementing RN-Provided Chronic Condition Care Coordination – “collective action”.....	156
“Interactional Workability”—how the practice was operationalized.....	157
“Relational Integration”—the impact on inter-professional relationships. ....	158
“Skill-Set Workability”—the “fit” with existing skill-sets. ....	161
“Contextual Integration”—the “fit” within the organizational context.....	162
Implications for practice.....	164
Boundary spanning.....	164
Transformation opportunities. ....	165

Limitations.....	166
Conclusion.....	167
References .....	171

## List of Tables

Table 1: <i>The Action Research Typology</i> .....	33
Table 2: <i>Outline of Relationships between Action Research, Individual Studies and Data Analysis Methods</i> .....	37
Table 3: <i>Search Terms and Resulting Papers</i> .....	63
Table 4: <i>Characteristics of Participants in Study 2</i> .....	74
Table 5: <i>Characteristics of Participants in Study 3</i> .....	90
Table 6: <i>Characteristics of Participants in Study 4</i> .....	108
Table 7: <i>Summary of Findings of Studies 1 – 4 and Implications for Intervention Design</i> .....	117
Table 8: <i>Characteristics of Participants in Study 5</i> .....	122
Table 9: <i>The Interconnection between Elements of the Patient Intervention and Underpinning Theories and Concepts</i> .....	196



## List of Figures

<i>Figure 1: Model of the components of Normalization Process Theory (May &amp; Finch, 2009, p.541)</i> .....	10
<i>Figure 2: NPT and its mechanisms and components - adapted from May and Finch (2009).</i> .....	13
<i>Figure 3: Components of the Active Care Management Program</i> .....	50
<i>Figure 4: Chronic condition care coordination activities</i> .....	66
<i>Figure 5: Usual Care in General Practice 1</i> .....	75
<i>Figure 6: Usual Care in General Practice 2</i> .....	76
<i>Figure 7: Usual Care in General Practice 3</i> .....	77
<i>Figure 8: Usual Care in General Practice 4</i> .....	78
<i>Figure 9: Usual Care in General Practice 5</i> .....	80
<i>Figure 10: Usual Care in General Practice 6</i> .....	82
<i>Figure 11: Usual Care in General Practice 7</i> .....	83
<i>Figure 12: Usual Care in General Practice 8</i> .....	84
<i>Figure 13: Usual Care in General practice 9</i> .....	85



## List of Appendices

Appendix A .....	191
Designing the Active Care Management Program (ACMP) .....	191
General practice preparation.....	191
Practice nurse preparation. ....	192
The ICF as a philosophical framework for care delivery. ....	192
Self-management support in a general practice environment. ....	193
Person-centred care.....	194
Patient intervention.....	194
Conclusion.....	197
5As model	199
Practice Preparation	201
Appendix B.....	203



## **Abstract**

In Australia, the health care system is complex, constantly changing and comprised of multiple layers. Within this complex system, service fragmentation, care segmentation, and confusion about access to and provision of health care services, is likely to be the usual experience of both consumers and providers of health care. Chronic condition care coordination is frequently touted as one solution to these problems, but its implementation has been less successful. Given that access to the health care system most frequently originates in general practice, implementation within this context is particularly important.

However, implementing chronic condition care coordination within general practice is not likely to be simple because a complete reorientation of general practice will be required, from an acute care focus towards the ongoing management of chronic conditions. Nurses (RNs) who work in general practice provide an opportunity for achieving this type of reorientation, but the sustainability of any changes will be dependent on the way in which practices become routinely embedded in the work of general practice.

This research examines the implementation of RN-provided chronic condition care coordination in general practice. According to Normalization Process Theory (NPT) (May & Finch, 2009), the extent to which any new practice or innovation becomes embedded in usual practice is dependent on the extent to which its components are workable within the context and are capable of being integrated into existing ways of operating. Thus, the most appropriate theoretical framework to apply to the interpretation of this research is NPT.

The research was conducted using two action research cycles. Participants were recruited from three different, but geographically comparable, research sites to represent different exposure to chronic condition care coordination incentives. Five separate studies were conducted to answer the research question, “How is the work of RN-provided chronic condition care coordination understood and implemented in the general practice context?” The first action research cycle included qualitative data gathered from the literature, general practitioners, nurses, care coordinators and staff from Divisions of General Practice. This cycle sought to define the work of chronic

condition care coordination, identify who was involved in the work, and explore the organizing structures and group processes associated with the work. The second action research cycle qualitatively explored the experiences of nurses and Division staff as they attempted to implement a model of RN-provided chronic condition care coordination they had been involved in designing. This cycle focused on the mechanisms of “collective action” and “reflexive monitoring” during the implementation process.

The results of the first action research cycle showed that chronic condition care coordination was poorly defined and the general practice context was heterogeneous. Person-centred care and self-management support were the key differences between usual care and chronic condition care coordination. Chronic condition care coordination was distinguished by the fact that it was built on relationships with patients, among teams and across components of the broader health care system and that it focused on supporting the person to manage their own care more effectively using supports within their own context. It was concluded that the implementation of RN-provided chronic condition care coordination would require cultural change, professional development, and recognition of the business and financial context within which general practice existed.

Two key findings emerged from the second action research cycle. First, boundary spanning was identified as an important strategy for negotiating organizational structures and social norms when dealing with ill-defined and poorly understood concepts, such as care coordination. Second, providing opportunities for transformation was identified as an important strategy for negotiating the group processes and conventions that influenced the definition and understanding of, and engagement with, RN-provided chronic condition care coordination. Even without coherent understanding of the concept, a structured and deliberate exposure to a theoretically and contextually appropriate model of practice could lead to positive perceived benefits, which then resulted in enrolment and deeper understanding of the concept.

The theoretical contribution of this thesis to NPT is that it highlights the prominence of “reflexive monitoring” in the process of normalization. Underpinning both strategies of boundary spanning and transformation was the need to build reflexive monitoring processes early in the implementation process. Rather than sequentially building

coherence and participation and then monitoring the fit of a new practice, it was critical to engage participants in the process of reflexive monitoring as soon as possible, perhaps even before fully coherent definitions of the work had been established. The practical contribution of this thesis to the work of RN-provided chronic condition care coordination is the finding that boundary spanning and opportunities for transformation impacted on the influential organizing structures and social norms, and the group processes and conventions associated with the practice. Thus, these strategies provide nurses with powerful ways of influencing their context and facilitating the implementation of new practices.

This research would have been strengthened if the full NPT had been available at the time of designing the study. Nevertheless, NPT has provided an excellent lens through which to interpret the findings. The study has revealed important strategies to support implementation of RN-provided chronic condition care coordination in general practice, and has established guidance for future research in this area.



## **List of Abbreviations**

ACMP	Active Care Management Program
ANF	Australian Nursing Federation
ANMC	Australian Nursing and Midwifery Council
APN	Advanced Practice Nurse
CPD	Continuing Professional Development
DVT	Deep Venous Thrombosis
ECG	Electrocardiograph
EEN	Endorsed Enrolled Nurse
EPC	Enhanced Primary Care
GP	General Practitioner
GPLO	General Practice Liaison Officer
GPMP	General Practitioner Management Plan
GPMHC	General Practitioner Mental Health Care Plan
HbA1c	Glycosated Haemoglobin
ICF	International Classification of Functioning, Disability and Health
MBS	Medicare Benefits Scheme
NHMRC	National Health and Medical Research Council
NP	Nurse Practitioner
NPCC	National Primary Care Collaboratives
NPS	National Prescribing Service
NPT	Normalization Process Theory

PEPPA	Participatory, Evidence-Based, Patient-Centred Process for Advanced Practice Nurses
PIP	Practice Incentive Payment
PN	Practice Nurse
PNI	Practice Nurse Incentive
RACGP	Royal Australian College of General Practitioners
RN	Registered Nurse
TCA	Team Care Arrangement

## Thesis Overview

In Australia, like many other industrialized countries, the health care system is facing an increasing incidence of chronic conditions combined with an ageing population, workforce shortages and rising costs (Dunbar & Reddy, 2009). Each of these factors is significant in isolation, but when combined they represent a complex challenge that is unlikely to be addressed using singular or simple strategies. Amongst industrialized countries, the most common response has been to reorganize the delivery of health care for people with chronic conditions utilizing two main approaches, namely, disease management (i.e., systematic, evidence-based and organized treatment for specific chronic conditions) and care coordination (i.e., management of health and social care delivery to reduce segmentation and fragmentation of services and ensure timely access) (Greb, et al., 2009).

Although there are commonly-agreed elements to each of these responses, their implementation has been heavily influenced by unique funding mechanisms in individual countries (e.g., managed care organizations in North America compared with a National Health Service in the United Kingdom) (Fitzpatrick, 2008). Similarly, countries differ in terms of the health care priorities that have motivated these responses (e.g., bridging the evidence-practice gap, inadequate linkages between health and social services, commitment to promoting self-management, varied quality of care, increasing costs and inefficient use of resources or a focus on preventative care) (Greb, et al., 2009). As a result of these differences, the implementation of care coordination has been context-specific and not always transferrable across different regions or countries.

In Australia, through the National Health and Hospitals Reform Commission, the health system is now being required to deliver health care that focuses on improved access to quality services. These services need to be designed around individuals, as well as the principles of disease prevention, early intervention, and care provision beyond the hospital context (Department of Health and Ageing, 2010c). It is, therefore, not surprising that general practice is increasingly being seen as a pivotal first-contact point for comprehensive, relationship-based and person-centred health care (Gunn, et al., 2007; Starfield, Shi, & Macinko, 2005).

An important consequence of its role as an entry point to the broader health care system in Australia is that General Practitioners (GPs) act as gatekeepers, thereby preventing inappropriate or avoidable hospitalisation and monitoring long-term health status (Duckett, 2007; Forrest, 2003). This gatekeeping function, combined with growing recognition that chronic conditions are best managed in the community (Department of Health and Ageing, 2010c) has meant that successive Australian governments have focused on the role of general practice in chronic condition care coordination.

Within general practice, the way in which health care professionals respond to this increasing focus on the need for chronic condition care coordination is not well understood. Although the personal relationship between GPs and their patients has traditionally been the cornerstone of care provision, general practice is increasingly faced with the prospect that care must respond to the diverse, multi-system and cross-sectoral needs of people with complex chronic conditions (McKee & Nolte, 2004). They need to understand, respond to, and interact with the natural and social environments within which people with chronic conditions live (Soubhi, 2007) and recognize the role of other health professionals in the provision of chronic condition care (Wagner, 2000). These features (i.e., the inclusion of other health professionals in the delivery of care, the complex nature of the tasks to be undertaken and the complicated requirements of this population) have dramatically altered the general practice context. Repeatedly, GPs are finding that they are unable to manage this new environment and the workload it has created (Bodenheimer, 2008). Thus, finding ways to understand and implement chronic condition care coordination in the general practice context can be challenging and requires further investigation.

In response to this complicated environment, Registered Nurses (RNs) who work in general practice (i.e., practice nurses<sup>1</sup>) are increasingly being considered as ideally placed to assist (Daly & Bryant, 2007). Indeed, RNs themselves have identified a key role for their profession in providing coordinated care (Patterson, Muenchberger, & Kendall, 2007). However, there is a paucity of information about how the RN role can be developed and supported so they can contribute to chronic condition care

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<sup>1</sup> RNs who work in general practice are frequently referred to as practice nurses. However, in this thesis they will be referred to as RNs except where the term “practice nurse” has been used by other authors. The reason this approach has been taken is that RNs involved in the research specifically requested not to be referred to as “practice nurses”.

coordination. If general practice is to respond to the increasing demand for chronic condition care coordination within the broader health care system, it is essential to develop greater understanding of its meaning in general practice and to clarify the ways in which the roles of those working within this context can be developed and supported to meet the growing demand.

In summary, the global increase in chronic conditions has generated demand for better disease management and chronic condition care coordination within the community. Although there is increasing evidence about the effectiveness of these approaches, they are context-specific, and cannot be easily transported from one country or context into another. It is essential, therefore, to design approaches that are based on local conditions and implemented within relevant contexts. In Australia, the focus has been on general practice as an appropriate context for improving the chronic condition care coordination. However, the factors that influence how chronic condition care coordination is implemented and integrated into the general practice context are largely unexplored. Importantly, the role of health care professionals, other than GPs, in the provision of chronic condition care coordination warrants further attention.

In this thesis, I will investigate issues relevant to developing and implementing RN-provided chronic condition care coordination in the general practice context. Specifically, I will answer the research question “How is the work of RN-provided chronic condition care coordination understood and implemented in the general practice context?” by:

1. Defining the work of chronic condition chronic condition care coordination<sup>2</sup>;
2. Gaining an understanding of the difference between the work of usual chronic condition care and the work of chronic condition care coordination;
3. Gaining an understanding of the factors associated with implementation of RN-provided chronic condition care coordination; and

---

<sup>2</sup> The term chronic condition care coordination will be used throughout this thesis to refer to the delivery of chronic condition care coordination to people with complex chronic conditions (i.e., those people with a health care condition that has, or is likely to last longer than six months, whose clinical care needs and / or their social care needs mean that they would benefit from regular, integrated risk assessment, support and follow-up). Chronic condition care coordination will be distinguished from usual care in that it comprises both systematic and multidisciplinary risk assessment, support and care follow-up. Thus, it is possible for usual care to be consistent with chronic condition care coordination, but it cannot be assumed to be equivalent. However, these definitions and practices will be examined further in this thesis.

4. Understanding how RN-provided chronic condition care coordination was implemented when an optimized locally-responsive and supportive network was available to assist participants.

This thesis involves an analysis of the literature and four studies that respond to these research questions, with the final study being based on the implementation of a RN-provided chronic condition care coordination model designed in collaboration with RNs using a participatory action research framework. Chapter 1 will more fully explore the issues associated with the provision of chronic condition care in the Australian health care system and the theoretical framework that underpins this research. Chapter 2 will review the literature relating to the work of chronic condition care coordination (i.e., how it is currently distributed and provided). The overall design and method for the research will be described in Chapter 3. Chapter 4 will report the results of a concept analysis that describes the work of chronic condition care coordination. Chapters 5, 6, 7 and 8 will report the analysis of a series of studies undertaken to respond to the specific research questions. Specifically, Chapter 5 will report the findings from a study that mapped usual chronic condition care in general practice; Chapter 6 will report the findings of a study that explored how health professionals define and experience the work of chronic condition care coordination; Chapter 7 will report the findings of a study that investigated the interaction between RN-provided chronic condition care coordination and the general practice context; and Chapter 8 will report the findings associated with the implementation of a model of RN-provided chronic condition care in the general practice context. Finally, Chapter 9 will conclude with a discussion that integrates the overall findings of the studies and relates them to the theoretical framework.

## **Chapter One**

### **Chronic Condition Care Coordination in the Australian Context**

General practice is nestled within a broader health care landscape. Consequently, I will commence this thesis with a chapter that explores chronic condition care within the Australian health care system. After reviewing the Australian health care system and the impact of chronic conditions, I will investigate of the role of general practice. Then I will explore issues associated with implementing new models of chronic condition care coordination in general practice. Finally, I will introduce Normalization Process Theory (NPT) (May & Finch, 2009), a precursor of which (May, 2006) informed the current research. Subsequent to the conduct of this research, NPT was expanded and published and provides an ideal lens through which to interpret the results.

#### **Chronic conditions in the Australian context.**

In 2008, approximately 75% of Australians lived with a chronic condition (i.e., a long-term disease or health condition that lasts or is anticipated to last six months or more) (Australian Institute of Health and Welfare, 2010). In most countries, including Australia, health care is most frequently managed in the general practice context (Seddon, Marshall, Campbell, & Roland, 2001). Data available from Australia's universal health care insurance scheme (Medicare) indicates that approximately 88% of Australians visit a doctor at least once per year (Britt, et al., 2009). Between 2008 and 2009, GPs managed chronic conditions at an average rate of 55 per 100 encounters (Australian Institute of Health and Welfare, 2010), suggesting that over half their activity is related to chronic condition care. During patient encounters, GPs manage an average of 1.5 problems, either ongoing or episodic, with at least one chronic problem being addressed in 42% of encounters and two or more chronic problems being managed in 9.8% of all encounters (Australian Institute of Health and Welfare, 2010).

Cancer, coronary heart disease, type 2 diabetes, and mental disorders are chronic conditions that contribute most to the burden of disease in Australia (Australian Institute of Health and Welfare, 2010). Cardiovascular disease and respiratory disease are among the most common reasons that people attend GPs (Australian Institute of Health and Welfare, 2010). These chronic conditions occur more frequently in an ageing population. As the number and proportion of the population over the age of 65

increases, the complexity of health issues addressed by GPs also increases. Thus, it is anticipated that the capacity of general practice to provide quality care to people with chronic conditions will be challenged in future. The capacity of general practice to respond to increasing demand is not clear and is likely to be affected by a range of factors, including those associated with the position of general practice within the broader health care system.

### **The complexity of the Australian health system.**

Although the way in which health care services are managed and funded within Australia is being reviewed (Department of Health and Ageing, 2010a), it is currently provided within a system that is complex, constantly changing and comprised of multiple layers. Included within this complex system are hospitals, public and private health care services, primary and community health care services, and specialized health care services (Australian Institute of Health and Welfare, 2010). Funding mechanisms within this complex matrix of providers and contexts are multifarious. State governments currently have primary responsibility for managing publicly-provided health care services, despite receiving significant amounts of funding from the Commonwealth government (Rydon & Mackay, 1995; Willis, 2009). Public health care funding is generated through local government rates, the Medicare levy and taxation (Willis, 2009).

Although publicly-funded health care is available, individuals are also required to fund some of their own health care costs, either through varying levels of co-payments and out-of-pocket expenses, or through privately-funded health insurance (Duckett, 2007). This private health care system most often funds care that is delivered in hospitals (Willis, 2009), but also funds some community-based care such as cardiologists, endocrinologists and the like as well as podiatrists, optometrists and physiotherapists. Most health professionals who work in publicly funded health care agencies are salaried employees, however, health professionals who provide community-based care are often owners and operators of small businesses (Willis, 2009). For instance, the first point of contact with the health care system occurs by attending a GP (Britt, et al., 2009) who is in private business. Payment for GP services is funded by patients on a fee-for-service basis. Patients are reimbursed by Medicare, either fully or in part, for the care they receive (Commonwealth Department of Health and Ageing, 2000). Although patients are able to freely choose their GP, the amount of reimbursement they receive is

dependent on the difference between the fee paid (which is determined by individual business operators) and the pre-determined Medicare reimbursement schedule (Australian Institute of Health and Welfare, 2010). People with complex chronic conditions will, therefore, need to access both publicly and privately funded care in hospital, general practices, and community-based organizations. They will interact with multiple providers with different fee structures and profit motives. Their co-payments are likely to be variable and reimbursements are likely to be sourced from different agencies (e.g., Medicare, private insurance, workers' compensation). Health professional reimbursements and health care organization funding schemes are also complicated. Navigating the funding and care provision complexities of the Australian health care system is likely to be challenging for most people. It is little wonder then, that so many find it difficult to understand and make decisions regarding who they need to see for health care, where they need to see that health care professional, what they can expect when their health care needs are attended to, and how much they need to pay for the care. Not surprisingly, therefore, service fragmentation and care segmentation, and confusion about access to and provision of health care services, is likely to be the usual experience of both consumers and providers.

The complexity of the health care system creates a situation where there is potential for considerable confusion regarding accessing and paying for health care. It is essential, therefore, to find ways of assisting people who require ongoing health care to navigate their way around the system. Strong partnerships between multiple parties (such as health care professionals, individuals, families, friends, and others involved in the lives of people) and multiple contexts within and external to the health care system, are considered essential to improving the way in which health care is delivered in Australia (Department of Health and Ageing, 2010a). Frequently, care coordination is promoted as an appropriate mechanism for supporting and maintaining strong partnerships within a complex and seemingly fragmented system (Chen, Brown, Archibald, Aliotta, & Fox, 2000; Powell Davies, et al., 2006). However, the mechanisms for implementing chronic condition care coordination within the system are not entirely clear and require further study.

### **General practice as an ideal context for managing chronic conditions.**

In Australia, general practice is considered the vanguard of the health care system (Department of Health and Ageing, 2010a). Health care systems with a strong general

practice component have been found to provide higher quality health care, improved health outcomes, more equitable access and lower costs for entire populations (Stange & Ferrer, 2009). General practice is the interface between people with health care needs and the health care system; it forms an integral component of the system, and is a significant provider of chronic condition prevention and management. Even when people with chronic conditions receive health care from secondary and tertiary facilities, their medical management primarily occurs within general practice. Thus, general practice is a frequent entry point to other health care services (Britt, et al., 2009; Duckett, 2007) and is the point to which individuals most often return. One responsibility of general practice is to ensure that people only progress into the broader health system when necessary (Forrest, 2003; Tieman, et al., 2007). A gatekeeping role effectively means that GPs can influence care pathways (Gunn, et al., 2007). Accordingly, they are ideally placed to facilitate chronic condition care coordination.

Irrespective of the unique position of GPs with regard to chronic condition care coordination, funding care in general practice has been limited to the intermittent care GPs provide (i.e., a reactive, acute care model of care provision) rather than on the provision of ongoing team-based care (Tieman, et al., 2007). Reorientation of general practice is likely to be required if it is to shift from acute illness care towards chronic condition care. As Gunn and her colleagues noted (2007, p.6), “primary care in Australia is in transition”. One of the most important aspects of this transition has been a focus on chronic condition care coordination. Chronic condition care coordination requires multiple members in the health care team and a broader scope of care than has traditionally been provided in general practice. Nevertheless, engaging interdisciplinary and multi-faceted, team-based approaches to chronic condition care will assist general practice to re-orient itself and provide quality care for people with chronic conditions (Gunn, et al., 2007; Harris & Zwar, 2007).

However, neither the concept of chronic condition care coordination within the general practice environment, nor the ways in which it can be implemented in this context are clear in the current literature. In this thesis, I will examine the concept of chronic condition care coordination from the perspective of the literature and health care professionals within the general practice context. In conjunction with key stakeholders, I will then use an action research method to develop and implement a sustainable model of RN-provided chronic condition care coordination. Given that sustainability will be dependent on the way in which practices become routinely embedded, the most

appropriate theoretical framework to apply to the interpretation of this research is that provided by Normalization Process Theory (NPT) (May & Finch, 2009).

### **Embedding practice—Normalization Process Theory.**

According to Normalization Process Theory (NPT) (May & Finch, 2009), the extent to which any new practice or innovation becomes normalized depends on the extent to which its components are workable in actual contexts and are capable of being integrated into existing contexts. NPT was developed as a response to a perceived need for improved understanding and explanatory capability in situations where new ways of organizing health care were not routinely embedded in clinical practice. This lack of uptake can occur despite professional and political endorsement of the new practices, indicating the presence of a complex set of interacting factors that influence implementation (May & Finch, 2009). NPT is a mid-range theory that was developed by expanding the Normalization Process Model (NPM) (May, 2006; May & Finch, 2009; May, et al., 2009). NPM is concerned with the connections between four domains. They are:

- (i) the interactional work that professionals and patients do within the clinical encounter and its temporal order, (*interactional workability*);
- (ii) the embeddedness of trust in professional knowledge and practice, (*relational integration*);
- (iii) the organizational distribution of work, knowledge and practice across divisions of labor (*skill set workability*); and,
- (iv) its contexts of institutional location and organizational capacity, (*contextual integration*). (May, 2006, p.9)

The broader NPT is concerned with the macro environment within which complex interventions are implemented, whereas the original model focused on the micro conditions of everyday practice and considers how people make complex interventions workable (May, Mair, Dowrick, & Finch, 2007; May, et al., 2009). Figure 1 below shows the NPT.

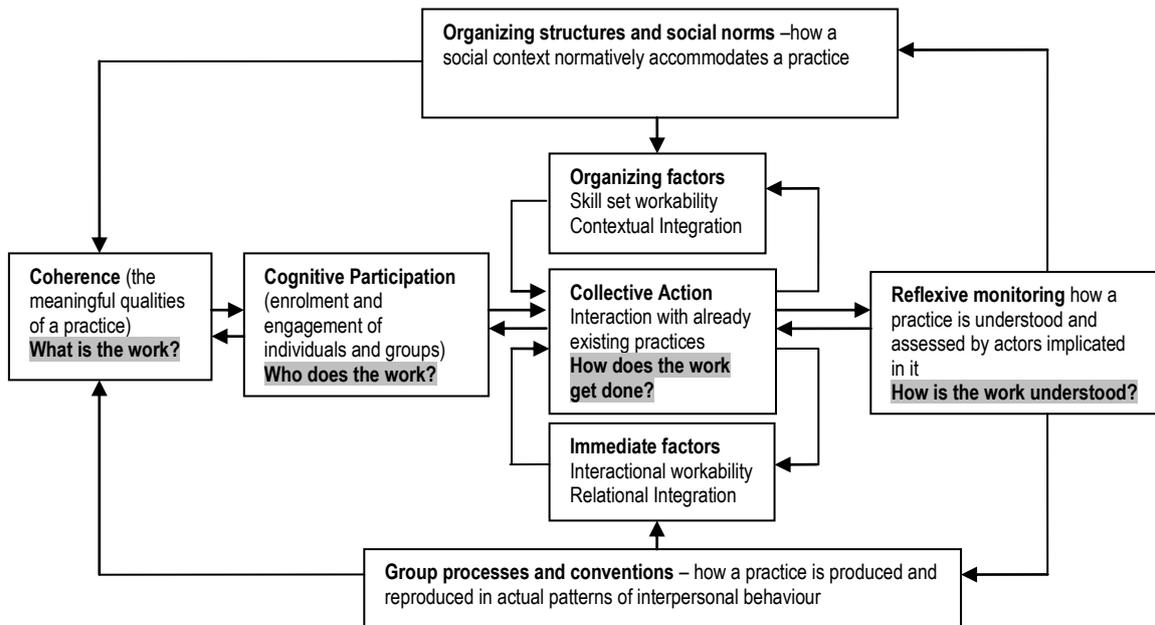


Figure 1: Model of the components of Normalization Process Theory (May & Finch, 2009, p.541)

The theory asserts that in order for new practices to be routinely established within different contexts, it is essential to understand the work people do, and how they do it (May & Finch, 2009). Thus, NPT begins with the question of “What is the work?” and includes questions regarding how the work is organized socially (implemented), made routine (embedded) and sustained in social contexts (integrated) (May & Finch, 2009). Work is defined by May and Finch (2009, p.539) as “purposive social action that involves the investment of personal and group resources to achieve goals”, and occurs within socially patterned chains of interaction. Implementation work occurs through four interconnected, but non-linear mechanisms, namely “Coherence”, “Cognitive Participation”, “Collective Action” and “Reflexive Monitoring” (May & Finch, 2009).

“Coherence” refers to the institutionally-sanctioned beliefs and behaviours that define and organize knowledge and practice (May & Finch, 2009; May, Finch, et al., 2007). These qualities result in a conceptualization of the boundaries of the work (Gunn, et al., 2010). It is influenced by the way in which (a) the practice to be implemented is different from other practices (i.e., *differentiation*); (b) the practice is understood by the individuals who are required to work with it (i.e., *individual specification*); (c) the practice is understood and shared by the groups who are required to work with it (i.e., *communal specification*); and (d) practices are anchored by creating meaning that is learned, shared and experienced (i.e., *internalization*) (May & Finch, 2009). Thus, “Coherence” requires an investment in the meaning of a practice and results in

explanations and knowledge that address the question “What is the work?” (May & Finch, 2009).

“Cognitive Participation” refers to the beliefs and behaviours that define and organize the way in which individuals interact and engage with a shared set of techniques (Gunn, et al., 2010; May & Finch, 2009; May, Finch, et al., 2007). It is the site of the mental and material work that is associated with the organization and enactment of a practice and is influenced by the way in which (a) a practice comes into being (i.e., *initiation*); (b) a practice is interpreted and accepted through institutionally-shared beliefs about the practice (i.e., *legitimation*); (c) individuals work together and organize themselves to participate in a new practice (i.e., *enrolment*); and (d) a practice is operationalized in a clinical context as a result of decision-making work (i.e., *activation*) (May & Finch, 2009). Thus, “Cognitive Participation” requires investment in a new practice and results in explanations and knowledge that address the question “Who does the work?” (May & Finch, 2009).

“Collective Action” refers to the everyday practices and the beliefs and behaviours that define and organize the way in which agreement is reached about how the practice is organized and enacted (Gunn, et al., 2010; May, 2006; May & Finch, 2009). It is influenced by the way in which a practice is (a) operationalized (i.e., *interactional workability*); (b) understood and mediated within networks based on historical and culturally stable relationships (i.e., *relational integration*); (c) incorporated within a social context (i.e., *contextual integration*); and (d) distributed and conducted (i.e., *skill set workability*) (Elwyn, Legare, van der Weijden, Edwards, & May, 2008; Gask, et al., 2010; May, 2006; May & Finch, 2009; May, Finch, et al., 2007). Thus, “Collective Action” requires persistent effort and results in knowledge that addresses the question “How does the work get done?” (May & Finch, 2009).

“Reflexive Monitoring” refers to beliefs and behaviours that define and organize knowledge and understanding about how a practice is appraised, which results in agreement about how the work will be monitored (Gunn, et al., 2010; May & Finch, 2009). It is influenced by the way in which judgements are made about (a) the utility and effectiveness of the new practice (i.e., *systematization*); (b) the value and outcomes of the practice resulting in individual commitment to perform the practice (i.e., *individual appraisal*); (c) the value and outcomes of the practice that result in communal commitments to conduct and perform the practice (i.e., *communal*

*appraisal*); and (d) the use and utility of the practice resulting in subversion, modification and reconstruction of the practice (i.e., *reconfiguration*) (May & Finch, 2009). Thus, “Reflexive Monitoring” requires comprehension of the new practice, and results in explanations and knowledge that address the question “How is the work understood?” (May & Finch, 2009).

The work of these implementation mechanisms does not occur in isolation. Rather, work is conducted within an environment that is influenced by social contexts (i.e., organizing structures and social norms) and patterns of interpersonal behaviour (i.e., group processes and conventions) (May & Finch, 2009). The generative mechanisms of “coherence”, “cognitive participation”, “collective action” and “reflexive monitoring” require the performance of work that is considered to be either “immediate” or “organizing” (May & Finch, 2009). The factors that affect organizing work include the institutional context, exogenous processes, the way in which work is framed, and the way in which labour is divided (May, 2006). Immediate work is influenced by the interpersonal context of the clinical encounter, endogenous processes and trust (May, 2006). Figure 2 below represents the connection between organizing work, immediate work and the mechanisms of NPT.

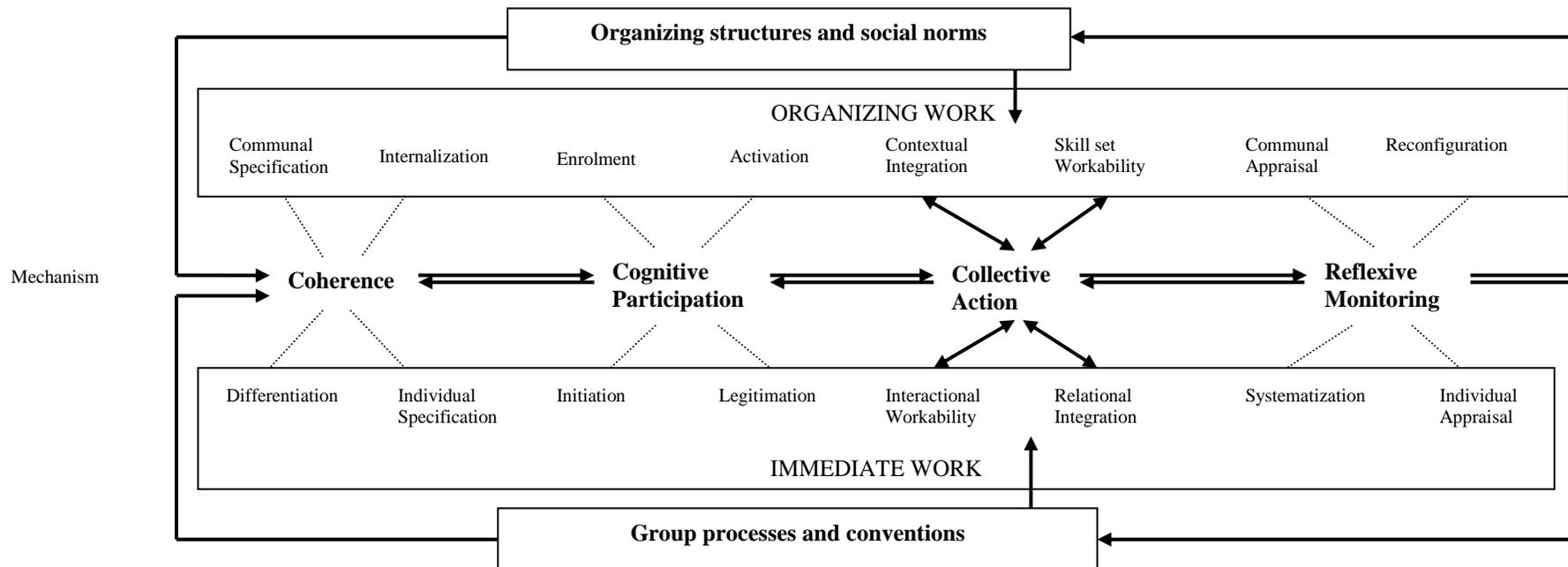


Figure 2: NPT and its mechanisms and components - adapted from May and Finch (2009).

..... The dotted line in the preceding figure indicates a relationship, however NPT represents an implementation process that is dynamic and fluid and the degree of rigidity that is implied by the existence of a connecting line is inconsistent with the theory (May & Finch, 2009). Thus, although a relationship exists, no assumptions are made about the nature of the relationship. The generative mechanism of “Collective Action” does not have a dotted line to represent a relationship, but rather has solid directional arrows to reflect the relationships outlined in the original model of May (2006).

In summary, NPT is concerned with the way in which complex interventions are embedded, integrated and normalized by groups who are situated within social contexts. However, normalization of a practice is not considered to be an automatic process or a permanent state (May, Finch, et al., 2007). Indeed, normalization is only one of the possible outcomes of acting to implement a new practice—adoption of the practice for a short period of time or rejection of the practice are also potential outcomes (May, Finch, et al., 2007). Thus, NPT (which is an expansion of the NPM) accounts for both the macro and the micro environment into which new practices are introduced. It also accounts for the way in which social structures and processes promote or inhibit the implementation of complex interventions (May, Finch, et al., 2007). Rather than focusing on the action of individuals, NPT focuses on the chains of interactions that occur when groups within organizational contexts and broader social contexts implement a complex practice (Elwyn, et al., 2008; May & Finch, 2009). NPT provides a theoretical framework for describing and explaining how a practice is conceptualized, and how participants engage with, enact and appraise that practice over time (May & Finch, 2009). Although the NPM had been published before the commencement of this research, the extension of this model into the NPT had not. Thus, NPT will be applied in Chapter 9 of this thesis as the overarching framework to guide the discussion of the findings and implications of this research (May, et al., 2010).

### **Conclusion.**

The health landscape in Australia is changing from one dominated by acute illnesses to one that responds to chronic conditions and long-term care needs (Duckett, 2007). Acute illnesses and injuries require episodic care, whereas chronic condition care is usually based on the input of multiple professionals over extended periods of time and integrates clinical treatment with social services (Gunn, et al., 2007; McKee & Nolte, 2004; Tieman, et al., 2007; Wagner, 2000). The health care system in Australia is complex. It is multi-layered, has multiple access points, differential funding mechanisms, and accommodates many professional disciplines working within it. An increased demand for quality health care associated with an increasing burden of chronic conditions compounds this complexity. The most obvious context where people with chronic conditions contact the health care system is general practice. Accordingly,

it is within the general practice setting that the implementation and delivery of chronic condition care coordination is most likely to have an impact.

General practice is an ideal setting for chronic condition care coordination (Tieman, et al., 2007). The gatekeeping role of general practice means that members of the general practice team are required to deliver consistent and high quality care by accommodating and understanding the individualized nature and needs of people with chronic conditions while simultaneously assisting individuals to navigate a complex and fragmented health care system. Although GPs are ideally situated to develop ongoing care relationships with people who have complex chronic conditions, care is rarely able to be provided by a single health care professional or facility. Thus, continuity is likely to be required across the broader health care system (Tieman, et al., 2007). Quality chronic condition care requires continuous, accessible, clinically-effective service that is centred on the individual (Campbell, Roland, & Buetow, 2000). The capacity of the general practice setting to identify the mechanisms of chronic condition care coordination and respond to the longer timeframes associated with ongoing care is not clear. It is essential, therefore, to investigate the capacity of general practice to implement chronic condition care coordination.

Chronic condition care coordination is frequently advocated as an appropriate means of improving quality of care within a fragmented system. However, the perception of quality originates within the clinical encounter (Harteloh, 2003). Thus, quality chronic condition care coordination needs to be embedded within normal clinical practice. To improve the likelihood that chronic condition care coordination will be embedded in practice, two important issues must be considered. The first is a need to understand how the work of chronic condition care coordination is conceptualized in the general practice setting, and the second is to understand how that work is distributed and enacted. As a result, much of the research in this series of studies is concerned with understanding the work associated with chronic condition care coordination in the general practice setting.



## Chapter Two

### Chronic Condition Care Coordination in the General Practice Context

In Chapter 1, I reviewed the complexity of the Australian health care system and the need to coordinate the care of people with complex chronic conditions to reduce care fragmentation. I also noted that general practice is an ideal setting for implementing chronic condition care coordination. A key challenge for the provision of chronic condition care coordination at any level is that care needs to be active and systemic, rather than reactive and ad hoc (Harris & Zwar, 2007; O'Malley, Tynan, Cohen, Kemper, & Davis, 2009; Rothman & Wagner, 2003). Although general practice is an ideal setting for chronic condition care coordination, GPs are unable to proactively coordinate care within a funding model that favours the standard 15-minute consultation (Duckett, 2007; Harris & Zwar, 2007). Thus, it is essential to develop solutions that will increase the capacity of general practice to coordinate chronic condition care. Chronic condition care coordination includes client level coordination (micro), organizational level coordination (meso), and system level coordination (macro) (Powell Davies, et al., 2006). Achieving chronic condition care coordination at these levels is influenced by broader system level mechanisms. Over the last decade three major initiatives have been designed to encourage general practice to adopt chronic condition care coordination. These initiatives include the introduction of specific Medicare item numbers for remuneration, funding Divisions of General Practice to support and expand chronic condition care coordination activities, and the Coordinated Care Trials. Funding incentives and standardized approaches are two health system mechanisms that are applied in the general practice setting to influence the implementation of chronic condition care coordination. In this chapter, I will review the three major initiatives relevant to chronic condition care coordination in general practice, explore the response of general practice to the initiatives and explore the role of RNs in chronic condition care coordination.

#### **Medicare funding.**

The first response to better chronic condition care coordination has been the inclusion of specific Medicare item numbers through the Enhanced Primary Care Initiative in 1999. Although uptake has been sporadic, the purpose of the Enhanced Primary Care

Medicare item numbers was to reimburse general practices and GPs for the ongoing management of chronic conditions (Blakeman, Harris, Comino, & Zwar, 2001; Harris & Zwar, 2007; Oldroyd, et al., 2003; Proudfoot, et al., 2007). Several activities have been facilitated through this funding, including the General Practitioner Management Plan (GPMP), which funds GPs to manage the care of individuals with specific chronic conditions; the Team Care Arrangement (TCA), which funds treatment for more complex chronic conditions that benefit from care provision by a multidisciplinary team; and the GP Mental Health Care Program (GPMHC), which funds GPs to intervene early, and assess and manage individuals with mental illness (Swerissen & Taylor, 2008). Although these programs enable GPs to provide comprehensive care, they are restricted to a limited number of chronic conditions and the number and frequency of visits is tightly controlled. A standardized cluster of activities is assumed, thus reducing the potential for individualized and responsive management. Further, remuneration for care based on item numbers (i.e., the Medicare Benefits Schedule (MBS) which outlines the scheduled fee for a defined service) promotes quantity of service delivery, but is unable to monitor the quality of care or the nature of outcomes for patients (Swerissen & Taylor, 2008). To address this situation, the Australian Government introduced incentive programs in the early 1990s that sought to introduce a population focus in the general practice environment (Smith & Sibthorpe, 2007; S. Taylor, Foster, & Fleming, 2008).

The Practice Incentive Program (PIP) is a component of the general practice reform strategy that provides additional payments to GPs who are providing quality population-based care (Swerissen & Taylor, 2008). The PIP comprises capitation and pay-for-performance payments that are superimposed on the existing fee-for-service payment system (A. Scott, Schurer, Jensen, & Sivey, 2009). Pay-for-performance funding is available for general practices that improve their information technology infrastructure, are accredited according to the standards set out by the Royal Australian College of General Practitioners (RACGP) and provide higher quality care in cervical screening, asthma, mental health and diabetes (A. Scott, et al., 2009). Thus, the aim of PIPs is to provide a system of remuneration that is linked to quality of care provision rather than volume (A. Scott, et al., 2009). Although several different incentives are available in the PIP, there are two incentives that are relevant to chronic condition care coordination. They are the Diabetes Incentive and the Practice Nurse Incentive (PNI). The Diabetes Incentive is designed to encourage the effective management of people with diabetes by

using a patient register, a recall or reminder system, and by completing designated monitoring and review cycles of care (Medicare Australia, 2010a). Beginning in late 2001, general practices who had already enrolled in PIPs were eligible to receive additional remuneration for completing a defined annual cycle of care that used evidence-based guidelines through service incentive payments (SIPs) (A. Scott, et al., 2009). Despite the introduction of the diabetes incentive, optimal adherence to evidence-based guidelines is not guaranteed because there is a lack of capacity within general practice to manage the associated administrative burden (Moretti, Kalucy, Hordacre, & Howard, 2010). The PNI encourages the employment of nurses and Aboriginal health workers in general practices and Aboriginal Medical Services in rural and remote areas in Australia, and in areas of workforce shortage in urban Australia (Medicare Australia, 2010b). There is some evidence of improvement in the quality of diabetes care in Australia as a result of the incentive programs (A. Scott, et al., 2009). However, there is still some way to go to encourage care that focuses not only on prescribed and standardized processes for a restricted number of chronic conditions, but also on the quality of care and individual outcomes for people with all chronic conditions.

#### **Divisions of general practice program.**

“The purpose of the Divisions of General Practice Program ... is to provide services and support to general practice at the local level, through Divisions of General Practice, to achieve health outcomes for the community that would not otherwise be achieved on an individual GP basis” (Department of Health and Ageing, 2010b). Divisions of General Practice (hereafter referred to as “Divisions” or “the Division”) are, therefore, Commonwealth funded organizations with a local mandate to facilitate the implementation of best practice in general practice. Divisions were introduced into Australia in 1992 (A. Scott & Coote, 2007), and there is some evidence that they have become embedded within the Australian primary health care system as organizations that are responsible for geographically-based planning and development (Smith & Sibthorpe, 2007). Divisions are GP-member owned and operated legal entities within a geographically defined area, they are governed by a board of directors, and they employ staff (A. Scott & Coote, 2007; Sprogis, 2007). Until recently, the Divisions boards of directors were almost always comprised exclusively of GPs. In Australia, Divisions have a relatively strong engagement with their local GP members and are able to engage GPs in governance and leadership activities which distinguish them from other

international primary care organizations (Smith & Sibthorpe, 2007). Notably, Divisions are the only health-specific institutions in Australia with a population focus based on geographical areas that are more localised than a State or Territory level<sup>3</sup> (Smith & Sibthorpe, 2007). The role, function and structure of Divisions effectively mean that they are key access point for engaging individual GPs and general practices in activities within geographically defined areas.

Divisions are able to make collective decisions about the activities they conduct within their local region (A. Scott & Coote, 2007). However, their reliance on Commonwealth funding means that they are required to respond to Commonwealth priority areas. There are seven Commonwealth priority areas for general practice, namely improving access; encouraging integration and multi-disciplinary care; prevention and early intervention; better management of chronic conditions; general practice support; quality support; and ensuring a growing consumer focus (Department of Health and Ageing, 2010b). Combining locally responsive programs with pre-determined and externally enforced priorities means that priorities and programs vary between Divisions.

As the peak body that represents general practice, Divisions are well positioned to support and build the capacity of the sector to effectively manage chronic conditions. However, existing infrastructure and governance arrangements have capacity building limited efforts (Proudfoot, et al., 2007). In response, the focus of Divisions has generally been on establishing infrastructure and systems that assist with data reporting, business management, research and innovation, and translating best evidence into practice (Biuso & Newton, 2008; Hall, 2007; Harris & Zwar, 2007). Divisions have been less successful at influencing clinical performance of individual GPs (A. Scott & Coote, 2007). However, clinical performance is difficult to measure because the data systems that are required have been largely non-existent within general practice (A. Scott & Coote, 2007), and there is “... no overall systematic approach to improving care for people with chronic disease through implementing evidence-based guidelines” (Ford & Knight, 2010, p.90). Thus, proactive mechanisms aimed at improving the quality of care are hampered by existing practices and evidence-based chronic condition care coordination practices are either non-existent, obscure or inconsistently applied.

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<sup>3</sup> Australia also has Local Government Authorities that are smaller, geographically-based institutions. However, although they have some health-related functions, they do not have a health-only focus.

One method that the Divisions have proactively used to engage general practices in improving the quality of care, has been to support the implementation of the National Primary Care Collaborative (NPCC) initiative (Biuso & Newton, 2008). A “collaborative” is a strategy that aims to achieve rapid improvement in clinical outcomes by closing the gap between best practice and usual care for a specific topic (Ford & Knight, 2010; Knight, 2004). The Australian Primary Care Collaboratives are based on the National Primary Care Collaboratives which have been implemented throughout the United Kingdom (Knight, 2004). The goal of the Collaborative initiative is to “... achiev[e] rapid improvement in clinical outcomes through bringing providers together” (Knight, 2004, p.269). Five change principles are used to achieve improved health outcomes, namely (a) building the general practice team; (b) establishing and maintaining a valid register of people with the chronic disease of interest; (c) systematically and proactively managing care; (d) including patients in the development and delivery of care; and (e) establishing effective links with key partners locally (Ford & Knight, 2010). The board and management of the Division collaboratively determine the topic of interest (e.g., diabetes, heart disease, or asthma), the targeted area for improvement (i.e., the relevant national priority area/s), and change management strategies to best reflect local priorities. Through the collaboratives initiative, Divisions have adopted a leadership role in the processes of practice change and improvement and are, therefore, vital to the future of general practice as a site of chronic condition care coordination.

### **Coordinated care trials.**

A third and more active response to the management of chronic conditions in Australia has been the National Coordinated Care Trials. Based on a principal hypothesis that “coordination of care of people with chronic or complex needs results in improved participant health and well-being within existing resources” (Esterman & Ben-Tovim, 2002, p.469), the Commonwealth Government invested in two rounds of trials across the country. Trial 1 lasted from June 1997 to December 1999, and Trial 2 began in late 2002 for a period of three years. Through these trials, the Commonwealth Government funded a number of pilot projects with the aim of strengthening the ability of general practice to manage chronic conditions (Department of Health and Ageing, 2007). Despite some evidence of improved outcomes in the first round of trials, savings were insufficient to negate the cost of chronic condition care coordination, and the anticipated savings from reduced hospitalisations did not eventuate (Battersby, 2005; Esterman &

Ben-Tovim, 2002). A report following the second round of the trials identified several key outcomes. Notably, people with chronic conditions reported improved health and well-being, and greater access to services; increased knowledge; and an increased sense of security (Department of Health and Ageing, 2007). However, cost-effectiveness was not substantiated.

In the Coordinated Care Trials, general practice was the defined environment from which chronic condition care coordination was provided. From a workforce perspective, the Coordinated Care Trials focused on the GP as a pivotal contributor to the care coordination process. Intervention sites for the trials were recruited throughout Australia. Recruitment to the trials was based upon a number of criteria, including the presentation of a business case and project plan outlining the way in which the intervention site would provide chronic condition care coordination. Thus, a number of different models of chronic condition care coordination were implemented nationally. Care coordinators were recruited from organizations external to the general practice environment (e.g., community health centres). These externally-based care coordinators were referred to as “service coordinators” during the trials. This action had two important consequences. First, externally recruited care coordinators found it difficult to engage with general practitioners, with the result that there was considerable confusion at the local level regarding the purpose, methods and professional responsibilities associated with chronic condition care coordination (Department of Health and Ageing, 2007). Second, RNs who were excluded from the care coordination role considered that they had an important role to play, and that they were eminently capable of contributing in a meaningful way (Patterson, et al., 2007). The importance of gaining improved health and well-being for people with complex chronic conditions in a cost effective manner is indisputable. Equally important, however, is gaining an understanding about the roles different health professionals and service providers have when implementing new and previously untried initiatives within a defined environment.

Little attention was paid to understanding the impact that other team members would have on the implementation of chronic condition care coordination. Indeed, the trial evaluators noted that although the involvement of GPs in chronic condition care coordination was critical to success, it was the contribution of adequately trained health professionals at all points of the care process that was equally necessary for the successful delivery of care (Department of Health and Ageing, 2007). Given the importance of the whole team in chronic condition care coordination, further study is

required to explore how health care teams can actively provide chronic condition care coordination in the general practice setting.

A unique feature of the Coordinated Care Trials was that Divisions were fundholders during the trial period. However, unresolved issues surrounding block funding (i.e., the provision of large sums of money for purposes such as chronic condition care coordination) to organizations for the delivery of care programs (e.g., chronic condition care coordination) in general practice exist. In Australia, a private business/independent model of general practice is firmly entrenched (Smith & Sibthorpe, 2007). GPs are, therefore, reluctant to embark on a block funding model of general practice which they consider has the potential to create a cost saving focus, increase the control of clinicians by external management, reduce care quality and reduce equity of access to care (Beilby & Pekarsky, 2002). Managing block funding is also restricted because the capacity of individual Divisions to undertake a significant fundholding role is unevenly distributed across Australia (Smith & Sibthorpe, 2007). Furthermore, the Commonwealth Government is reluctant to devolve budgets and decision-making for population-based health care to Divisions made up of private sector GPs with whom contractually binding relationships do not exist (Smith & Sibthorpe, 2007). Without an obvious way forward and despite two rounds of trials, national approaches to active chronic condition care coordination have not eventuated. All that remains to support general practices implementing chronic condition care coordination are locally responsive Division activities and limited Medicare remuneration for specific care activities. Finding ways to fill the gap between what was shown to be possible in the Coordinated Care Trials, and what is available within current funding structures will progress the ability of general practice to respond to the chronic condition care needs of people.

### **The response of general practice to Medicare funding incentives for chronic condition care coordination**

Funding for chronic condition care has elicited varied passive responses from general practice. Although reimbursement for multidisciplinary care planning and health assessment is available to general practices, the provision of structured multidisciplinary care is limited (Harris & Zwar, 2007; Oldroyd, et al., 2003). The reasons for this are not clear and are likely to be multi-faceted. For example, although GPs accept the principle of team-based care, issues associated with poorly defined professional roles can hamper the creation of primary care teams (Belanger & Rodriguez, 2008; Hansson, Friberg,

Segesten, Gedda, & Mattsson, 2008). Moreover, allied health professionals are sometimes seen as competitors rather than collaborators in the care relationship (Kirby, et al., 2008). When GPs are willing to form care partnerships with allied health professionals, the required partners might not be available (Harris & Zwar, 2007). Even though financial incentives exist to promote team-based chronic condition care coordination, the challenges associated with developing teams potentially become a disincentive for general practice. Furthermore, even when partners are available to form teams, Medicare imposed access restrictions and cumbersome paper-based communication mechanisms contribute to suboptimal uptake of available funding (Harris & Zwar, 2007).

However, a new funding initiative appears to be associated with an increased uptake in general practices. In 2007, Medicare introduced an item number specifically for nurses or registered Aboriginal health workers to monitor and support people with chronic disease. A recent study reported an increase in the claims relating to the specific Medicare item number (Halcomb, Davidson, & Brown, 2010). These changes were considered by Halcomb and her colleagues to be an affirmation of policy initiatives that support the role of the Australian general practice nurse. This finding could also indicate that GPs are willing to engage RNs in chronic condition care coordination if it involves being able to access funding. Irrespective of the reason for the increase in uptake of the RN specific Medicare item number, an increased uptake suggests that including RNs in chronic condition care coordination is acceptable in the general practice setting. Indeed implementation of chronic condition care coordination that relies on the existing internal care relationships may contribute to reducing sporadic uptake and contribute to inherently sustainable changes. If GPs are more willing to implement chronic condition care coordination that includes RNs, then it is important to establish the role of RNs in chronic condition care coordination. However, it is also important to explore the likely impact that implementing more active chronic condition care coordination will have on these relationships.

### ***The role of RNs in chronic condition care coordination in general practice.***

RNs are existing members of general practice teams with clinical skills that could be utilized to contribute to safe, quality care and increase the capacity of general practice to respond in the changing health care environment (Jolly, 2007). RNs who work in general practice have identified that they have a clear role in the provision of chronic

condition care coordination (Patterson, et al., 2007). Rather than the GP being solely responsible for the facilitation of chronic condition care, it is appropriate to consider RNs as skilled team members who can be included in care provision. RNs are important members of the general practice team who are moving beyond acute care focused treatment room work towards broader health promotion and illness prevention roles (K. Price, 2007). Including RNs in the practice team can extend GP services, improve patient satisfaction, and promote effective and efficient use of GP time with the effect that patient flow is improved, waiting times are reduced, and the workforce pressures experienced by GPs are diminished (Keleher, Joyce, Parker, & Piterman, 2007; Pearce, Hall, & Phillips, 2010; RCNA, 2005). Importantly, nurses are often available to patients in a way that doctors are not; making primary care services more accessible (Phillips, et al., 2007). Clearly, RNs have an important role in the provision of chronic condition care coordination in general practice. However, the factors that constitute exemplary general practice nursing are vague because models of general practice nursing in Australia have not been debated (Keleher, Joyce, et al., 2007).

Although nurses function as part of the general practice health care team, their role is ambiguous. The literature identifies four role pathways for RNs in general practice including (a) delegation (i.e., passively following doctors' instructions), (b) substitution (i.e., extending the role to include additional task-oriented responsibilities that are delegated by general practitioners), (c) enhancement (i.e., role expansion that promotes RNs as autonomous person-centred practitioners), and (d) innovation (i.e., adopting a coordinator role with responsibility for the management of a multidisciplinary health care team) (Dent & Burtney, 1997; Keleher, Joyce, et al., 2007; Sibbald, Laurant, & Reeves, 2006; Willis, Condon, & Litt, 2000a). Phillips and her colleagues (Phillips, et al., 2008) identified six key ways that RNs function in general practice. They are patient carers, organizers, problem solvers, quality controllers, educators, and agents of connectivity. Importantly, some nurses have the capacity to cycle through these roles rapidly in their daily routine (Phillips, et al., 2008). Nurses who are capable of rapidly responding to different role functions are relatively spontaneous and unstructured in their work routines, they are highly mobile, highly task focused, and their time is considered to be a fluid commodity by others in the general practice (Phillips, et al., 2008).

RNs are well positioned to spend longer periods of time with patients and to act as central reference points within the general practice, thus creating a situation where the

information that patients give nurses is different from information they give GPs in important ways (Phillips, et al., 2007; Phillips, et al., 2008). GPs and RNs are, therefore, able to contribute differently to the care relationship and the provision of chronic condition care coordination, but mechanisms for maximising these opportunities will be essential. Given these broad skill areas, RNs are appropriate and well positioned members of the general practice team to provide chronic condition care coordination, but the way in which they are best able to contribute is imprecise. Mechanisms for capitalizing on the unique knowledge that nursing can contribute to chronic condition care coordination will not necessarily be available, however, because differences in power, status and medico-legal responsibilities exist that make sharing care between GPs and RNs difficult (Phillips, et al., 2007; Willis, Condon, & Litt, 2000b). It is essential, therefore, to explore and understand the factors that limit and facilitate implementation of a model of RN-provided chronic condition care coordination in general practice.

RN role development in general practice has not been debated until recently, and has existed in a policy vacuum even though including RNs in chronic condition care coordination would be appropriate (Keleher, Joyce, et al., 2007). However, as Scott (2009) argued, professional enablement and the removal of constrictive work practices will be required to enable care teams to acquire skills and adapt to meeting the challenges associated with role development. Nevertheless, the impact of changing the skill-mix of health care professionals on the entire health care system has not been established (Sibbald, Shen, & McBride, 2004). Negotiating a collaborative partnership between RNs and GPs that includes nurses in the provision of chronic condition care coordination will potentially challenge both professions. Halcomb and her colleagues evaluated general practice nurse conference proceedings and postulated that an overall absence of GPs as co-authors to papers was likely to represent an entrenched culture of lack of collaboration (Halcomb, Davidson, & Patterson, 2007). Collaborative practice is also likely to be impeded when both professions claim holistic care, such as that required in chronic condition care coordination, as uniquely their professional domain. For example, nursing has claimed that coordination of holistic care is unique to their professional practice whilst the medical and allied health professions provide partial care (Willis, et al., 2000b). However, these authors identify that GPs also situate themselves as providing holistic care in comparison to medical specialists and allied health professionals.

When clearly defined and negotiated models of collaborative working do not exist, it is likely that clarity regarding the roles associated with holistic care will also be absent. Willis and her colleagues demonstrated this tension when they argued that GPs are sometimes reluctant to delegate functions to practice nurses because they consider that to do so is "... to renege on their fundamental responsibility for holistic care" (Willis, et al., 2000b, p.244). GPs often view nurses as resources rather than peers because of the employer/employee relationship that commonly exists between them (Mills & Fitzgerald, 2008). Although some GPs view nurses as trusted professional colleagues, GPs and nurses often develop pragmatic working relationships based on the small business nature of general practice rather than on the nurses' desire for professional status (Willis, et al., 2000b). Thus, GPs are unlikely to welcome a collaborative model of nursing where nurses are considered autonomous practitioners (Mills & Fitzgerald, 2008). As some researchers have noted, "... the growing strength of the practice nurse challenges traditional professional roles and practice patterns" (Halcomb, Davidson, & Patterson, 2008, p.846). Although it can be argued that RNs have a role in providing chronic condition care coordination, change in established care provision arrangements will require collaboration and negotiation between key stakeholders. It will be essential to understand the current model of care provision; the way in which health professionals in general practice define and experience care coordination; and identify the factors that are likely to impact on RNs being able to deliver chronic condition care coordination.

### **Conclusion.**

Divisions of General Practice, the Coordinated Care Trials and specific Medicare funded reimbursement initiatives have been three of the mechanisms the Commonwealth Government in Australia has employed to increase chronic condition care coordination in general practice. Divisions remain important features of the chronic condition care coordination landscape because of their focus on supporting general practices to provide evidence-based care. The Coordinated Care Trials have not led to a national approach to care coordination and general practice is left to provide chronic condition care coordination within reimbursement structures that are limited in scope and predominantly passive in approach. There is some evidence that when funding support is available to encourage the inclusion of nurses in chronic disease care, general practices become more active in claiming that reimbursement. What is not clear is how general practices can proactively distribute the work of chronic condition care coordination. The role of RNs as providers of chronic condition care coordination has

received little attention. RNs have been identified as professionally well positioned to provide chronic condition care coordination. RNs have the theoretical knowledge, clinical skills and professional scope of practice to provide chronic condition care coordination, but they do not have a clearly identified role. So that the role of RNs in chronic condition care coordination can be developed, the general practice context and the impact that RN role development is likely to have within that context require further understanding.

## Chapter Three

### Method

The intervention trial within which this research was situated was based on a model of RN-provided chronic condition care coordination (outlined below and attached in Appendix A, pp. 185-196). The focus of the larger study was the outcomes of patients with chronic conditions, but it also provided an opportunity to investigate implementation processes associated with new ways of providing chronic condition care coordination in general practice. My research informed the development of the model of care used in the intervention by using action research methods. During the active trial, I was a member of the larger research team and worked collaboratively with team members and participants in the intervention trial. My research focused on the implementation processes associated with the intervention, whereas the intervention trial focused solely on patient care and outcomes. The model of care used in the intervention was designed with and for general practice to enhance acceptability and suitability, thus providing optimal conditions for studying implementation processes. I conducted all research design, data collection, analysis, and interpretation associated with the implementation research with particular reference to the role of RNs in providing chronic condition care coordination in general practice. In this chapter, I will describe (a) the design and rationale of the studies, (b) the overarching action research framework, (c) the action research cycles, (d) the data collection methods, and (e) the techniques used to ensure rigour and ethical conduct during the research. Given the different participant groups involved in each study, participant details are included in the relevant results chapter to aid in the interpretation of each study.

### **Study background.**

The Gold Coast Division of General Practice had received funding to implement an RN-provided model of chronic condition care coordination. The Division comprises a Board of Directors and employees including business managers, program area managers and program area staff. The Chief Executive Officer (CEO) and the Chronic Disease Program Manager were the key people involved in negotiations surrounding the funding of the intervention. Three RNs were employed by the Division to work as General Practice Liaison Officers (GPLOs) and were key people involved with implementing the intervention. The managers from the Division approached the research team to assist with evaluation of an RN-provided

model of chronic condition care coordination. They outlined three objectives that the Division needed to meet. The intervention needed to (a) be evidence-based; (b) include RNs as providers; and (c) be developed, implemented and evaluated in a timeframe that was consistent with the reporting obligations of the Division to their funding body. During negotiation of the evaluation requirements with the Division, it became evident that there was lack of clarity about (a) their understanding of care coordination, (b) role delineation for RNs, (c) the intervention, and (d) the implementation plan. These factors needed to be addressed before a trial could be established, providing the impetus for my research.

### **Design.**

My research was conducted using an action research approach to deal with the perspective of multiple stakeholders and competing priorities. Action research is an appropriate style of research when problem identification and evidence-based solutions in health care contexts need to be generated (Meyer, 2000). Action research was chosen as the design for this research because I needed a strategy for working with key stakeholders to develop a potentially sustainable solution to providing chronic condition care coordination in general practice. Given the gaps in the knowledge base that became evident in early negotiations, action research provided an appropriate framework for collaboratively building a shared understanding of the work and establishing optimal conditions for successful implementation. Action research includes (a) joint planning; (b) recognizing the values and perspectives of participants; (c) shared problem-solving and communication; (d) generating solutions and new knowledge; (e) the research/er acting as a catalyst in the process; and (f) the research/er offering interventions (Hart & Bond, 1995). The emphasis of action research is on empowerment, raising awareness, and finding common ground from which researchers and practitioners can work collaboratively. “It [action research] deals with practical concerns of people about the future and their ideals, goals and intentions, and as such is closely linked to the planning process” (Hart & Bond, 1995, p.22). Action research is also appropriate in situations when a number of smaller studies are required because potential solutions are “... based on localized studies that focus on the need to understand *how* things are happening, rather than merely on *what* is happening, and to understand the ways that stakeholders—the different people concerned with the issue—perceive, interpret, and respond to events related to the issue investigated” (Stringer, 2007, p.19). Therefore, action research was an appropriate approach to use.

### *Strengths and limitations of action research*

Action research is appropriate in situations that are concerned with “...individuals whose relationships with others are influenced by the way they define the situation” (Hart & Bond, 1995, p.22). Action research is, therefore, context specific and not generalisable which creates a frequent source of challenge regarding its validity (Checkland & Holwell, 1998). However, it is precisely because of the context specific nature of action research that it was an appropriate method to use in this research. One strength of action research is that it is able to generate practical solutions to problems and engage practitioners with research and implementation activities (Meyer, 2000). Because this research required me to engage practitioners in the implementation of a trial of RN-led chronic condition care coordination, action research was an appropriate method to use.

Action research is a combination of action and research whereby the research engages in real-world situations with an aim of both improving the situation and acquiring knowledge (Checkland & Holwell, 1998). However, there are many forms of research that result from combining action with research including, for example, cooperative inquiry, participatory action research, action learning, action science and action inquiry, thereby creating increasing confusion about the distinctiveness of action research as a research approach (Dash, 1999). To address the confusion surrounding the nature of action research, I have focussed on a typology of action research which has been described by Hart and Bond (1995), and is discussed more fully below.

#### *Action research cycles.*

Four broad approaches have been identified within action research, namely, experimental, organizational, professionalizing and empowering approaches (Hart & Bond, 1995) (refer Table 1, p.32). The different approaches are based on distinguishing factors such as differences in problem ownership, method of engaging key stakeholders, negotiated role of researchers, and the proposed outcome of the research. Based on these factors, my research was initially consistent with an organizational approach. An organizational type of action research is appropriate when applied to organizational problem-solving, however it relies on an underpinning perception that education and training is the most appropriate way of creating behaviour change (Hart & Bond, 1995). Initially, the lack of clarity about models of RN-provided chronic condition care coordination and ways of developing, implementing and

evaluating them, meant that I acted as a consultant to key stakeholders (i.e., Division staff). The key stakeholders were the two managers and three GPLOs previously identified. These Division staff were the primary recipients of the knowledge that was generated in the study. In the beginning stages of the research, the managers at the Division had defined the problem, and had pre-determined the aims (i.e., a model of RN-provided chronic condition care coordination needed to be implemented in general practice). Although Division staff lacked detail about the content of the model, the implementation process was tightly controlled by the managers, and there was a requirement that tangible outcomes would be produced (i.e., that a model would be implemented and evaluated). Thus, the initial stages of the research were organizational in approach (Hart & Bond, 1995). It became evident that a transition from an organizational approach to a professionalizing approach had occurred as the study progressed. This shift indicated a change towards a more participatory style of engagement and a potentially more sustainable solution to the problem that had been identified by the Division. Professionalizing action research is frequently associated with an agenda that seeks to improve professional practice, improve the status of the profession, and diminish the gap between theory and practice by generating findings that practitioners find meaningful and useful (Hart & Bond, 1995; Meyer, 2000). Evidence of the shift became apparent in Study 4 when the research turned towards a practitioner focus, the participants in the research extended beyond the Division staff, and the Division staff became active co-researchers rather than passive knowledge recipients. Thus, the final stages of the research were more consistent with a professionalizing approach to action research. Although an emancipatory approach could have been desirable, using emancipatory change approaches in nursing research requires caution because the ability of nurses to act autonomously is often limited (Hart & Bond, 1995). As noted previously, the Division tightly controlled the initial components of the research. Therefore, an emancipatory type of research was not possible in this study.

Table 1:

*The Action Research Typology (Hart & Bond, 1995, pp. 40 - 43).*

	←—————→			
	<i>Consensus model of society</i> <i>Rational social management</i>		<i>Conflict model of society</i> <i>Structural change</i>	
<i>Action research type</i>	<i>Experimental</i>	<i>Organizational</i>	<i>Professionalizing</i>	<i>Empowering</i>
<i>Distinguishing Criteria</i>				
1 Educative base	<p>Re-education</p> <p>Enhancing social science / administrative control and social change towards consensus</p> <p>Inferring relationship between behaviour and output; identifying causal factors in group dynamics</p> <p>Social scientific bias / researcher focused</p>	<p>Re-education / training</p> <p>Enhancing managerial control and organizational change towards consensus</p> <p>Overcoming resistance to change / restructuring balance of power between managers and workers</p> <p>Managerial bias / client focused</p>	<p>Reflective practice</p> <p>Enhancing professional control and individual's ability to control work situation</p> <p>Empowering professional groups; advocacy on behalf of patients / clients</p> <p>Practitioner focused</p>	<p>Consciousness-raising</p> <p>Enhancing user-control and shifting balance of power; structural change towards pluralism</p> <p>Empowering oppressed groups</p> <p>User / practitioner focused</p>
2 Individuals in groups	<p>Closed group, controlled, selection made by researcher for purposes of measurement / inferring relationship between cause and effect</p> <p>Fixed membership</p>	<p>Work groups and / or mixed groups of managers and workers</p> <p>Selected membership</p>	<p>Professional(s) and / or (interdisciplinary) professional group / negotiated team boundaries</p> <p>Shifting membership</p>	<p>Fluid groupings, self selecting or natural boundary or open / closed by negotiation</p> <p>Fluid membership</p>
3 Problem focus	<p>Problem emerges from the interaction of social science theory and social problems</p> <p>Problem relevant for social science / management interests</p> <p>Success defined in terms of social science</p>	<p>Problem defined by most powerful group; some negotiation with workers</p> <p>Problem relevant for management / social science interests</p> <p>Success defined by sponsors</p>	<p>Problem defined by professional group; some negotiation with users</p> <p>Problem emerges from professional practice / experience</p> <p>Contested, professionally determined definitions of success</p>	<p>Emerging and negotiated definition of problem by less powerful group(s)</p> <p>Problem emerges from members' practice / experience</p> <p>Competing definitions of success accepted and expected</p>
4 Change intervention	<p>Social science, experimental intervention to test theory and / or generate theory</p>	<p>Top-down, directed change towards predetermined aims</p>	<p>Professional led, predefined, process-led</p> <p>Problem to be resolved in the interests of</p>	<p>Bottom-up, undetermined, process-led</p> <p>Problem to be explored as part of process of</p>

	<i>Consensus model of society</i> <i>Rational social management</i>	←—————→	<i>Conflict model of society</i> <i>Structural change</i>	
	Problem to be solved in terms of research aims	Problem to be solved in terms of management aims	research-based practice and professionalization	change, developing an understanding of meanings of issues in terms of problem and solution
5 Improvement and involvement	Towards controlled outcome and consensual definition of improvement	Towards tangible outcome and consensual definition of improvement	Towards improvement in practice defined by professionals and on behalf of users	Towards negotiated outcomes and pluralist definitions of improvement; account taken of vested interests
6 Cyclic process	Research components dominant	Action and research components in tension; action dominated	Research and action components in tension; research dominated	Action components dominant
	Identifies causal processes that can be generalized	Identifies causal processes that are specific to problem context and / or can be generalized	Identifies causal processes that are specific to problem and / or can be generalized	Change course or events; recognition of multiple influences upon change
	Time limited, task focused	Discrete cycle, rationalist, sequential	Spiral of cycles, opportunistic, dynamic	Open-ended, process driven
7 Research relationship, degree of collaboration	Experimenter / respondents	Consultant / researcher, respondent / participants	Practitioner or researcher / collaborators	Practitioner researcher / co-researchers / co-change agents
	Outside researcher as expert / research funding	Client pays an outside consultant – ‘they who pay the piper call the tune’	Outside resources and / or internally generated	Outside resources and / or internally generated
	Differentiated roles	Differentiated roles	Merged roles	Shared roles

Five studies were conducted within two action research cycles to answer the research question: How is the work of RN-provided chronic condition care coordination understood and implemented in the general practice context? The first four studies, which represented Action Research Cycle 1, occurred prior to implementation of the intervention (i.e., the model of RN-provided chronic condition care coordination). The aims of this research cycle were to (a) define the work of chronic condition care coordination; (b) gain an understanding of the difference between the work of usual chronic condition care and the work of chronic condition care coordination; and (c) gain an understanding of the factors associated with implementation of RN-provided chronic condition care coordination. Studies 1 to 3 (Chapters 4 – 6) contributed to the background knowledge that was required before an intervention model could be developed. These studies proceeded in the following ways (a) consultation and joint planning with the Division staff; (b) data collection and analysis; (c) sharing of knowledge gained in each study; (d) discussion about implications of findings from each study; (e) decision-making based on the available evidence; and (f) planning the next steps. Study 4 (Chapter 7), although also a pre-implementation study represented (a) a transition between the two action research cycles, (b) the beginning of the planning for implementation of the intervention, and (c) the transition between organizational and professionalizing approaches of action research.

Study 5 (Chapter 8) was the sole study contained within Action Research Cycle 2. Through this study I was able to research implementation processes in-vivo. The aim of the second research cycle was to understand how RN-provided chronic condition care coordination was implemented when an optimized locally responsive and supportive network was available to assist participants. Given the more collaborative role of the Division staff as co-researchers and the need to ensure that the intervention would be acceptable to RNs, it was necessary to adopt a participatory framework to guide our joint actions. One framework that complements a professionalizing approach to action research is the PEPPA (participatory, evidence-based, patient-centred process for advanced practice nurses) framework (Bryant-Lukosius & DiCenso, 2004). The PEPPA framework was created to facilitate development, implementation and evaluation of advanced nursing roles in Canada, and has been applied successfully across a range of health settings. The premise of the PEPPA framework is that by using a participatory research method, generated solutions will be accepted by key stakeholders, reflect the best use of their skills, produce a workable solution and, therefore, be more likely to produce the desired outcomes. Creating collaborative relationships to meet the

health care needs of patients through the provision of chronic condition care coordination is the foundation on which the PEPPA framework is based (Bryant-Lukosius & DiCenso, 2004). This made it suitable for adoption in the context of my research. The framework is based on iterative consultations with key stakeholder groups to develop a workable, contextually-appropriate role for RNs. There are eight distinct but interlinked steps within the PEPPA framework. They are:

1. Define the patient population and describe the current model of care.
2. Identify key stakeholders and recruit participants.
3. Determine the need for a new model of care.
4. Identify priority problems and goals.
5. Define the new model of care and the nursing role.
6. Plan implementation strategies.
7. Initiate the implementation plan.
8. Evaluate the nursing role and the new model of care.

Table 2 below outlines the action research cycles, research aims that each study addresses, participants in the study, key research activities, and method of data analysis employed.

Although the steps contained in action research imply a linear and step-wise progression, a more circuitous, backward and forward progression that emerges over time is often the case (Hart & Bond, 1995). For clarity, the research will be presented in a linear fashion, although much of the data collection and analysis interacted and unfolded in an enmeshed manner.

Table 2:

*Outline of Relationships between Action Research, Individual Studies and Data Analysis Methods*

<i>Study</i>	<i>Research aims</i>	<i>Participants, key stakeholders and Research Site</i>	<i>AR<sup>4</sup> approach</i>	<i>Key research activities</i>	<i>Method of Data analysis</i>	
<b>AR CYCLE 1 – PRE-IMPLEMENTATION</b>	1	Define the work of chronic condition care coordination	Literature, Division staff	<b>Organizational approach</b>	(a) consultation and joint planning	Systematic Literature Search and Concept analysis
	2	Gain an understanding of the difference between the work of usual chronic condition care and the work of chronic condition care coordination	GPs and RNs, Division staff <b>Research Site 1<sup>5</sup></b>		(b) data collection and analysis	
	3	Gain an understanding of difference between the work of usual chronic condition care and the work of chronic condition care coordination	GPs and RNs, Division staff <b>Research Site 3</b>		(c) knowledge sharing	Individual interviews and thematic analysis
	4	Gain an understanding of the factors associated with implementation of RN-provided chronic condition care coordination	GPs and RNs, Division staff <b>Research Site 2</b>		(d) discussion about implications of findings	
<b>AR CYCLE 2 - IMPLEMENTATION</b>	5	To understand how RN-provided chronic condition care coordination was implemented when an optimised locally-responsive and supportive network was available to assist participants	RNs, Division staff <b>Research Site 2</b>	<b>Transition</b>		Focus group interviews and thematic analysis

<sup>4</sup> AR = Action Research<sup>5</sup> Research Sites are explained in detail below



### *Overall recruitment approach.*

Participants in Action Research Cycle 1 were recruited from three sites that corresponded to the geographical boundaries of three different Divisions of General Practice. These sites differed in their exposure to chronic condition care incentives as outlined in Chapter 2 (i.e., Medicare incentives, Division of General Practice activities and Coordinated Care Trials). Research Site 1 (Study 2) had been exposed to Medicare incentives only. Research Site 2 (Studies 4 and 5) had been exposed to Medicare incentives and an active Division focus on promoting chronic condition care coordination. Research Site 3 (Study 3) had an exposure to Medicare incentives, an active Division focus on promoting chronic condition care coordination, and a Coordinated Care Trial. These three areas were comparable geographical locations (i.e., they were all metropolitan areas in South-East Queensland, Australia with access to similar tertiary and community-based health care services). The different levels of exposure<sup>6</sup> provided a unique opportunity to understand the work of chronic condition care coordination in general practice from multiple participant perspectives within multiple general practice settings.

#### *Research site 1.*

The first research site was in the Logan area of South-East Queensland. The Logan Area Division of General Practice covers a geographical area that has approximately 279 GPs (36.2% of whom are female), working in 78 general practices to provide care to a population of approximately 23 566 people aged 65 and over (Primary Health Care Research and Information Service, 2010a). The Division had been actively promoting quality improvement activities amongst their membership base and had been working with individual general practices to increase the adoption of the 12-month diabetes cycle of care.

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<sup>6</sup> There are two other possible combinations, namely exposure to Medicare funding incentives in combination with Coordinated Care Trials (i.e., no exposure to Division activities); and exposure to Division activities in combination with Coordinated Care Trials (i.e. no exposure to Medicare funding incentives). However, neither of these combinations is realizable. That is, Coordinated Care Trials do not exist in isolation from Divisions of General Practice, and every general practice has access to Medicare funding.

### *Research site 2.*

The second research site was located in the Gold Coast region of South-East Queensland. The Gold Coast Division of General Practice covers a geographical area that has approximately 408 GPs (39.7% of whom are female), working in 129 general practices to provide care to a population of approximately 66 329 people aged 65 and over (Primary Health Care Research and Information Service, 2010c). As discussed previously, the Gold Coast Division was actively seeking to implement a model of RN-provided chronic condition care coordination which became the focus of Action Research Cycle 2.

### *Research site 3.*

The third research site was located in the northern suburbs of Brisbane in South-East Queensland. The Brisbane North Division of General Practice covers a geographical area that has approximately 856 GPs (47.4% of whom are female), working in 216 general practices to provide care to a population of approximately 66 593 people aged 65 and over (Primary Health Care and Research Information Service, 2010b). The Division had been a trial site in the Coordinated Care Trials and had an established record with assisting their membership base to provide chronic condition care coordination.

Many researchers have found recruitment to research within the general practice environment to be problematic (see, e.g., Bower, et al., 2009; Hummers-Pradier, et al., 2008). One mechanism for overcoming such challenges is to enlist the assistance of Divisions of General Practice. Participants in all studies were purposively selected with the assistance of a staff member from the relevant Division who had extensive knowledge of general practices in the target area. Selection criteria for each study differed depending on the requirements of the study. The Division staff member constructed a list of participants who met the relevant criteria. General practices were then invited to participate and, wherever practical, consideration was given to representativeness of the population in that Division (e.g., practice size and gender of the lead GP). Once general practices were identified, the GP and RN or practice manager were contacted by telephone and invited to participate in the study. Participants were provided with information about the research and consented to

participate in the study (refer appendix B, p.197). Specific recruitment strategies for each study are detailed below.

### **Action Research Cycle 1: Pre-implementation Studies 1—4**

#### **Study one—concept analysis of chronic condition care coordination.**

Concepts like chronic condition care coordination become so familiar that they quickly become rhetoric, and the underlying complexity can be overlooked (Allen, Griffiths, & Lyne, 2004). Frequently, an understanding of chronic condition care coordination is implied, and is used interchangeably with expressions such as integrated care and multidisciplinary care (Tieman, et al., 2007). To facilitate chronic condition care coordination, a common understanding must be held by consumers, providers, organizations and policy-makers. The degree of ambiguity that surrounds a concept such as chronic condition care coordination creates the potential for different parties to operate according to different underlying philosophies. Consequently, the first component of the research was to undertake an analysis of the literature with the aim of better understanding the work of chronic condition care coordination.

#### ***Systematic search strategy.***

A search was conducted for published, peer review studies using electronic databases, MEDLINE (1966—2008), and CINAHL (1982—2008). These databases were selected because of their extensive coverage of the medical and science literature. Unpublished or “grey” literature, although potentially useful, was excluded from the scope of this review because of ambiguity relating to quality (i.e., potentially biased foundations) and extensive costs associated with its acquisition (McAuley, Pham, Tugwell, & Moher, 2000). The search strategy utilized the following terms “Service Coordination”, “Chronic Disease Management”, “Integrated Services”, and “Coordinated Care”. These terms were then used to search the abstracts within the databases. Studies were included in the search if they were published in English between 2000 and 2008 and reported on health care systems in developed countries. These inclusions increased the likelihood of eliciting contemporary approaches to chronic condition care coordination and including recent policy or practice developments around the topic area that could be applied in the Australian context. Abstracts were initially discarded if they focused on care coordination within the acute care context (e.g., between intensive care and general medical units) or between acute care and residential nursing facilities. Abstracts were

reviewed if they were original journal articles that could be applied to the description of chronic condition care coordination in the general practice context. As this conceptual review was intended to reflect the current understanding of care coordination in the literature and generate a shared definition, an inclusive approach was adopted (i.e., our emphasis was on retaining any studies that were relevant to the concept and its definition rather than on excluding studies on the basis of methodological shortfalls) (Dixon-Woods, Shaw, Argarwal, & Smith, 2004).

### *Data analysis.*

Concept analysis is widely recognized as an appropriate method for clarifying the meaning of a concept. It is a rigorous but intuitive process that gives a framework and purpose to thinking that may otherwise meander indefinitely (Wilson, 1963). It has been successfully used to make sense of overused and ambiguous concepts to provide a knowledge-base that gives meaning to the construct and purpose to the practice that it generates (Cahill, 1996). Several methodologies exist that enable concepts to be analysed and operationalized (e.g., Walker & Avant, 2005). However, a useful model in cases where concepts are changing is that proposed by Rodgers (2000). Rodgers Evolutionary Model of Concept Analysis emphasises the evolving nature of concepts and is appropriate for investigating the concept of chronic condition care coordination. The steps involved in the Rodgers model are to (a) identify and name the concept of interest; (b) identify appropriate criteria for literature selection; (c) collect and manage the data and identify attributes of the concept; (d) identify antecedents and consequences of the concept; (e) analyse the data; (f) identify a model case to illustrate the concept, if appropriate; and (g) identify areas for further development. It became evident during the first action research cycle that the concept of chronic condition care coordination was unclear and not well developed in general practice. Thus, all components of the evolutionary model of concept analysis were conducted except for identification of an exemplary case.

The text within each of the selected studies was examined to extract key attributes (i.e., reported components, implied or stated prerequisites, tacitly or openly approved behaviours and frequently recurring characteristics) associated with chronic condition care coordination. Specifically, the following steps were undertaken:

1. The text around each attribute was transcribed verbatim from each paper and recorded on a spreadsheet. A total of 100 unique statements were generated using this method.
2. The statements and their sources were randomly clustered into four groups of 25 different statements. The groups were then randomly allocated to four independent researchers, namely, the author, a GP researcher and two post-doctoral researchers who were familiar with health care provision. Each researcher sorted the text into preliminary conceptual clusters on the basis of similarities (i.e., first level analysis). The conceptual clusters generated at this level included (a) person-centred care, assessment, care planning, monitoring, and self-management support/education; (b) the care team, communication, learning communities, guidelines and protocols; and (c) cooperative service delivery, resource management, information management, integration, and linkages.
3. The conceptual clusters were compared and contrasted across the four researchers to identify common categories. Through a process of consensus and discussion (i.e., second level analysis), three broad categories were identified, including (a) client level coordination, (b) the process of care coordination, and (c) system level coordination. This random allocation and assignment process ensured that the emergent concepts and categories were free of interpretative bias from any single reviewer and that similar concepts were evident within subsamples of the total statement pool.
4. The categories were checked and clarified (i.e., third level analysis) and a final definition of care coordination was generated.

### **Study two—mapping usual chronic condition care.**

Study 2 occurred in Research Site 1. Study 2 was the first of two studies that aimed to gain an understanding of the difference between the work of usual chronic condition care and the work of chronic condition care coordination. Understanding usual care was considered to be an important baseline upon which chronic condition care coordination could be superimposed. Diabetes care was chosen as an exemplar of usual chronic condition care because of the existence of Commonwealth Government regulations, guidelines, and funding incentives that clearly document pathways of care, thus providing a consistent framework from which to compare standard care across general practices.

### ***Recruitment.***

The overall recruitment strategies are outlined above and details of the participant sample are included in the results (Chapter 5). Participants were selected if they identified the management of chronic conditions as part of their usual business and they had previous involvement in a quality improvement program that had been implemented by the Division. The program included regular recall and monitoring of diabetic patients in a way that was consistent with the 12-month cycle of care.

### ***Data collection.***

Data was collected using individual interviews that were conducted face-to-face, in the general practice within which participants worked, and at a time that was convenient for each participant. Individual interviews were utilized so that similarities and differences between the care practices and processes of individual participants could be determined (Grubium & Holstein, 2002). The individual stories of participants assisted me to understand the work of health care professionals who were providing chronic disease management in clinical practice (Seidman, 1998). Although other techniques, for example, focus groups, could have been adopted, individual interviews were chosen for pragmatic reasons, namely the logistics of bringing together a number of busy general practitioners in the same place at the same time (Lambert & Loiselle, 2008). The semi-structured interview guide included (a) “What guidelines do you use in diabetic care?”, (b) “Which guidelines do you find the most useful?”, (c) “Who is involved in the management of diabetic patients?”, and (d) “What is their role?”. Participants were prompted to provide as much detail as possible about the way in which they usually provided care and management to people with diabetes. Each interview was digitally recorded. GPs were interviewed separately to RNs. Each interview lasted 7 minutes to 27 minutes with an average time of 19 minutes.

### ***Data Analysis.***

The most useful way to represent the data from this study was diagrammatically. Concept maps are one method of graphically representing data that has been used to summarize knowledge contained in interview transcript data (Kinchin, Streatfield, & Hay, 2010). They are useful for clearly showing the relationships and patterns that exist within the data (Kinchin, et al., 2010). “‘Concept mapping’ refers to any methodology that is used to produce a picture or map of the ideas or concepts of an individual or

group” (Trochim & Kane, 2005, p.187). Concept mapping has several characteristics, namely that it (a) integrates the input from multiple sources, (b) uses sophisticated and rigorous multivariate data analyses to construct maps, (c) creates a series of maps to visually depict aggregated data, and (d) can be used immediately to guide further action (Trochim & Kane, 2005). The resulting maps were useful for increasing the understanding of the work of usual chronic condition care and informed later stages of the research. Although thematic analysis could have been applied, presenting the data in a visual manner provided an opportunity to clearly demonstrate the different care delivery approaches that were being adopted in the general practice context.

Recorded data were transcribed verbatim and checked for accuracy. Data was managed using both manual and computer-based data handling processes. A map of the work of diabetes care was constructed by interrogating the data to ascertain the structures, responsibilities and processes used by health care professional (Kinchin, et al., 2010). The following steps were applied:

1. I listened to the tapes and read the transcripts once to obtain an overview of the content.
2. I re-read the transcripts and highlighted areas of text that appeared to provide answers to the following questions (a) “Who is involved in diabetes care?”, (b) “What work is performed?”, (c) “Who performs the work?”, and (d) “How is the work divided and shared between health care professionals?”
3. Information from GPs and RNs in each general practice was amalgamated to represent diabetes care provision within that general practice.
4. A map was then drawn to represent the most salient people, processes and practices that best described usual diabetes care.

### **Study three—chronic condition care coordination in practice.**

Study 3 occurred in Research Site 3. As in Study 1, the aim of the study was to gain an understanding of the difference between the work of usual chronic condition care and the work of chronic condition care coordination. Including health care professionals who were experienced providers of chronic condition care coordination in general practice was critical to understanding how chronic condition care coordination differed from usual care.

### ***Recruitment.***

The overall recruitment strategies are outlined above and details of the participant sample are included in the results (Chapter 6). Participants were selected if they had previous involvement in the Coordinated Care Trials.

### ***Data collection.***

Data were collected in the same way as Study 2. A semi-structured interview guide was used that included the following questions (a) “Who is involved in chronic condition care coordination”, (b) “What is their role”, (c) “What would you consider to be the most successful aspects of chronic condition care coordination?”, (d) “What are the major barriers you have encountered in trying to deliver chronic condition care coordination?”, and (e) “If we had only one opportunity to describe chronic condition care coordination to a stranger, how would you do that?”. Each interview lasted between 33 and 80 minutes with an average of 50 minutes and was digitally recorded.

### ***Data analysis.***

Each interview was transcribed verbatim and checked for accuracy as in Study 2. However, given the interpretive nature of Study 3 and the richness of the data, a thematic analysis of data was undertaken using the following steps:

1. After data transcription, I checked the accuracy by listening to the interview tapes. Then, I familiarized myself with the data by openly re-reading the interview transcripts without making notes.
2. I explored the data on a paragraph-by-paragraph basis. Responses that seemed important and related to the provision of chronic condition care coordination within a general practice context were highlighted and each piece of transcript was labelled to indicate the interview of origin, and page number of the original transcript. This first level of coding was conducted using questions such as (a) “Who is involved in the care?”, (b) “What work is performed?”, (c) “Who performs the work?”, and (d) “How is the work divided and shared between health care professionals?”.
3. Once the first level of coding was complete, a cutting and sorting technique was used to place the selected pieces of data into groups that seemed to conceptually belong together (Lincoln & Guba, 1985; Ryan & Bernard, 2003). Each statement that had initially seemed important was then re-examined by

asking the question “What is this specifically?” (i.e., second level coding) (Glaser & Strauss, 1967). The team of researchers involved in the larger project independently sorted twenty-five percent of the data statements to check that data coding was similar.

4. This second level of coding categorisation was then placed into a table and higher order themes were developed by asking the question “What is this an example of?” until all data could be accounted for within themes (DeSantis & Ugarriza, 2000; Ryan & Bernard, 2003). Emerging themes were discussed by researchers in the team to determine those that were most salient in each study, and how they related to each other (Ryan & Bernard, 2003) until the most important and stable categories were able to be identified (DeSantis & Ugarriza, 2000).

#### **Study four—supporting nurses to provide chronic condition care coordination.**

Study 4 occurred in Research Site 2 which was the site of the future trial intervention. Thus, it was important to fully understand the context. The aim of the study was to gain an understanding of the response of general practices to the tasks of RN-provided chronic condition care coordination and the factors associated with implementation. Study 4 was more participatory in approach because it also sought to inform the Division staff about the target population for the trial intervention, key stakeholders, the level of need for a new model of care and priority problems in their local area (i.e., steps 1 to 4 of the PEPPA framework—refer Table 2, p.36). Study 4 was the final pre-implementation study and signalled the completion of Action Research Cycle 1.

#### ***Recruitment.***

The overall recruitment strategies are outlined above and details of the participant sample are included in the results (Chapter 7). Participants were selected if a GPLO from the Division was already working with the general practice to improve chronic condition care coordination. This criterion was necessary because it provided access to a pool of participants who were familiar with chronic condition care coordination tasks. Flyers detailing the proposed study were forwarded to all potential participants identified by the Division staff. General practices were then able to self-select to the study by returning a facsimile to the Division expressing their interest. Representation

by multiple parties (i.e., a GP and RN) from each general practice was encouraged. By ensuring that both GPs and nurses were recruited, I obtained a more complete understanding of the way in which general practice teams would be affected by the proposed implementation of a model of RN-provided chronic condition care coordination.

### ***Data Collection.***

Data were collected using focus group interviews that were conducted in a meeting room at the Division on a week-day evening. Focus group interviews are appropriate methods of data collection when needs, expectations and issues such as those associated with developing and implementing an RN-provided model of chronic condition care coordination need to be explored (Fern, 2001). Because RN-provided chronic condition care coordination would be delivered in the team environment, implementation would be affected by multiple stakeholders with multiple opinions. Focus groups provided the opportunity to collect opinions that emerged through interaction, collective language, shared concepts, and frameworks rather than by attempting to aggregate individual viewpoints (Kitzinger, 1994; Sim, 1998). The agreement and disagreement that can occur when different stakeholders from the same environment come together (Kidd & Parshall, 2000) was considered essential for understanding the nature of barriers and facilitators that might arise when implementing a model of RN-provided chronic condition care coordination in general practice.

To overcome the difficulties associated with bringing busy practitioners together at the same time, the Division provided a venue that was familiar, a meal, and reimbursement of expenses. This level of assistance was possible because the Division had been funded to promote chronic condition care coordination and similar levels of funding had been unavailable in the other research sites. Participants were divided into three small groups, each with an experienced group facilitator (i.e., a research team member) and a co-researcher (i.e., a staff member from the Division). I was not responsible for group facilitation and, therefore, rotated between the groups to obtain a broad perspective from all participants. The smaller groups maximised the opportunity for spontaneous conversation among participants, and promoted interaction while ensuring that the discussion remained focused (Kidd & Parshall, 2000; Stewart, Shamdasani, & Rook, 2009). Each group consisted of at least one GP, one RN, and one Division staff member. The GP and RN pairs remained together. Although stratifying groups based on

profession is frequently used in focus group interviews, the team environment of general practice was considered an important mechanism for stratifying groups in this study. Given the importance of GPs and RNs to the implementation of RN-provided chronic condition care coordination, separating them would have obscured important data.

To ensure participants had a common understanding of the tasks associated with care coordination, I searched for the best description of the details of the chronic condition care coordination process. The description provided by Chen and his colleagues (Chen, et al., 2000), was consistent with the findings of Studies 1, 2, and 3, and was considered the most comprehensive description of best practices associated with chronic condition care coordination. It outlined three tasks associated with chronic condition care coordination, that is, assessment and planning, implementation and delivery, and reassessment and adjustment. Each group was allocated one stage of the chronic condition care coordination process. An interview protocol was used to guide the interview process. The interview protocol included questions such as (a) “How does this task currently happen in general practice?”, (b) “In an ideal system, how would this task happen?”, (c) “Who should be responsible for this task?”, (d) “What skills, training and support are needed to make this task happen?”, (e) “What tools, protocols and processes are currently used and/or should be used?”, and (f) “What other changes will be needed if this task is to occur?”. The interview process appeared to be highly structured. However, the questions were non-directional which allowed participants the opportunity to respond and interact spontaneously (Kidd & Parshall, 2000). The time taken for the focus groups was 1 hour and 38 minutes with a 14 minute wrap-up discussion. Each focus group was digitally recorded. Researchers met immediately after the focus groups to describe and discuss the process. Researchers individually created a diary entry regarding the key issues and strategies that participants identified, and gaps that existed regarding the provision of care coordination by RNs.

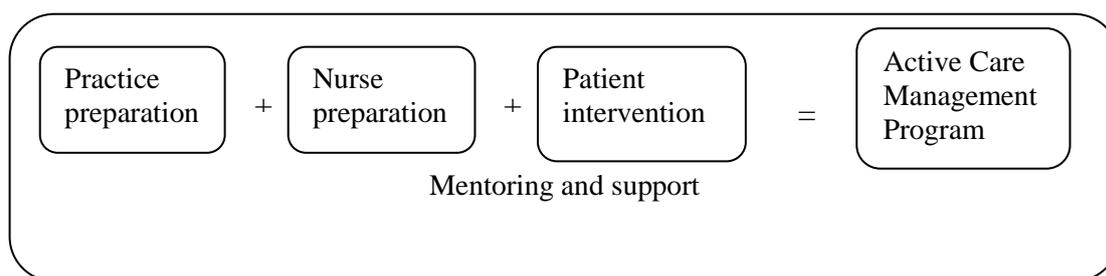
### ***Data analysis.***

Data analysis occurred in the same way as Study 3.

### **Action Research Cycle 2**

All of the data that were collected in Action Research Cycle 1 was collated, analysed, shared and discussed and used to develop the intervention. Nurses who were recruited

to the intervention (i.e., six RNs) were involved in the intervention development together with the Division staff (i.e., the chronic disease program manager and three GPLOs). The intervention was called the Active Care Management Program<sup>7</sup> (ACMP) (refer to table 8, p.150 and Appendix A pp.185-196). In accordance with steps 5 and 6 of the PEPPA framework, (see table 2, p.36), a localized model and implementation plan was developed. The ACMP contained three main components in an environment of mentoring and support as shown in Figure 3 below. Based on the findings in Studies 1 to 3, these components were considered essential.



*Figure 3: Components of the Active Care Management Program*

Practice preparation was an integral part of the ACMP and was developed to achieve flexibility within the model of RN-provided chronic condition care coordination. Practice preparation responded to the confusion about chronic condition care coordination and the relationship basis of care identified in Studies 1, 2, 3 and 4, and the priorities of cultural change and professional definition, development and recognition identified in Study 4. The primary function of practice preparation was to assist individual general practices to examine existing care practices and gather evidence about the way in which implementation of RN-provided chronic condition care coordination would impact on existing relationships within and external to the general practice. Practice preparation included assessment of the general practice environment in a structured manner to understand the unique context of the general practice prior to the implementation of a new program.

The nurse preparation component of the ACMP responded to priorities identified in Study 4 regarding professional definition, development and recognition, and acted as a mediating mechanism to assist nurses become familiar with the entire program prior to

<sup>7</sup> The program was named the Active Care Management Program by the Division and the RNs to represent a more active version of the care management they usually provided.

implementation. Nurse preparation involved a series of workshops to provide RNs with the necessary skills and theoretical understanding to deliver the ACMP intervention.

The patient intervention was an evidence-based, structured and systematic package that responded to the practical tasks, routines and processes identified in Studies 1, 2 and 3. It responded to the business models and financial context identified in Study 4.

A mentoring and support environment was developed to assist RNs implement all aspects of the ACMP. Mentoring and support were specifically designed to respond to the barriers identified in Study 4 and to increase RNs' capacity to perform the work of chronic condition care coordination which had been identified as an issue in all studies. This support was provided by GPLOs employed by the Division, and by members of the research team who were familiar with the materials and processes associated with the ACMP. Participants were provided with ongoing support using electronic mail, face-to-face meetings and telephone-based follow-up.

Although practice preparation, nurse preparation and the patient intervention were the agreed components of the ACMP and occurred in an environment that provided mentoring and support, the following decisions were made by the key stakeholders that affected the way that each component was implemented during the trial (a) completion of the practice preparation component was optional; (b) the nurse preparation component of the program was limited to two three-hour evening workshops; (c) the patient intervention was time-limited, and occurred over a six-month period that included Christmas, which is perhaps one of the most disruptive times of the year for general practice; and d) mentoring and support were provided by both the research team and GPLO from the Division. The majority of the support was provided to RNs by a GPLO, and the GPLO contacted the research team whenever concerns or issues arose.

### **Study five—implementing chronic condition care coordination**

Study 5 occurred in Research Site 2. The aim of the study was to understand how the work of RN-provided chronic condition care coordination was done when an optimized locally responsive and supportive network was available to assist participants implement the work. Including both the RNs who had been involved in implementing the trials and the GPLOs from the Division who were co-researchers was critical to understanding how the work of RN-provided chronic condition care coordination had been carried out.

### ***Recruitment.***

Recruitment processes in Study 5 were different from those of the other studies in several ways. Details of the participant sample are included in the results (Chapter 8). Although the Division staff were instrumental in engaging potential participants, the participants in this study had been recruited specifically to implement the intervention. General practices were offered financial remuneration by the Division for the time and human resources that were anticipated would be required to complete all activities related to the intervention. Researchers were excluded from accessing details regarding the financial remuneration offered and the contractual arrangements between the Division and individual general practices. However, it was generally understood that participants had a contractual obligation to participate fully in the intervention. Full participation included (a) recruiting patients to the trial, (b) attending all workshops, (c) providing chronic condition coordinated care as outlined in the model, (d) collecting patient-related evaluation data, and (e) participating in all focus groups. Several criteria were used by the Division to guide participant selection including that (a) the RN had experience with usual chronic disease care in the general practice context; (b) the general practice management agreed to support nurses in the intervention; (c) the general practice management systems were organized and maintained; (d) the nurses had sufficient access to necessary resources including space, computer, fax and photocopier; and (e) the general practice could demonstrate capacity to meet the demands of the trial. Six general practices met all of these requirements. Although it was general practices that were recruited to the intervention trial, participants in this study were the RNs who were involved in the intervention and the GPLOs who supported them.

### ***Data collection.***

Two separate focus groups were conducted, one with RNs and one with the GPLOs. Data collection occurred in a similar way to Study 4. A semi-structured interview protocol was used that included questions such as (a) “What does a general practice need to have in place to implement the ACMP or similar program?”, (b) “What would (your general practice / the general practices you supported) need to have in place to continue the program?”, (c) “What type of resources would (your general practice / the general practices you supported) need to have in place to be able to continue the program?”, (d) “What were the greatest challenges in implementing the program?”, (e)

“What were the greatest rewards in implementing the program?”, (f) “What would you keep the same about the program?”, and (g) “What would you change about the program?”. The focus groups lasted 2 hours 12 minutes, and 2 hours 10 minutes respectively.

### ***Data analysis.***

Data analysis occurred in the same manner as in Studies 3 and 4.

### ***Rigour.***

The rigour associated with qualitative research is subject to controversy because of the inherent subjectivity of the process (Chiovitti & Piran, 2003; Patton, 2002). The decision-making processes that are utilized in thematic analysis are naturally subjective, and therefore, open to questions regarding rigour. Although there is no certain way to demonstrate that the themes have been rigorously identified and that the results are valid, when clarity of themes is achieved and agreement between researchers is maximised, theme validity is more likely (Ryan & Bernard, 2003).

Three independent researchers were involved in coding and thematically analysing the data. Two researchers were experienced health researchers—one with a professional background in psychology, the other with a professional background in neuropsychology. As the third researcher I have a professional background in nursing as discussed below. Prior to commencing data coding, I immersed myself in the data by listening to interview recordings, checking the transcripts and reading the transcripts completely (Holloway & Wheeler, 2002). Processes for ensuring that themes were rigorously derived are described above. The varying levels of experience and professional background assisted researchers to critically reflect on their preconceptions and their reactions to the participant information contained in the data. Thus, reflexivity was part of the data coding process adopted by the researchers and enhanced the credibility of the research (Holloway & Wheeler, 2002).

### ***Positioning the researcher—self as researcher.***

I have twenty-nine years experience as an RN including twelve years experience in the community sector. The majority of my experience has been gained in the area of chronic disease care and management. My early career, acute care skills were in the area of general medicine, and the entire focus of my community-based nursing experience

has been the care of people with chronic conditions. Additionally, the past five years have included project management with a focus on health promotion, illness prevention and chronic disease management within defined communities. Although having never worked in general practice, I have worked alongside general practice staff and Division representatives in projects that sought to improve the care and management of people with chronic conditions. I have also worked for a state-based general practice peak body as a research assistant with a responsibility for undertaking a review of the literature associated with chronic condition care coordination. My experience as a community-based RN has meant that I am able to understand the language used by general practice RNs, and quickly understand the nursing issues identified. As a result of my professional experience, I was able to grasp the viewpoint and reality of participants, that is, I had an emic perspective (Holloway & Wheeler, 2002). However, I was also able to distance myself from the general practice context because I had never worked as a general practice RN. Thus, I was able to simultaneously investigate and interpret the information provided by participants based on directly observable data, that is, adopt an etic perspective (Holloway & Wheeler, 2002).

#### *Credibility and validity.*

Credibility in qualitative research relies on methodological rigour to establish trustworthiness and authenticity (Patton, 2002) and includes intimate understanding of the data, systematic comparison during data analysis and clearly articulated and logical links between the data and the resultant analysis and argument (Charmaz, 2006). Credibility is related to the degree to which coders of the data are identifying the same thing (Ryan & Bernard, 2003). Coding differences between researchers were discussed until agreement was reached. Intercoder agreement about the themes that existed in the data was achieved by discussing each of the emergent themes until all data could be accounted for.

The validity of constructs developed using qualitative research methods is enhanced when similar findings are derived from multiple sources, and themes are developed over a number of studies (Kidd & Parshall, 2000). The series of studies undertaken in this research continually found similar themes. Participants from general practice were provided with multiple feedback avenues and there was agreement that the findings were consistent with their experience of chronic condition care coordination in general practice. During thematic analysis each piece of text was compared with other pieces of

text to determine similarities and differences in a constant comparative process (Glaser & Strauss, 1967). One component of this study has already been published in a peer reviewed journal, and another has been presented at a peer-reviewed conference, accepted for publication and is currently in press.

Triangulation occurs when multiple methods are used to make valid and reliable conclusions about a phenomenon. However, multiple sources of data can also be triangulated to achieve completeness; that is, to contribute to an overall picture rather than to confirm results (Polit & Beck, 2010; Shih, 1998). In this study, triangulation was used to obtain a more complete picture about what was occurring with regard to chronic condition care coordination in the general practice context. As outlined above, multiple research sites were used (i.e., spatial triangulation), thematic analysis, concept analysis and concept mapping were used to analyse the data (i.e., method triangulation), and multiple researchers were involved in coding data (i.e., investigator triangulation). Member checking was then used to determine if the results from the data were consistent with the understanding of participants.

#### ***Member checking.***

The findings were returned to participants so that my account of the data could be considered (Creswell & Miller, 2000; Mays & Pope, 2000). Although it is important to return researcher interpretations to participants; “It is not confirmation that is required from respondents as much as a commentary from them on the plausibility of the interpretations offered” (Baxter & Eyles, 1997, p.512). Member checking occurs continuously in both formal and informal ways and did so in the current study (Lincoln & Guba, 1985). Focus group facilitators undertook a process of member checking by confirming and clarifying tentatively identified issues at the end of each focus group (Kidd & Parshall, 2000). The results of each study for which thematic analysis was used were presented to research participants in a process of member checking to reduce the likelihood of analysis bias (Tuckett, 2005) and comment regarding the findings. In each instance, participants agreed that the content of the findings accurately reflected their views. Emergent results of each of the studies were presented to representatives from general practice using a combination of verbal feedback, conference presentations and formal reports. Any discrepancies were discussed and consensus was obtained to ensure that the emergent findings were consistent with individual understanding of chronic condition care in general practice.

### ***Ethical Considerations.***

Human research has societal benefit; however to maintain safe and ethically responsible research, researchers need to comply with recognized principles and guidelines (National Health and Medical Research Council, 2007). The conduct of ethical research is "... more than simply doing the right thing. It involves acting in the right spirit, out of an abiding respect and concern for one's fellow creatures" (National Health and Medical Research Council, 2007, p.3). Ethical approval to conduct this research was obtained from Griffith University Human Research Ethics Committee. Ethical approval required the assurance that participants would be self-determining, protected from discomfort and harm, treated with privacy and dignity, and guaranteed anonymity, confidentiality and fair treatment. Three separate ethical approvals were related to this study. Ethics approval numbers HSV/02/07/HREC applied to Study 2; HSV1008HREC applied to Study 3, and HSV/10/08/HREC applied to Study 4 and Study 5.

Clear values and principles of ethical conduct have been provided by the National Health and Medical Research Council (NHMRC) and include guidelines that specify conduct surrounding all research involving human participants (National Health and Medical Research Council, 2007). The values and principles of ethical conduct provided by the NHMRC include "... respect for human beings, research merit and integrity, justice, and beneficence" (National Health and Medical Research Council, 2007, p.11). These values and principles were considered individually, managed actively to ensure that neither participants nor researchers were compromised during this study, and adhered to in a manner that will be demonstrated separately in the following sections.

### ***Integrity.***

Researchers conduct research with integrity when they search for knowledge and understanding, follow recognized principles, are honest in the conduct of research, and disseminate results that allow scrutiny and contribute to public knowledge and understanding (National Health and Medical Research Council, 2007). This research is a requirement of a Doctor of Philosophy degree and has been conducted with the close supervision of qualified researchers. The research methods were reviewed by the research team and scrupulously followed. The research project was chosen to gain improved knowledge and understanding with the purpose of providing quality chronic condition care coordination for people with complex chronic conditions. The project

also sought to enhance the role of RNs in providing chronic condition care coordination in the general practice context. Because of the action research basis of this research, the results are already providing valuable information that underpins ongoing projects focused on chronic condition care coordination and hospital avoidance. The commitment of the researcher to complete this study in a quality manner and disseminate results via conference presentation and publication demonstrates that the principle of integrity has been upheld in the conduct of this research. Additionally, demonstration of the methodological principles and honesty during the conduct of this research form the overall structure of this thesis, notably the current chapter.

### ***Justice.***

The NHMRC (2007) considers just research to be fair relative to inclusion and exclusion criteria which must be adequately described; recruitment processes; and distribution of, and access to research benefits. Also, participants are not to be exploited as a consequence of their participation in the research. Participant selection was guided by project requirements. As previously noted, recruitment of participants in general practice can be challenging. Therefore, the research team were dependent on Divisions of General Practice who were familiar with engaging members of the general practice community to guide and assist with recruitment and selection. As previously noted, financial reimbursement was provided to individual general practices participating in the implementation of RN-provided chronic condition care coordination (i.e., Study 5). Nevertheless, every general practice that nominated an interest in being involved in the research project and therefore entered into a contract surrounding the project was recruited to the project.

Research outcomes were made available to participants involved in the research thereby assuring just access to the benefits of the research. Research findings will also be made available to the wider community to inform understanding and knowledge regarding the factors that influence implementation of complex models of intervention in general practice.

### ***Beneficence.***

“The likely benefit of the research must justify any risks of harm or discomfort to participants” (National Health and Medical Research Council, 2007, p.13). The NHMRC considers evaluation of the risk of harm occurring includes identifying the

likelihood of harm and the impact that would result if harm occurred. Risks to participants include anxiety and distress, exploitation, misrepresentation, identification, and inconvenience (Richards & Schwartz, 2002). Exploitation can occur when there is a power imbalance between researcher and participant or health professional and patient (Richards & Schwartz, 2002). Although patients were included in the larger research project, participants in the studies reported in this thesis were all health care professionals. Potentially, power differentials might exist between RNs and GPs, between GPs and the Division, and between researchers and participants. Mechanisms that were utilized to minimise the likelihood of power differentials included the (a) facilitation of individual interviews allowed the opinions of RNs and GPs to be sought separately, (b) leading of focus groups by experienced moderators, (c) provision of support and mentoring to participants in the implementation of the trial, and (d) adoption of a participatory approach in the research design.

The kinds of harm that can occur during research include physical, psychological, social, economic, legal and spiritual harm (National Health and Medical Research Council, 2007). No economic, legal or spiritual harms were identified during this research. Some participants were potentially at risk of social harm, for example, in their professional relationships or by uncovering practice that could impact on their employment or reputation. Strategies that were utilized to reduce the risk of social harm included support and mentoring from both the Division and from the research team. For RNs involved in the study, there was a risk that the increase in skills and knowledge gained in the trial would be constrained at the completion of the trial if they were required to return to pre-implementation ways of working. Strategies adopted to minimise this risk included (a) exploring avenues for continued use of the skills and knowledge beyond trial completion, (b) including participants in conference presentations and dispersal of information about RN-provided chronic condition care coordination to the broader general practice community, and (c) using a reflective practice process with participants to monitor and understand the ways in which their professional practice was changing. For some participants, financial reimbursement associated with involvement in the intervention meant that there was the possibility of economic gain. However, the financial reimbursement was designed to fairly remunerate general practices for the time, effort and inconvenience associated with their involvement in a short-term, intensive trial. Thus, there was little likelihood of unreasonable economic gain. For some participants, there was the potential that the time

required to provide information for the research could be inconvenient. In all instances, time was scheduled in consultation with participants to minimize the impact on their daily schedules. One participant in the larger research project withdrew when the time and evaluation demands associated with involvement in the study became clear.

The NHMRC (2007) indicates that consent needs to be (a) obtained without coercion (b) given voluntarily, (c) informed, (d) able to be withdrawn without penalty, and (e) valid. Each participant, after indicating their willingness to be involved in the research, was provided an information sheet and consent form (Appendix B, p.197). Each participant was provided the unconditional right to refuse participation in the study and could withdraw their consent to the study at any time without concern of retribution. Informed consent was provided by each participant prior to the commencement of data collection. None of the participants indicated to any of the research team that they wished to withdraw from the project.

Although participants had the ability to withdraw consent to inclusion in the research, there was a contractual obligation between individual general practices and the Division regarding participation in the implementation of the trial of RN-provided chronic condition care coordination (i.e., Study 5). There was potential that financial remuneration for general practices could lead to a situation where RN participants were coerced by members of the general practice team to be involved with the project. However, the financial remuneration was not disproportionate to the amount of additional work that participants in the trial were required to perform. Furthermore, although only the person with the relevant authority within the general practice signed the contract (i.e., the principal of the general practice or the financial manager of the general practice), the research team understood that the RN in the general practice had agreed to participation in the project. None of the pre-implementation components of the project (Studies 1 – 4) was associated with financial reimbursement to participants.

The nature of qualitative research is interpretive and published results are only one version of truth that must be judged for validity by determining the care with which data are analysed (Richards & Schwartz, 2002). To avoid misrepresentation of the information provided by participants, all research results were presented to participants who were provided with an opportunity to disagree with the research findings. In all studies, there were no changes requested by the research participants.

Identification of participants was also identified as a potential source of harm to participants (Richards & Schwartz, 2002). One way of managing this potential source of social harm is to uphold the principles of confidentiality. Identification of participants can occur when the principles of confidentiality are not upheld and when the participant is recognized by others. To minimise the risk that participants would be identified, multiple general practices were recruited. However, participants who attended focus groups were known to each other. Prior to the commencement of each focus group, participants were reminded of the importance of upholding the confidentiality of all other participants who contributed to the focus group. Maintenance of confidentiality associated with data storage included (a) storing data in locked filing cabinets in locked rooms at the University, (b) restricting access to data to only members of the research team, (c) storing all electronic data on password protected computers, and (d) restricting data transcription to was undertaken by either members of the research team or a reputable commercial transcription service. Potential identification of the participants by others has been minimized by (a) ensuring that the research team were the only people who knew both the identity of the participant and the data code attributed to the participant; (b) using codes for all quotes and references attributed to participants in published material; and (c) ensuring that all other identifying data, for example, socio-demographic information was collectively represented. However, although every care has been taken to ensure presented data will not lead to identification of the source, "... it is not always easy to predict which data will lead to identification" (Richards & Schwartz, 2002, p.137).

### ***Respect for human beings.***

"Respect for human beings is the common thread through all discussions of ethical values" (National Health and Medical Research Council, 2007, p.12). The NHMRC considers respect for human beings to be recognition of the intrinsic value of humans; provision of capacity within the research process for humans to be self-determining; and giving due regard to the cultural heritage, custom, perceptions, beliefs and welfare of individuals and communities. Respect for human beings was demonstrated by including the intervention participants in the design of the intervention, keeping them informed throughout the trial, and providing them with the necessary support to provide an optimum experience. RNs' opinions were sought and heard on numerous occasions throughout the research. They were given the opportunity to present the work to their peers. The research gave them the opportunity to enhance their professional status

within their discipline. Respect for human beings has been central to the conduct of this research and the previous ethical discussions provide the evidence that this value has been upheld.

### ***Conclusion.***

An action research methodology within a participatory evidence-based, patient-centred framework was adopted in this study during the development and implementation of a model of RN-provided chronic condition care coordination in general practice. Ethical processes and recruitment and sampling procedures have been discussed. Iterative action cycles that included planning, acting, observing and reflecting have been discussed. Finally, issues surrounding reliability, rigour and ethical conduct have been addressed.



## Chapter Four

### Results of Study 1—Concept Analysis of Care Coordination

This chapter presents the results of a concept analysis of chronic condition care coordination. The aim of this study was to define the work of chronic condition care coordination. A coordinated approach to care delivery is frequently promoted as a solution to care fragmentation because it assists individuals with chronic conditions to navigate the complex health care system. However, cohesive frameworks that are able to facilitate flexible delivery of chronic condition care coordination remain elusive, even though there has been greater clarity over the last decade about the best practices required for chronic condition care coordination (Chen, et al., 2000). Powerful economic, health-related and moral arguments exist for maximising health care outcomes by improving systems of care delivery based on existing knowledge rather than creating new and different systems (Woolf & Johnson, 2005). To ensure that existing knowledge can be optimally applied, it is essential that the work of chronic condition care coordination in general practice is understood.

A systematic search of the literature was undertaken and has been described in Chapter 3. Table 3 below details the search history generated from the conceptual review of the literature.

Table 3:

#### *Search Terms and Resulting Papers*

	Medline		CINAHL	
	No. of Abstracts	No. of Inclusions	No. of Abstracts	No. of Inclusions
Service coordination	9	2	65	21
Chronic disease management	52	5	441	40
Care coordination	29	9	143	12
Integrated services	14	2	365	37
<b>TOTAL</b>	<b>104</b>	<b>18</b>	<b>1014</b>	<b>110</b>

A total of 128 abstracts were identified in the database search. Only studies that included an explicit definition of chronic condition care coordination were selected for the next phase, resulting in the exclusion of 88 studies. From the remaining 40 studies, those included in the final analysis contained descriptions of (a) the components of chronic condition care coordination, (b) activities or practices that were claimed or assumed to be a prerequisite of chronic condition care coordination, (c) a characteristic that recurred frequently as an aspect of chronic condition care coordination, or (d) behaviours that were tacitly approved or openly promoted by authors as being representative of chronic condition care coordination (DeSantis & Ugarriza, 2000; Walker & Avant, 2005). Following this process, 20 studies remained and formed the basis of the analysis. Included in the 20 studies were fourteen empirical studies (i.e., one randomized controlled trial, two systematic reviews of the literature, and eleven descriptive studies); five discussion pieces, and one opinion piece.

Conceptually, chronic condition care coordination offers a systematic and responsive approach to supporting people with chronic conditions (Bowler, 2006; Segal, Dunt, & Day, 2004). Adopting a chronic condition care coordination approach is essential in circumstances where relational continuity between individuals and providers is missing (Bodenheimer, 2008). Chronic condition care coordination, although conceptually complex, is critical to the provision of safe (Wertenberger, Yerardi, Drake, & Parlier, 2006), quality (Rothman & Wagner, 2003) health care. Furthermore, chronic condition care coordination is generally required when people's care needs are complicated, necessitating "multiple ongoing interventions from a variety of specialists" (Branca & Lake III, 2004, p.40). When chronic condition care coordination is functioning optimally, it is generally assumed that people are supported in all contexts across the health-wellness continuum (Palsbo, Mastal, & O'Donnell, 2006) resulting in reliable, accessible, timely, efficient and high quality care (Wertenberger, et al., 2006).

Optimal complex chronic condition management requires coordinated and collaborative interaction between consumers and providers of health care. "The more individualised the set of services a patient requires, the less likely it is that a single agency or program can provide all the components" (Duckett, 2007, p.266). Chronic condition care coordination provides real outcomes for people and services. Clinical and business outcomes are achieved by using chronic condition care coordination to understand service demand, reduce hospital admissions, decrease waste, and deliver the right care in the right place at the right time (Wertenberger, et al., 2006). Vulnerable populations

can be supported across the care continuum (Dorman Marek, et al., 2005), and service duplication can be reduced (Schifalacqua, Hook, O'Hearn, & Schmidt, 2000). Chronic condition care coordination is assumed to deliver effective medication management and early detection of disease exacerbation (Bowler, 2006; Dorman Marek, et al., 2005). In some studies, chronic condition care coordination has been found to improve access to care, reduce complication rates (Wertenberger, et al., 2006), and decrease health emergencies (Bowler, 2006). Individual independence is promoted (Bowler, 2006; Wertenberger, et al., 2006) and disease progression is managed effectively (Aiken, et al., 2006). Importantly, at a systems level, unmet care needs can potentially be met by employing principles associated with chronic condition care coordination (Perkins, et al., 2001; Segal, et al., 2004).

In terms of the players who are linked to chronic condition care coordination, it is seen as a core function of the primary care team (Bowler, 2006; Starfield, 2008; Stille, Jerant, Bell, Meltzer, & Elmore, 2005). Chronic condition care coordination also involves health care organizations (Rosenthal, et al., 2007) and community agencies (Stille, et al., 2005). Although people with chronic diseases and their families are key participants in the chronic condition care coordination team (Segal, et al., 2004; Stille, et al., 2005; Wertenberger, et al., 2006), sustained partnerships between health professionals, providers and service users are necessary (Perkins, et al., 2001; Shannon, 2002; Stille, et al., 2005; Wertenberger, et al., 2006). Consistent with the findings of Davies et al. (2006), this analysis revealed multiple levels of chronic condition care coordination consisting of a client level, a service provision level, and a systems level. Figure 4 below illustrates the work of chronic condition care coordination identified through this analysis.

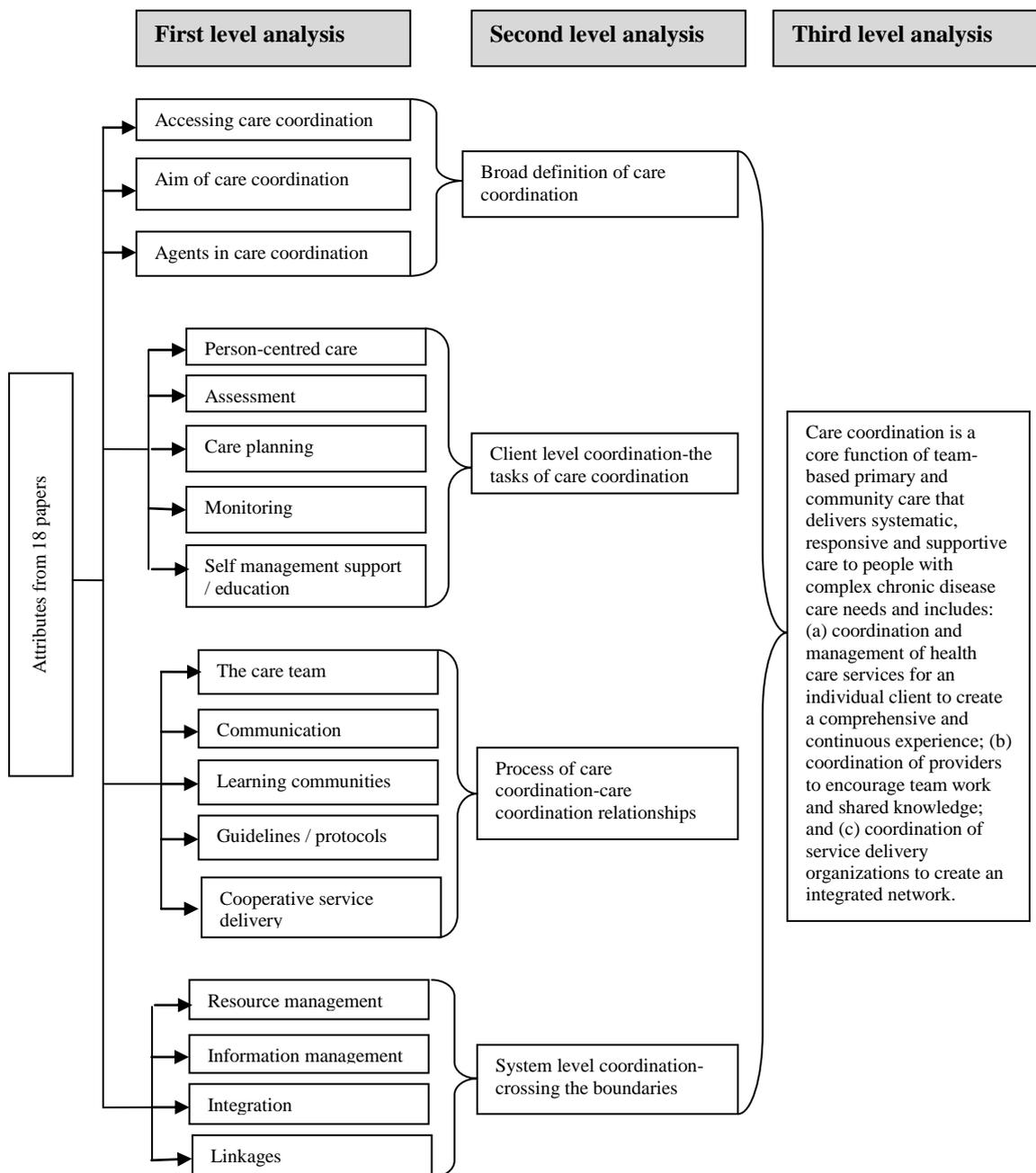


Figure 4: Chronic condition care coordination activities

### Client level chronic condition care coordination.

Person-centred care is pivotal to delivering chronic condition care coordination (Bowler, 2006; Coughlin, Pope, & Leedle, 2006) and includes assessment, planning, monitoring and review, and self-management support and client education. Person-centred care begins with an assumption that individuals are able to access all the services and care they require across levels and contexts (Rosenthal, et al., 2007; Schifalacqua, et al., 2000; Segal, et al., 2004). Pivotal to the principles of person-centred care are advocacy (Wertenberger, et al., 2006), involvement (Segal, et al.,

2004), social and psychological support (Aiken, et al., 2006), empowerment (Schifalacqua, et al., 2000), upholding rights and confidentiality (Schifalacqua, et al., 2000), customization of care to comply with the values and needs of people (Wertenberger, et al., 2006), and addressing their spiritual and cultural needs (Schifalacqua, et al., 2000).

Person-centred chronic condition care coordination includes service provision matched to patient need (Morin, et al., 2005; Perkins, et al., 2001), goal setting and problem solving that include the person (Rothman & Wagner, 2003; Stille, et al., 2005), and ensuring the person has control over their care (Wertenberger, et al., 2006). Additionally, information and knowledge are gathered about individuals, families, prior health care experience and prior responses (Stille, et al., 2005), and the person's perspectives and disease management skills (Rothman & Wagner, 2003). Furthermore, people are informed about service provider roles (Stille, et al., 2005), supported during visits to health professionals (Palsbo, et al., 2006; Schifalacqua, et al., 2000) and care provision is based on a continuous healing relationship (Wertenberger, et al., 2006).

It is critical to undertake a process of identifying the population for whom chronic condition care coordination is most likely to be relevant (Coughlin, et al., 2006; Perkins, et al., 2001; Segal, et al., 2004). Categorizing people according to their level of need is appropriate (Bowler, 2006; Segal, et al., 2004). Client assessment occurs in several ways. Initially, a comprehensive assessment of clients and their health risk is undertaken (Bowler, 2006; Dorman Marek, et al., 2005; Palsbo, et al., 2006; Perkins, et al., 2001; Schifalacqua, et al., 2000; Shannon, 2002), with reassessment at determined intervals (Perkins, et al., 2001; Schifalacqua, et al., 2000; Wertenberger, et al., 2006). The assessment process associated with chronic condition care coordination is typically holistic (Bowler, 2006; Branca & Lake III, 2004; Palsbo, et al., 2006; Rosenthal, et al., 2007; Segal, et al., 2004), although the method of ensuring this approach is variable.

Care planning is essential and is used to develop and implement individualized, therapeutic interventions designed to meet client needs (Bowler, 2006; Coughlin, et al., 2006; Dorman Marek, et al., 2005; Morin, et al., 2005; Palsbo, et al., 2006; Perkins, et al., 2001; Rosenthal, et al., 2007; Segal, et al., 2004; Shannon, 2002; Stille, et al., 2005). Care planning is a method for identifying and engaging the optimal mix of services and treatments to address needs aggressively and proactively (Coughlin, et al., 2006; Dorman Marek, et al., 2005; Morin, et al., 2005; Palsbo, et al., 2006; Perkins, et al.,

2001; Segal, et al., 2004). Although there are many uses of care plans in the development and implementation of interventions, one use is as a mechanism for developing an emergency response plan (Aiken, et al., 2006). Care plans promote multifaceted and multidisciplinary care (Branca & Lake III, 2004; Rosenthal, et al., 2007) and they provide relevant, efficient and accurate communication of information between health professionals and clients (Segal, et al., 2004; Stille, et al., 2005).

Monitoring and review are important to the delivery of chronic condition care coordination. Patients are thought to benefit from close supervision while services are being organized (Dorman Marek, et al., 2005). Prompt follow-up activity is important (Wertenberger, et al., 2006), and is interchangeably referred to as care plan management (Shannon, 2002), client evaluation (Palsbo, et al., 2006), clinical monitoring (Aiken, et al., 2006; Schifalacqua, et al., 2000; Shannon, 2002), or adjusting therapy (Rothman & Wagner, 2003). Team meetings, case management discussions, and case conferences contribute to a team approach to monitoring and reviewing care (Bowler, 2006; Munn, Cheers, & Petkov, 2003; Shannon, 2002).

Self-management support and client and caregiver education are necessary aspects of chronic condition care coordination (Aiken, et al., 2006; Bowler, 2006; Palsbo, et al., 2006; Rosenthal, et al., 2007; Schifalacqua, et al., 2000) and are commonly combined with disease management strategies (Wertenberger, et al., 2006). Education is used to advance self-management skills (Wertenberger, et al., 2006), collaboratively establish treatment goals (Aiken, et al., 2006), assist clients to develop self-efficacy (Palsbo, et al., 2006), and increase client knowledge (Aiken, et al., 2006). Several researchers (Bodenheimer, Wagner, & Grumbach, 2002; Coleman & Newton, 2005) describe self-management support as an essential component of high quality chronic illness management that improves patient outcomes in primary care.

### **Concepts relating to the health care team.**

Conceptually, chronic condition care coordination cannot exist unless health care providers work within a structured framework that facilitates coordinated delivery of services. The optimal method of delivering chronic condition care coordination is through a multi-disciplinary primary care team that functions as a cooperative cohesive unit (Shannon, 2002; Stille, et al., 2005; Wertenberger, et al., 2006). This team provides visible, transparent, relevant and sustainable care (Stille, et al., 2005; Wertenberger, et

al., 2006). The practice of these teams is supported by evidence, and includes guidelines and protocols (Munn, et al., 2003; Rosenthal, et al., 2007; Schifalacqua, et al., 2000; Wertemberger, et al., 2006). A leadership role is typically assumed by one team member (Aiken, et al., 2006), a care coordinator, who is designated and named for each client. The roles of individual health professionals are clearly defined (Bowler, 2006; Perkins, et al., 2001). Generally, it is agreed that care coordinators should hold a health qualification of some kind (Shannon, 2002).

Effective communication is essential to promote interaction, knowledge-sharing and collaboration among health care providers, clients, families and funders (Aiken, et al., 2006; Coughlin, et al., 2006; Dorman Marek, et al., 2005; Morin, et al., 2005; Palsbo, et al., 2006; Schifalacqua, et al., 2000; Stille, et al., 2005; Wertemberger, et al., 2006). Communicating in an environment that provides learning opportunities for health care providers is important because it contributes to quality care through education and the provision of sound underlying knowledge (Rosenthal, et al., 2007; Segal, et al., 2004; Wertemberger, et al., 2006), clinical supervision (Bowler, 2006), and the pooling of collective expertise (Rosenthal, et al., 2007).

Finally, health care teams need to exist within supportive, sustainable, and flexible service delivery systems (Rosenthal, et al., 2007). Thus, services need to work together in a flexible manner (Perkins, et al., 2001). Flexibility can be achieved through networks and coalitions of provider organizations and/or individual health professionals (Perkins, et al., 2001; Rosenthal, et al., 2007), based on a spirit of cooperation and mutual adjustment (Munn, et al., 2003).

### **System level chronic condition care coordination.**

Chronic condition care coordination implies that both care services and whole systems are connected and coordinated (Dorman Marek, et al., 2005; Rosenthal, et al., 2007). Resources, client care, programs and services need to be coordinated across contexts, including social and medical service contexts (Aiken, et al., 2006; Morin, et al., 2005; Munn, et al., 2003; Palsbo, et al., 2006; Schifalacqua, et al., 2000; Stille, et al., 2005). Resource management, information management, organizational integration and collaboration are important system components of care coordination.

A major premise of chronic condition care coordination is the identification and implementation of cost-effective options for care delivery (Schifalacqua, et al., 2000)

such as service substitution (Perkins, et al., 2001), and proactive leveraging of resources (Coughlin, et al., 2006). Fund pooling and resource mobilization emerge as key elements of resource management (Munn, et al., 2003; Palsbo, et al., 2006; Perkins, et al., 2001; Rosenthal, et al., 2007; Schifalacqua, et al., 2000). Coordination of financial resources tends to occur at senior and middle levels of management within organizations (Munn, et al., 2003). However formal agreements between organizations are reliant on informal networks between front-line health professionals who need to be in a position to share information (Munn, et al., 2003). In situations where there is an absence of coordinated information sharing across levels (e.g., between health professionals and financial managers), a mismatch between organizational requirements and resource requirements may occur at the clinical interface.

Coordinated health care is reliant on a system of coordinated information sharing (Morin, et al., 2005; Munn, et al., 2003) between health professionals (Stille, et al., 2005) and between clients and health professionals (Wertenberger, et al., 2006). Information sharing refers to both clinical and general information sharing (see, e.g., Palsbo, et al., 2006; Rosenthal, et al., 2007). Clearly, chronic condition care coordination information systems need to address information at all levels (Munn, et al., 2003). Information management differs depending on whether organizations focus on coordinating service around clients or on developing comprehensive inter-organizational service delivery systems (Munn, et al., 2003).

Integration between organizations is a key strategy for creating a harmonious care delivery system (Stille, et al., 2005). Integration focuses on streamlining and linking services across programs and sites (Rosenthal, et al., 2007) by developing networks of integrated organizations (Morin, et al., 2005) that are based on inputs from multiple health professionals, patients and families (Stille, et al., 2005). Chronic condition care coordination does not exist unless the people within organizations work together to deliver the right care to the right person in the right place at the right time. Linkages occur when there are frequent interactions between care facilities (Morin, et al., 2005), case managers and GPs (Schifalacqua, et al., 2000), as well as separate organizations (Munn, et al., 2003), to create system and service linkages (Schifalacqua, et al., 2000).

### **Summary of the literature.**

In summary, the literature suggests that several key components need to be addressed when adopting chronic condition care coordination within general practice. There is a complicated matrix of elements and levels associated with the delivery of chronic condition care coordination. At the level of the individual patients, chronic condition care coordination consists of person-centred care, assessment, care planning, monitoring and self-management support and education. At the level of health care professional teams, chronic condition care coordination requires communication, learning communities, guidelines and protocols, and cooperative service delivery. At a systemic level, resource management, information sharing, and integration and linkages between services are required to support chronic condition care coordination. Thus, the literature supports the notion that chronic condition care coordination is complex and occurs at multiple levels. However, delivering chronic condition care coordination is often misinterpreted as being a simple and univariate strategy. In its fullest form, chronic condition care coordination can be conceptualized as consisting of (a) coordination and management of health care services for an individual client to create a comprehensive and continuous experience, (b) coordination of providers to encourage team work and shared knowledge, and (c) coordination of service delivery organizations to create an integrated network.

Chronic condition care coordination in general practice can, therefore, be broadly defined as the delivery of systematic, responsive and supportive care to people with complex chronic conditions. The challenges associated with developing and implementing chronic condition care coordination within general practice are likely to be complex because the notion relies heavily on complicated concepts such as partnerships, networking, collaboration, knowledge transfer, person-centred practice and self-management support. The expression of these concepts in the literature was relatively superficial, with little discussion of the actual practices that might be implemented in order to enact them.

### **Conclusion.**

The preceding analysis of the literature has shown that chronic condition care coordination involves a horizontal aspect that reflects the interactions among discrete elements of the health care system at any one point in time. At the horizontal level,

chronic condition care coordination involves services at client, organizational and systemic levels, and is underpinned by complex concepts such as partnerships and networks within and between organizations and systems, and collaboration between health professionals (i.e., directed at both care delivery and professional learning). However, chronic condition care coordination also involves a vertical aspect that reflects the individual's experience of care provision over time and across contexts. At the vertical level, chronic condition care coordination appears to depend on effective transfer of information and communication, but also on self-management support. Indeed, self-management is perhaps the most important contribution to chronic condition care coordination over time and across contexts, given that the person with complex chronic conditions is likely to be the only constant element within this ever-changing environment.

Chronic condition care coordination requires integrated organizational networks that collaborate, and effectively and efficiently transfer and manage synchronised information and resources. Providers of chronic condition care coordination must form cooperative, multidisciplinary communities of practice that use evidence and communication processes to facilitate timely interactions and flexible care provision. Finally, holistic risk assessments are required to identify those most in need of chronic condition care coordination, and to ensure that the care provided is person-centred, relevant, planned, supportive of self-management, and regularly assessed, monitored and reviewed.

In reality, however, few models of chronic condition care coordination address all the components or activities found in the literature. Importantly, there is no evidence in the literature that chronic condition care coordination is consistently or routinely monitored or appraised in practice. Furthermore, the absence of clear understanding and definition regarding elements of the work of chronic condition care coordination suggest that, in practice, shared meaning about the boundaries of the work do not exist. It is important therefore, to investigate the general practice context more broadly and explore issues relevant to the understanding, development and implementation of an appropriate model of chronic condition care coordination in practice. The first step in investigating chronic condition care coordination in general practice is to explore the parameters of usual chronic condition care and compare them to coordination chronic condition care. This will be the focus of the next two chapters.

## Chapter Five

### Results of Study 2—Mapping Usual Chronic Condition Care

This chapter presents the results of a study that mapped usual chronic condition care in the general practice context. Study 2 was the first of two studies with the aim of understanding the difference between the work of usual chronic condition care and the work of chronic condition care coordination. The concept of chronic condition care coordination was broadly defined in Study 1 (Chapter 4) as the delivery of systematic, responsive and supportive care to people with complex chronic conditions. However, partnerships, networking, collaboration, knowledge transfer, person-centred practice and self-management support were also identified as essential elements of chronic condition care coordination. Although integral to the provision of chronic condition care coordination, there was no clear indication regarding which, if any, of these concepts were already occurring in general practices. It was important, therefore, to explore the elements of current care delivery and to identify who was responsible for delivering that care.

#### **Participants.**

Nine general practices were recruited (see Table 4 below) resulting in a sample size of eighteen participants. Two solo GP and seven group GP general practices were represented. Five male GPs and three female GPs participated in individual interviews. The sample was representative of the general practice workforce (Britt et al., 2009). There were no solo GP practices with female GPs in the geographical area. All nurses were female. In one general practice, only the RN was interviewed as the GP was not available. In one general practice, two RNs were interviewed together as they shared the role.

Table 4:

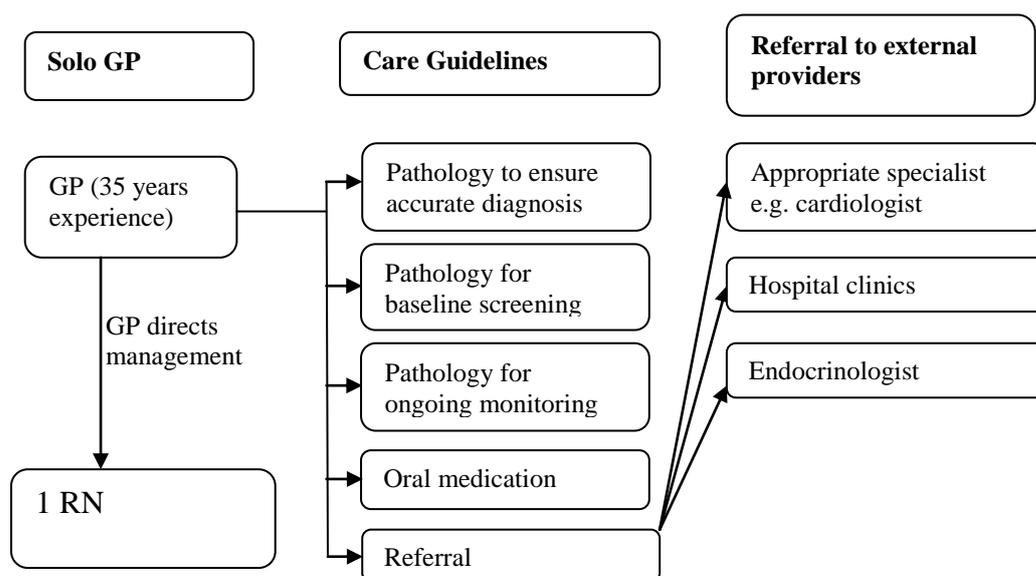
*Characteristics of Participants in Study 2*

Participant	Organization Type	Profession	Gender
1	Solo general practice 1	General Practitioner	Male
2	Solo general practice 1	Registered Nurse	Female
3	Solo general practice 2	General Practitioner	Male
4	Solo general practice 2	Registered Nurse	Female
5	Group general practice 3	General Practitioner	Male
6	Group general practice 3	Registered Nurse	Female
7	Group general practice 4	General Practitioner	Male
8	Group general practice 4	Practice Manager	Female
9	Group general practice 5	General Practitioner	Female
10	Group general practice 5	Registered Nurse	Female
11	Group general practice 6	General Practitioner	Male
12	Group general practice 6	Registered Nurse	Female
13	Group general practice 6	Registered Nurse	Female
14	Group general practice 7	Registered Nurse	Female
15	Group general practice 8	General Practitioner	Female
16	Group general practice 8	Endorsed Enrolled Nurse	Female
17	Group general practice 9	General Practitioner	Female
18	Group general practice 9	Registered Nurse	Female

**Results.**

A visual representation of each general practice's approach to the provision of diabetes care is presented below. Participants explained how usual care was provided for patients with a diagnosis of diabetes. They did not refer to the care they were providing as chronic condition care coordination. General practices included in the study had not had any deliberate exposure to chronic condition care coordination. In this way it was possible to investigate how each general practice provided usual chronic condition care by mapping how diabetes care was provided. Available infrastructure and resources were likely to differ across the different general practice types providing the opportunity to explore usual care under a number of different conditions.

**General practice 1.**



*Figure 5: Usual Care in General Practice 1*

The first general practice was a solo GP general practice. The GP was a male with thirty-five years' experience. He used intuitive guidelines rather than specific written guidelines to manage diabetic care. He did not use Medicare-funded items such as Team Care Arrangements (TCAs) and General Practice Management Plans (GPMPs) to guide care. The GP rarely referred patients to allied health professionals because "...it is an area where I feel competent in and I do a lot of my own dietary discussion and therapeutic discussions with the patients" (GP). The GP selectively referred his patients for specialist care in circumstances where patients "[fail] to respond to my own treatment ... and [for] any complication that reveals itself" (GP). The GP expected that specialists would "try to stabilise the situation or deal with the situation and then refer them back to me for management ..." (GP). The RN occasionally adopted an independent role in the care of patients "particularly with some of the dressings and things like that" (RN), but generally her activities were directed by the GP. Very few of the patient-level chronic condition care coordination tasks or the processes of care coordination identified in Chapter 4 were evident in practice.

## General practice 2.

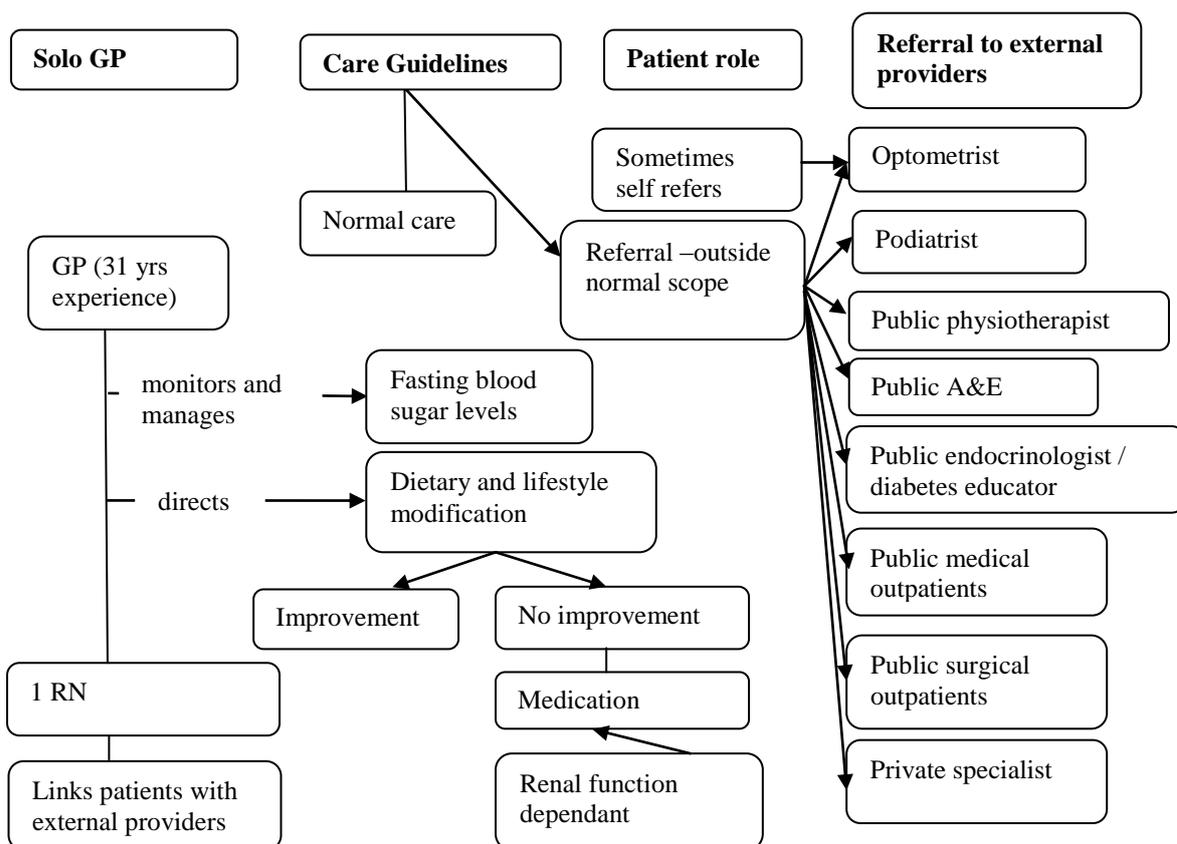


Figure 6: Usual Care in General Practice 2

The second general practice was also a solo GP general practice. The GP was a male with thirty-one years' experience. The guidelines for care he used were also intuitive. He did not use Medicare-funded items such as TCAs and GPMPs to guide care. The general practice was not computerised. The GP educated patients on lifestyle and diet himself so that patients were not confused about the message they received "I usually just try and impress upon them myself—then they're only getting one story" (GP).. Patients were only referred when issues outside the scope of usual GP care management arose "I do most of it myself apart from the podiatry bit... The lipids I should be measuring, their urine creatinine, microalbuminuria, I should be measuring" (GP).. The RN took direction from the GP regarding linking patients with external service providers "It's linking them [patients], assisting [GP], and being directed by [GP] in any of the management I need to do..." (RN). Apart from clinical assessment, there were no identifiable care coordination tasks and processes in the data obtained from the general practice.

### General practice 3.

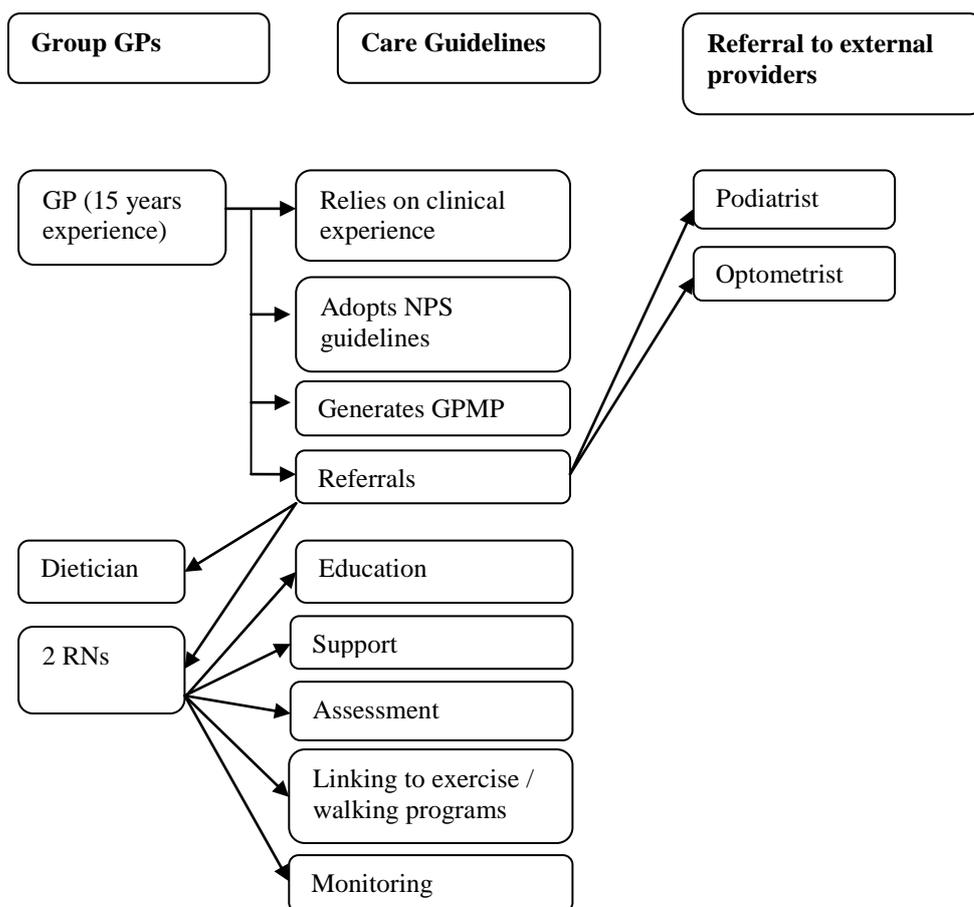


Figure 7: Usual Care in General Practice 3

The third general practice was a group GP general practice. The GP was a male with fifteen years' experience. The GP relied on clinical experience to guide care provision, and also adopted National Prescribing Service (NPS) guidelines in his practice "I guess the guidelines that I use I probably got from the NPS stuff we have go over the years... I don't know where they get them from, but I assume they are correct" (GP). The general practice actively adopted GPMPs and TCAs in the care of diabetic patients. The GP generated a management plan and routinely referred diabetics to a dietician and RN, both of whom were employed internally in the general practice. The reception staff made appointments for patients to attend the dietician and RN "I issue the referral. I then give the referrals to the receptionist who makes the appointments for the relevant people..." (GP). Patients were referred to some external service providers. No patterns of referral to medical specialists were identified. The RNs were responsible for "nurse education for diabetics and supporting them [patients] in whatever way that is needed, teaching them about the glucometry, giving them contacts for exercise and walking programs and checking their foot care" (RN). The GP valued having a dietician as an

internal service provider because “I talk to [the dietician] about patients and she will talk to me about things which you wouldn’t get if it was an external provider ... because some patients are quite difficult with their diet” (GP). The dietician was not interviewed and the role of the dietician in care provision as distinct from the role of the RN was not clear. Some of the tasks and processes associated with chronic condition care coordination were evident in the data. There was a distinct role for RNs in a team approach to care, and the use of guidelines was identifiable.

**General practice 4.**

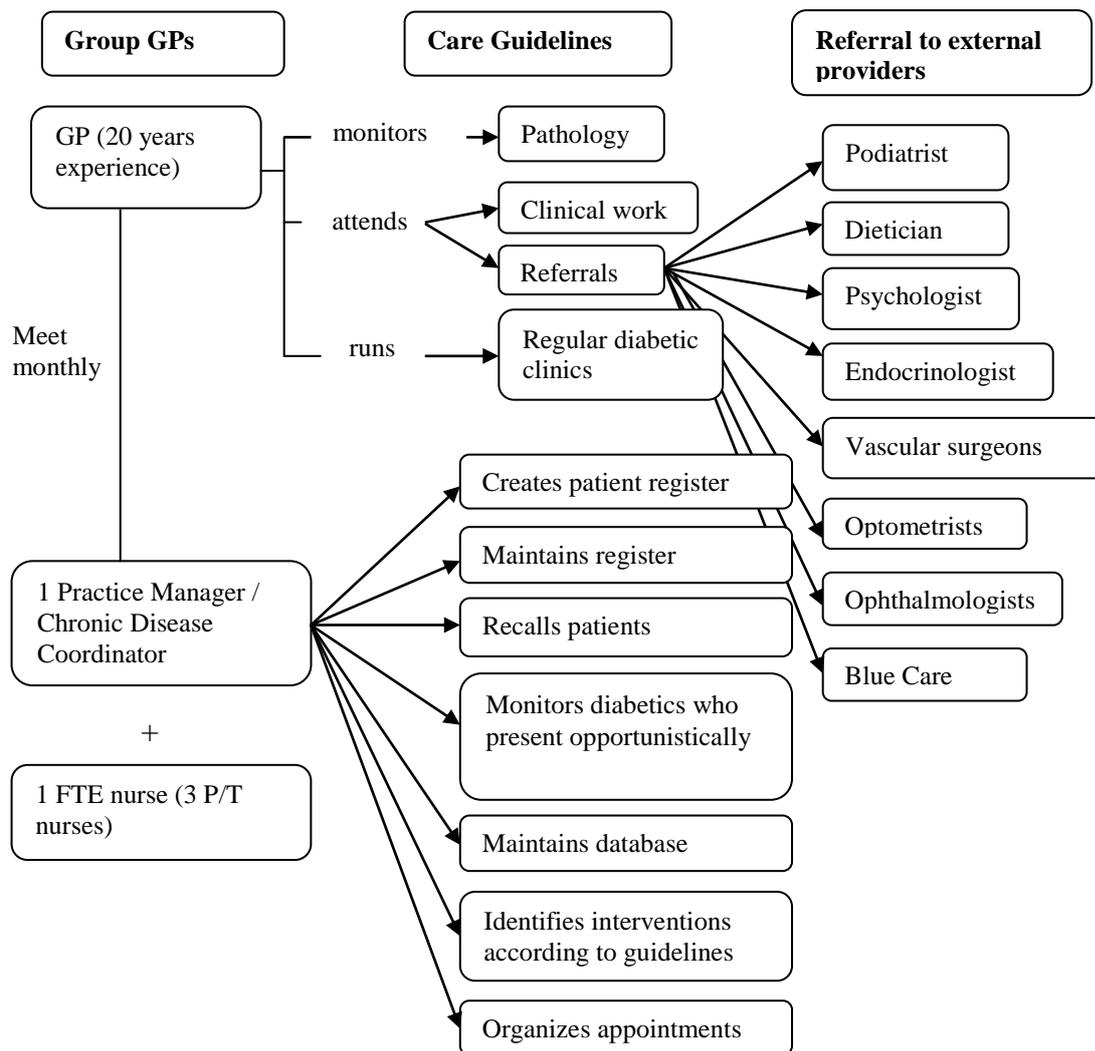


Figure 8: Usual Care in General Practice 4

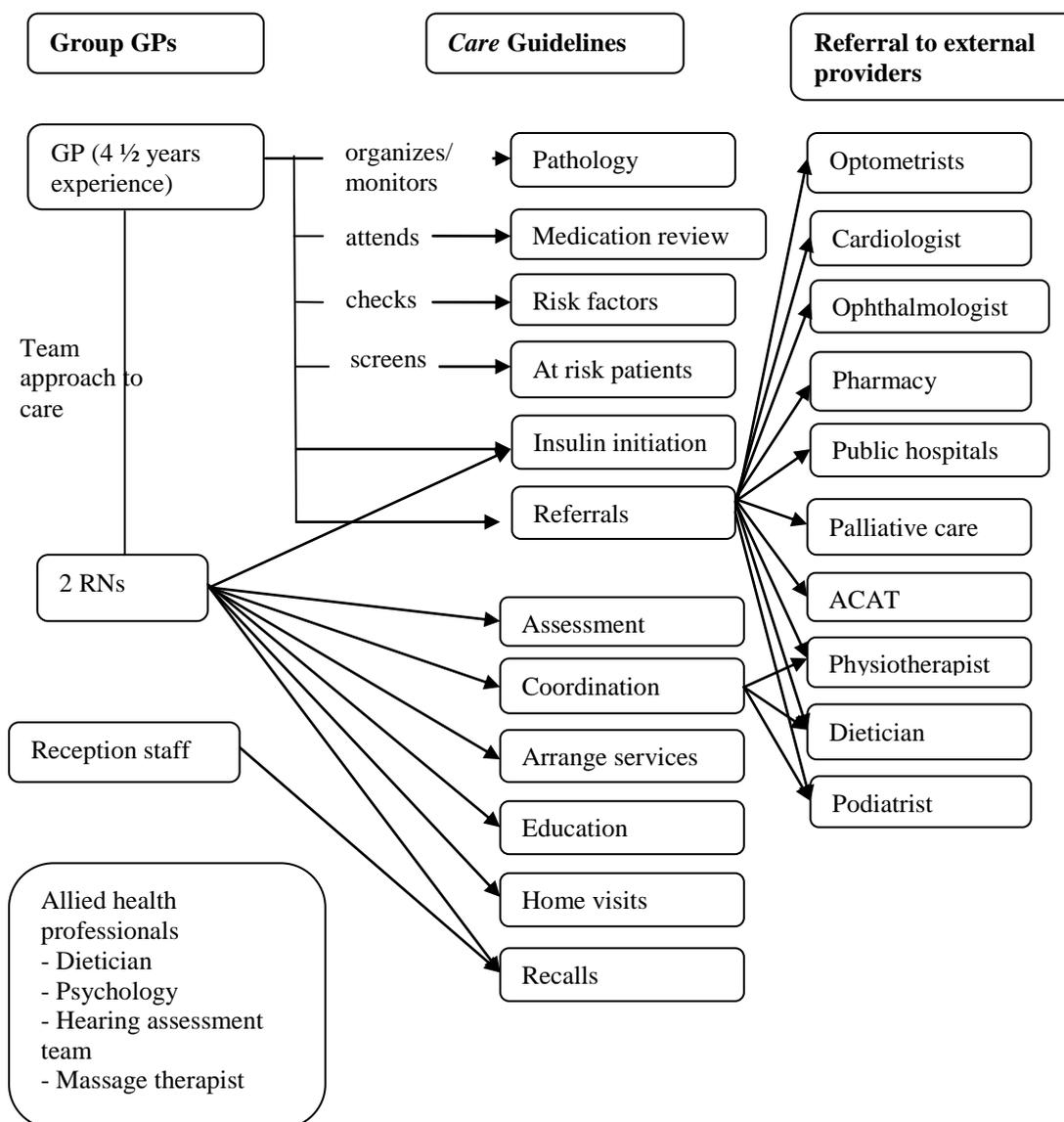
The fourth general practice was a group GP general practice. The GP was a male with twenty years’ experience. Diabetes care had been a focus of the general practice and the general practice team had set some ambitious pathology-related goals to demonstrate best practice in diabetes care. Although the GP could list the clinical parameters he used

to monitor and manage diabetic care, he was unable to identify a specific guideline to which he referred “The actual clinical [guidelines]... I couldn’t tell you what the [organisation who put wrote the guidelines] would be, I just know...” (GP). The general practice actively adopted GPMPs, TCAs and a 12-month cycle of diabetic care to guide the care of diabetic patients. Until recently, the GP dedicated specific time to running a diabetic clinic. Workforce issues affected this. Specifically the general practice was understaffed and had been trying to recruit a GP to replace a recent resignation but had been unsuccessful at the time of the data collection. To manage the daily demands of more acute general practice work, the diabetic clinic had been temporarily ceased “At the moment it [diabetic clinic] has fallen off because of the lack of doctors...” (GP). A non-clinical chronic disease coordinator was responsible for monitoring and maintaining a register of diabetics in the general practice. Part of her role was to ensure that patients with diabetes were well managed, “... Basically we have a traffic light system—green, amber and red for diabetics. She [chronic disease coordinator] flags patients who are [given priority codes] ... [patients requiring] urgent attention are red, uncertain is amber, and everything is in order is green” (GP). The chronic disease coordinator:

... places people on a register and gets rid of people from a register and maintains a register, basically ... what they [chronic disease coordinator] do is that they monitor the diabetics who present opportunistically and flag them for the doctors for that particular visit to address any issues that might be outstanding. She [chronic disease coordinator] also maintains a database of what parameters are up to date with the diabetics and which parameters are outstanding—blood test wise and otherwise. (GP)

Although there were RNs employed in the general practice, “The nurses don’t generally get involved in the chronic [condition] management. They deal with acute management of any complications or situations” (GP). Referrals to external service providers were not routine components of care provision. Rather, patients were referred if “they have got an active problem” or they “have got labile [major fluctuations in blood sugar level] readings” (GP). Monitoring and including a care team were two identifiable elements of care coordination in the general practice. However, the care team processes did not include a role for the RNs.

**General practice 5.**



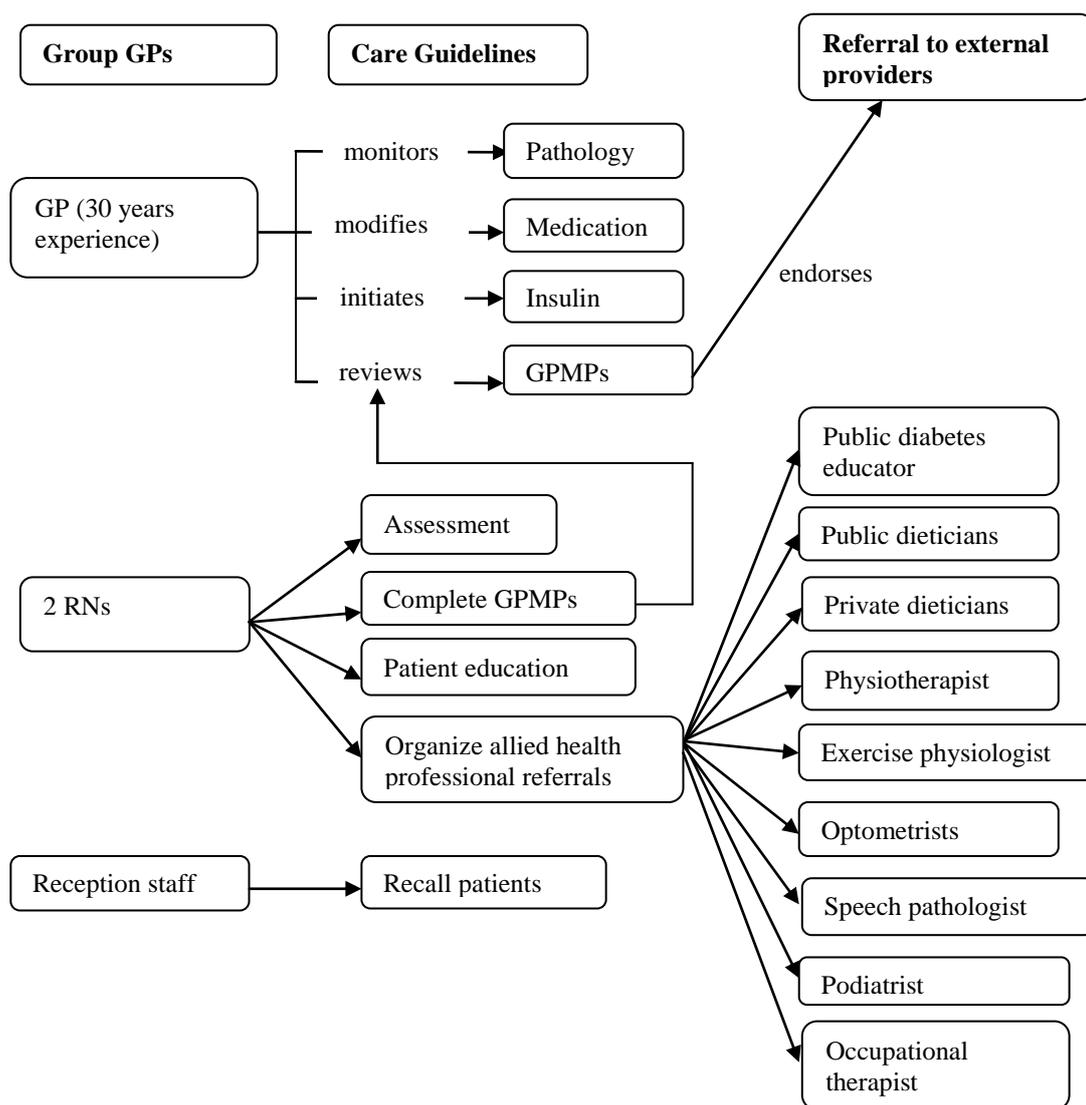
*Figure 9: Usual Care in General Practice 5*

The fifth general practice was a group GP general practice. The GP was a female with four and a half years' experience. She comprehensively listed all the clinical indicators that she used as care provision guidelines for diabetes management. She also provided a comprehensive list of external health service providers to whom she referred patients. A group of allied health professionals were given space in the general practice to attend to patient care. The general practice employed two RNs, one of whom was extensively involved in the provision of care to diabetic patients "My role is chronic disease management, assessment, involvement of allied health, review..." (RN). The RN undertook assessment of patient's diet, medication understanding and compliance, exercise, blood sugar level monitoring, peripheral pulse, skin checks and diagnostic

screening. Assessment of patients included obtaining a history and determining current health needs and issues.

For some patients, the RN undertook a home visit. The RN was responsible for coordinating care with the dietician, physiotherapist and podiatrist, and for undertaking individual education with patients. Both the GP and the RN identified patients for recall “Yes we see them [diabetic patients] every six months... so if we need to see them and make sure that they are doing things properly and so sometimes we recall them” (GP), but the receptionists were responsible for managing recalls. The general practice actively used GPMPs, TCAs and a 12-month cycle of diabetic care “I do a GP management plan and then follow up with a team care arrangement...” (PN). In addition, a team approach to diabetic care was described. Assessment, care planning and monitoring were evident in descriptions of usual care. Self-management support and person-centred care were clearly articulated as part of usual care “If a patient has got a different preference [to see a different allied health professional than those usually recommended by the RN], then that is fine, they can go to them...” (RN). There was evidence of a comprehensive care team who used a broad-based referral network, but there was little evidence of linkages and integration with the broader health care system beyond mentioning that they were important referral points.

**General practice 6.**

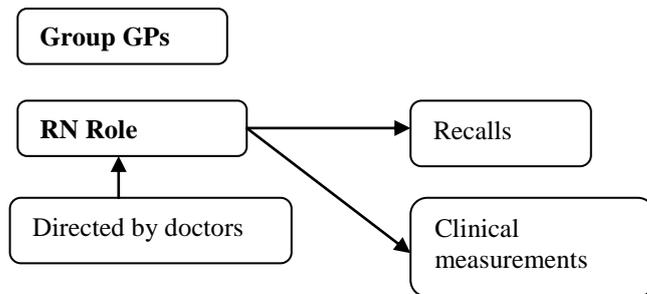


*Figure 10: Usual Care in General Practice 6*

The sixth general practice was a group GP general practice. The GP was a male with thirty years' experience. The general practice actively used GMPs, TCAs and a 12-month cycle of diabetes care. The GP used intuitive practice to monitor and manage the care of diabetic patients. Many of the tasks and processes associated with care coordination were identifiable in the data. The GP adjusted recommended guidelines for pathology monitoring to reflect a more pragmatic approach "...so I usually do their pathology six-monthly and not three-monthly as I find it is just excessive... to get people back to do HbA1cs three-monthly is just excessive" (GP). RNs were responsible for undertaking a comprehensive assessment of diabetic patients, completing a GMP, organizing referrals to external allied health professionals, providing information to patients regarding their diabetes management and educating patients about blood sugar level monitoring, lifestyle changes and dietary guidelines. Although the RN completed

the GPMP, it was reviewed by the GP who endorsed the RNs referral suggestions “So they [RNs] complete the management plan on behalf of myself, and I see the patient at a later date to go through that management plan” (GP). Usual care included the use of standardised templates for individual disease management. The receptionist was responsible for recalling patients.

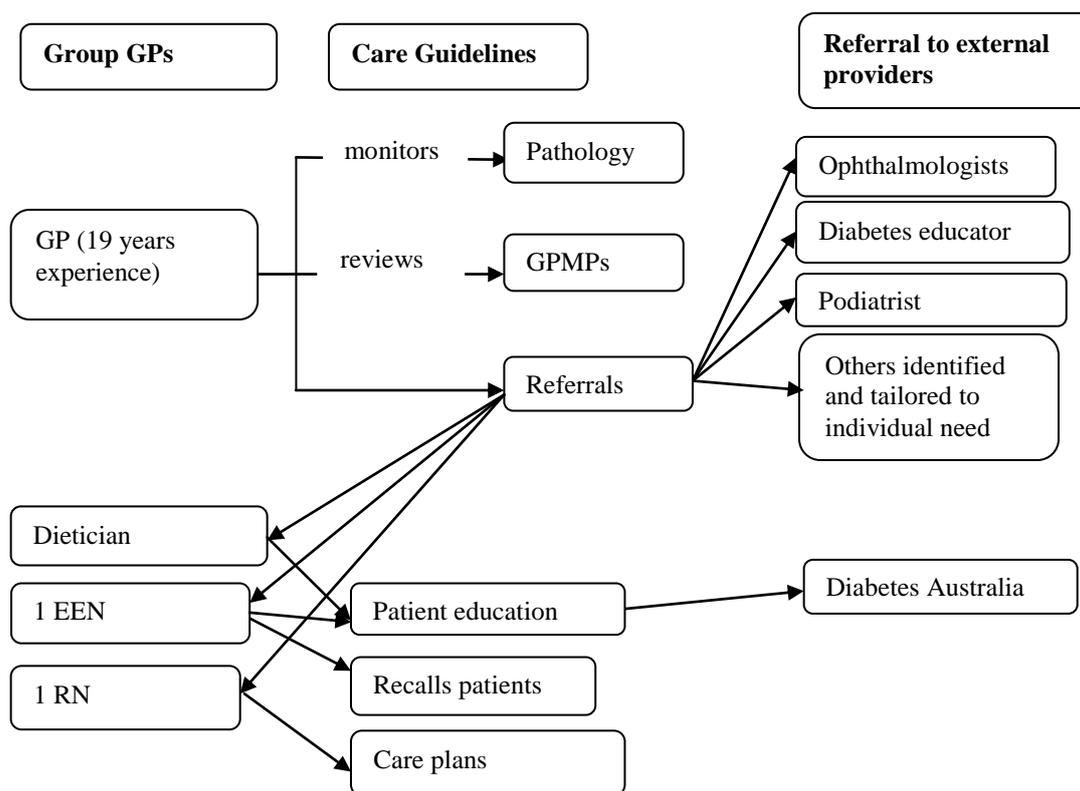
***General practice 7.***



*Figure 11: Usual Care in General Practice 7*

The seventh general practice was a group GP general practice. Only the RN was interviewed. The RN was a female with two and a half years’ experience in general practice, although she had a much wider and longer nursing experience. Her role within the general practice was solely at the direction of GPs. She was responsible for undertaking recall of patients and performing clinical measurements as directed by GPs. She expressed a willingness to be involved in chronic condition care but deferred to GP choice, “I’d like to be involved if they [GPs] wanted me to be involved” (RN). There was no clear role for the RN in chronic condition care coordination and change would be required within the general practice for a role to be developed.

*General practice 8.*



*Figure 12: Usual Care in General Practice 8*

The eighth general practice was a group GP general practice. The GP was a female with nineteen years’ experience. Some of the chronic condition care coordination tasks and processes associated with client level care were identifiable. The GP regularly used Royal College of General Practitioners (RACGP) guidelines for the management of diabetics and monitored diabetics to achieve target level glycosated haemoglobin (HbA1c) levels of less than 7mmol/l. The general practice employed two nurses. An RN worked once per month to undertake care planning associated with TCAs “The RN comes once a month and does care plans” (EEN). A full-time endorsed enrolled nurse (EEN), did not have a specific chronic condition care role, but was responsible for educating newly-diagnosed diabetics about blood sugar level monitoring and diet, and recognizing and managing hypoglycaemia and hyperglycaemia. The EEN also linked patients with Diabetes Australia, and was responsible for managing a recall and reminder system for patients.

My nurses do everything... They do care planning, they do dressings, they assist with surgery. Just recently, I had a newly diagnosed diabetic. I said “Go back to

my nurse. She'll teach you how to use your glucometer and give you all the handouts and sign you up with Diabetes Australia... . (GP)

A dietician worked at the general practice on a fortnightly sessional basis “We’ve got the dietician [who] comes once a fortnight” (EEN).

**General practice 9.**

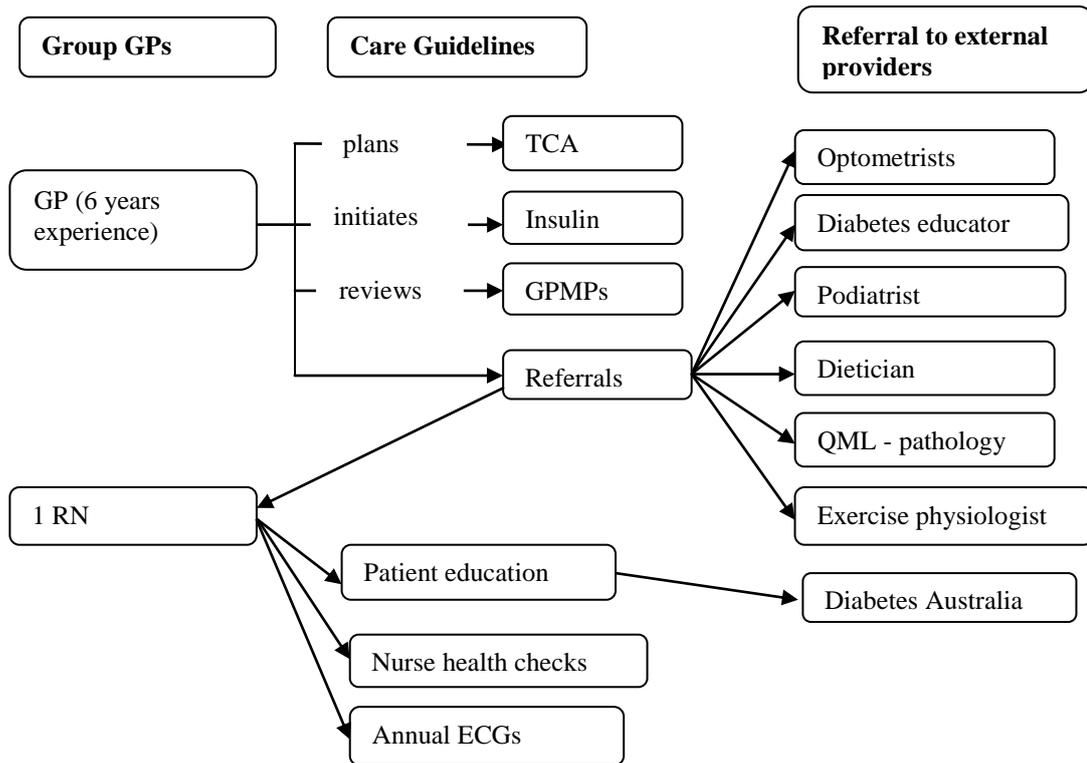


Figure 13: Usual Care in General practice 9

The ninth general practice was a group GP general practice. The GP was a female with six years’ general practice experience. Some of the care coordination tasks and processes were identifiable in the data “We use Logan Diabetes service, dietician, podiatrist, ophthalmologist to check the eyes, QML (Queensland Medical Laboratory) to check the pathology, the nurse to give them [patients] education” (GP). Guidelines developed by the RACGP were regularly used to guide diabetes care “We use the guidelines... every year we get a small brochure from Diabetes Australia (Queensland), ... [but] mainly the RACGP guidelines” (GP). Patients were referred to specialist care when their diabetes was not under control, if they had severe complications, and when they had unstable blood glucose levels. Although the GP initiated insulin, patients were referred to specialists if they did not respond to GP-initiated treatment. The RN did not have a chronic disease specific role, although she was required to develop guidelines

into flowcharts for the GPs to use “I do a lot of child health work... I do a lot of the guidelines and flowsheets for the doctors to get their patients to target [within guidelines] with regards to diabetes” (RN). She was also responsible for educating patients regarding diet, exercise, foot care, glucose monitoring and lifestyle changes “I do the nurse health check... to focus on education... I go through diabetes assessment.. if diet’s an issues, if exercise is an issue, foot care, glucose monitoring... that kind of stuff” (RN). The general practice did not routinely recall patients for follow-up care. Annual electrocardiographs (ECGs) were identified by the RN as an important component of diabetes care. However, without recall processes in place, ECGs occurred in an opportunistic rather than in a planned way. The general practice had recently engaged in the National Primary Care Collaborative (NPCC) scheme, and the RN was mostly responsible for leading the changes within the general practice to ensure that diabetes guidelines and targets were being achieved.

### **Conclusion.**

The aim of this study was to understand the difference between the work of usual chronic condition care and the work of chronic condition care coordination, by examining how usual diabetes care was provided in general practice. There were differences in the way in which general practices and general practice staff engaged with the work associated with chronic condition care. These differences existed despite standardised approaches to diabetes care that had been initiated through Medicare, namely TCAs, GPMPs and 12-month cycles of care. Although routines and processes existed for providing chronic condition care, the way in which they were enacted depended on team dynamics, team member roles, and established care relationships. Two interacting dimensions that impacted on chronic condition care delivery were evident in the data. The first dimension was the team structure and included both the internal and external team environments. Within individual general practices, some teams consisted of two people—the GP and a nurse, and in other general practices a multidisciplinary team existed including allied health professionals, nurses and administration staff. However, even in larger multidisciplinary teams, the roles that individual team members had in chronic condition care were inconsistent.

In some general practices, RNs had a wide and diverse role that required them to be skilled in many areas of chronic condition care provision, whereas in other general practices, RNs did not have any identified role in the provision of chronic condition

care. All general practices had established referral pathways with externally-based health professionals. The number and type of externally-based health professionals to whom referrals were made differed across practices. There appeared to be an inverse relationship between the breadth of the internal team environment and the number and type of externally-based health care professionals who were included in patient care.

The second dimension to care delivery was the interpretation of the application of chronic condition care funding on resource allocation and care delivery. Medicare funding initiatives such as TCAs and GPMPs were used inconsistently. Some GPs did not use the initiatives. When they were used, general practices differed in terms of who initiated the activity (i.e., GP or RN).

There was some evidence in the data that the way in which the two dimensions— team structure and resource allocation—intersected impacted on the way in which chronic condition care was delivered and the degree to which the tasks of chronic condition care coordination were identifiable. When a broad multidisciplinary team was combined with greater use of Medicare-funded resources, such as GPMPs and TCAs, there were also more chronic condition care coordination tasks identified. It was clear that the general practice context is heterogeneous.

The results of this study indicate that any model of chronic condition care coordination will need to be sufficiently flexible to accommodate and expand upon a range of usual chronic condition care practices. Team structure is likely to be different between general practices. Roles and task-allocation are likely to be well defined within individual general practices. It will be essential therefore, for stakeholders in general practices to be provided with opportunities to explore their own understanding and interpretation of chronic condition care coordination, compare their understanding with their colleagues, and determine how the implementation of chronic condition care coordination can occur within their general practice.



## Chapter Six

### Results of Study 3—Coordinated Chronic Condition Care in Practice

This chapter presents the results of a study that used thematic analysis to explore how health care professionals defined and experienced chronic condition care coordination. Study 3 was the second of two studies that aimed to understand the difference between the work of usual chronic condition care and the work of chronic condition care coordination. In Study 2 (Chapter 5), the results indicated that, although some of the identified tasks and processes associated with chronic condition care coordination were evident in current diabetes care, many elements of chronic condition care coordination were either absent or not obvious. Furthermore, the approaches to care provision were heterogeneous even though broad funding and care guidelines were available. While acknowledging the diversity of general practice, the current study sought to identify how health care professionals, who had been extensively involved with a comprehensive care coordination initiative (i.e., the Coordinated Care Trials described in Chapter 2), defined and experienced chronic condition care coordination.

#### **Participants.**

The health care professionals recruited to this study were either GPs, experienced community-based RNs who worked with general practices to coordinate services during the Coordinated Care Trials, or RNs who were employed in general practices and were involved with chronic condition care coordination. Recruitment strategies are described in Chapter 3. Ten GPs and six RNs participated in individual interviews. Five RNs were externally-based (i.e., community nurses employed by agencies external to general practice) care coordinators and one RN was employed by a general practice. Some externally-based RNs worked in two general practices. All nurses were female and were experienced community health nurses. All RNs had been trained in providing chronic condition care coordination within general practice and were supported by the Division. Table 5 below outlines the characteristics of the participants.

Table 5

*Characteristics of Participants in Study 3*

Participant	Organizational Type	Profession	Gender
1	Group general practice	General Practitioner	Female
2	Group general practice	General Practitioner	Female
3	Group general practice	General Practitioner	Male
4	Group general practice	General Practitioner	Female
5	Group general practice	General Practitioner	Male
6	Group general practice	General Practitioner	Male
7	Group general practice	General Practitioner	Female
8	Group general practice	General Practitioner	Female
9	Group general practice	General Practitioner	Female
10	Group general practice	General Practitioner	Male
11	Community Health Service	Registered Nurse	Female
12	Community Health Service	Registered Nurse	Female
13	Community Health Service	Registered Nurse	Female
14	Community Health Service	Registered Nurse	Female
15	Community Health Service	Registered Nurse	Female
16	Group General Practice	Registered Nurse	Female

**Results.**

Four key themes were identified that distinguished the descriptors of care in this context from care in contexts not exposed to the Coordinated Care Trials. The first theme focused on spanning boundaries. The second theme reflected the importance of relationship-based patient care. The third theme related to the way in which teams agreed about roles and routines. The fourth theme related to the degree of commitment shown by the general practice to chronic condition care coordination. The interconnectedness of these themes was reflected by the following:

And I think, you know, we haven't got the processes exactly right ... yet, but to have a community nurse especially for your more complicated people, who was actually linked in with the [general] practice and who did the service coordination work around that could make sure that that got—that happened ... I could see it working well in the future if we got the process right of having for each [general] practice, its [own] community nurse who gets to know all the doctors there and

gets to know their patients and does the, you know, moving around of information that needs to happen for those patients. (Dr 007, p.9)

***Theme one: moving beyond usual practice by spanning boundaries.***

An important component of the work of chronic condition care coordination was the ability to move beyond the knowledge boundaries of general practice and access existing, but previously untapped, external resources or information. Although some community-based resources were well known, not all general practices had knowledge about the community-based resources that were available or how to access them. Having a broader knowledge of resources available in the community was considered beneficial to chronic condition care coordination. The ability to move across contexts was another important boundary spanning activity, which was particularly important when multiple agencies were involved in care provision. Perhaps the most important boundary spanning activity was the ability to adeptly negotiate professional and organizational cultural boundaries. When care coordinators were able to navigate these boundaries, they were more likely to also span the boundaries of their knowledge and current contexts. The ability to successfully and skilfully span boundaries shifted care provision beyond usual care toward chronic condition care coordination.

***Spanning cultural boundaries.***

An important role for care coordinators was the ability to interact with the professional and organizational cultures within general practice and integrate chronic condition care work into that culture. Spanning professional and organizational cultures was dependent on the relationships that care coordinators established with the care team. Participants commented that one of the benefits of developing and nurturing relationships within the care coordination team was an increased awareness and understanding of the roles of other health care professionals and the cultures of different professional groups, "... that's a lot of understanding from you now, each person's culture" (Dr 007, p.13). Developing an understanding of differing professional cultures was facilitated when chronic condition care coordination promoted collaborative working relationships:

Well I suppose because you do work fairly closely with them in formulating care plans and organizing services, yes, you do work fairly closely with them. And you learn from them and hopefully they learn a bit from you or something .... (Dr 005, p.7)

The ability to span professional cultures was based on trust which developed through successful ongoing interactions between team members “You know, I think there’s mutual respect, which is very good. And yes I think—I feel the doctors trust me, and ask my opinion and all that sort of stuff, which is good” (RN 011, p.9).

All of the externally-based care coordinators commented on the importance of understanding the way in which work was usually conducted in general practice. As outsiders, their ability to span cultural boundaries was particularly important. When they were successful, they felt accepted as an insider in the general practice team, and they were able to perform the work of chronic condition care coordination:

Well, I guess that’s one of the main focuses of [chronic condition care coordination], to encourage that relationship. And it’s certainly developed. You know ... it’s getting much easier to communicate with the GPs and have an understanding of their practices and their cultures. [I’m] certainly more appreciative of that. (RN 012, p.11)

It’s given us an understanding of their [GPs] workplace; of their case loads. And it’s also given them an understanding of what we do. And also learning about—it’s just, yeah, working together, it’s improved. The communication is opened; we’re treated as part of the family, well most places, just treated as part of the workplace family when you go in there. There are only a couple of places that you don’t feel that way. But the majority of people—the majority of the surgeries [general practices] I work with are—welcome you just like one of them. So yeah it has opened the communication. (RN 014, p.7)

... There’s been a lot of good things come out of the relationships between the GPs and the nurses ... Well just actually having an understanding of each other’s roles better. And with the nurses going in to some of the GPs practices, they get an understanding of how the GP ..., I mean we’ve always known GPs are busy, but actually seeing how they actually run their businesses. And their time frames .... (RN 015, p.2)

Cultural boundary spanning was not restricted to RNs and was required by the whole team. The benefits of boundary spanning were reciprocal. GPs also commented that spanning professional cultures was important because it gave them the opportunity to understand how the work performed by care coordinators could be integrated with their usual chronic condition care work:

... I think it's more time for relationship building and understanding how processes work. Because you know, in actual fact, I think there's a gradual learning over time via the [care] coordinators with how general practice works and I guess an understanding from the—by GPs as to how the, you know, the [care] coordinator can work. (Dr 007, pp.13-14)

A smooth transition to understanding and assimilating externally-based care coordinators within the general practice was not guaranteed because different general practices worked in different ways. When care coordinators had not developed a strong link with the existing general practice team, they felt unsupported. This was particularly noticeable when RNs were working across a number of general practices and successfully spanned boundaries in one general practice, but were not able to in another. In most cases, the inability to assimilate was associated with resistance from key personnel:

I have got one [general] practice where that's—I liaise with her [identified person in the general practice] all the time and that's great. You know, we sort of do the follow up and everything like that. But the others where you're basically doing it yourself, it can be difficult. (RN 014, p.10)

Existing cultures and ways of working meant that integrating new relationships and care strategies into these well-established environments was not always an easy transition, with tensions sometimes occurring:

[Care coordinator] is a little treasure. She's lovely. Yes she, the girls [other general practice staff] think she's a pain in the neck but no, she's very good. (Dr 003, p.2)

But despite the fact that the [care] coordinator is annoying everybody including some of the doctors, she's got a big heart, you know? She's got a big heart and all she wants to do is help the patients get better. I mean it's wonderful. (Dr 010, p.3)

Spanning boundaries to effectively provide chronic condition care coordination required time and effort to develop and nurture partnerships both within and external to the general practice. Consequently, team members needed to believe that there was a benefit from that investment. Occasionally, the time required to develop relationships with external service providers was greater than the benefit to the general practice, especially when there was a small number of patients requiring chronic condition care

coordination, “Well, relationships [with external service provider] take time and on one patient [when the service is being accessed by one patient only] it’s very difficult” (Dr 002, p.7). One solution was to develop a critical mass of patient numbers to warrant having a dedicated person for care coordination, but that was considered equally problematic because it resulted in an unmanageable workload for the care coordinator:

Like, our coordinator, she’s just such a busy lady because she [works in another capacity] as well. And I suppose it’s—it’s a bit hard because you’ve got to have the numbers before you can have a dedicated person. You’ve got to be almost too busy to do the job. (Dr 004, p.5)

When care coordinators established effective working relationships within general practices they were able to introduce their local resource knowledge and develop networks that assisted in providing optimal care for people with chronic conditions:

I think it’s certainly allowing all the people involved to develop better working relationships, if that’s what they so choose. It’s certainly with the GPs that I’m involved with, I feel that they sort of, have a broader network of people that they’re involved with now, you know those other people we were talking about? And you know, they get reports and I think there’s—you’ve moved some energy in the right direction in terms of communication. Yeah. Well, that’s what it’s done; it’s shifted the energy a bit yeah. (RN 011, p.8)

*Spanning knowledge boundaries.*

There was an expectation that care coordinators would move beyond existing information sources and share knowledge about available resources, thereby increasing the awareness of GPs about services that could be accessed to improve patient care. Raised awareness about services and resources was valued by GPs and was a key contribution of care coordinators. Care coordinators were able to step beyond the existing boundaries of individual general practices, bringing new and important information to the general practice, “That’s part of their [care coordination] role, is to be you know, giving that information to GPs that these courses [self-management] are available ... I’m aware of some services that I wasn’t aware of previously” (Dr 007 pp. 3,15), and, “The [care coordinator] and I put these to her [patient] because she just was, I think as with most people in the community, very unaware of what there is out there” (Dr 004, p.2). There was no shortage of comments from GPs praising the role of the

care coordinator as a source of information that would not otherwise have been available:

We didn't know where to access certain things. [The care coordinator] has been a tremendous help, she's our area co-ordinator and she's been a tremendous help to [RN] ... in helping us to know where to access certain things. And so I think it's been very good from that point of view. (Dr 001, p.2)

I feel great because it's the first time that I've really known where to access things. (Dr 008, p.10)

Well [care coordinator] has certainly made me aware of what's available. And also the people, I don't know, like we had home help people just around the corner and I didn't even know they existed. And they obviously didn't know we were interested until we got together. (Dr 004, pp.4-5)

Some general practice staff had well-established local community knowledge that they had integrated into their usual care delivery practice. However, it was recognized that this might not ordinarily occur in the absence of a care coordinator, "But if you were the average GP, with no connection with community health, you've got very little knowledge of what services are even out there" (Dr 007, p.10).

When local knowledge was not available, there was a clear impact on the ability of GPs and the general practice team to assist patients to access resources, "The other problem I think, was our [care] coordinator wasn't based anywhere near this area, which made it a bit hard, I think, for her to know much about services in the area ..." (Dr 009, pp.2-3). Understanding and being able to access resources that were available in the local community was considered essential for chronic condition care coordination, "I'd say that's a very important link with the community health nurse's job really is, to know what's going on in her community" (RN 015, p.15). However, it was not easy to develop and maintain that type of knowledge in community environments that were constantly changing, "And that's the hard thing in relation to—is keeping up [knowledge about resources that exist in the community]" (RN 015, p.14). Maintaining current local knowledge was time consuming but integral to increasing service access for patients and improving care quality:

And I think that's just as we become a bit more familiar with it and certainly as [the RN] has become more familiar with it, and she realises what is out there to

access. I think it has become a lot easier because to start with it was more difficult. (Dr 001, p.2)

And so I feel like now, we can really give our patients a really good service and that's primarily because [RN] ... is spearheading, I suppose, in a sense, finding out where to send patients and she's [care coordinator] helping us in this area. (Dr 001, p.2)

And from a doctor's point of view, I mean this is going off that question a little bit but from a doctor's point of view, I have always wanted to really give my patients the best I could, but I realised that in many areas we just weren't giving them the best they could get because we weren't aware of what was available and secondly, we didn't have the time to be able to source those things. (Dr 001, p.2)

When chronic condition care coordination was applied to patient care, GPs were sometimes able to identify gaps in resources. By spanning knowledge boundaries, GPs and care coordinators identified unique opportunities to advocate for increased resources and improved service access for patients, "... as I said, we're finding what is available that we didn't know about and we're finding out what's not available that we hope to be able to have them commence in the future" (Dr 007 p.3).

*Spanning settings boundaries.*

An important aspect of chronic condition care coordination was the ability to coordinate care from different providers across several care settings. Some GPs believed that the time required meant that more complex chronic condition care coordination that spanned multiple settings was usually not possible in general practice:

And so you know, she's [care coordinator] just been invaluable to do that; because as a GP you don't have time to access all of that information and to find it. And to have somebody who's checking on that making sure that the patients are getting what we're sort of organizing to start with and then making sure that they're getting it and then seeing how they're going and is it working, she'll [care coordinator] go out to their home and talk with them and all those kinds of things. (Dr 001, p.2)

Other GPs considered that they already had established familiar care pathways that dealt with complex care arrangements "Because you're [already] dealing with different health services for different patients so I wouldn't say that I've got wonderfully new pathways

with other health services” (Dr 002, p.6). When multiple health care providers were involved in care delivery to patients, the ability to communicate information about individual patients between providers became an important feature of chronic condition care coordination. When not present, problems occurred that were the antitheses of chronic condition care coordination:

The feedback from the different providers probably hasn't been as good as I would have liked. I've had to rely on the patients basically to let me know how they got on ... Because if you're not getting—I mean I am, I'm getting feedback because I'm asking people the questions, you know, how did you get on when you went and saw so and so, but feedback from the providers would be brilliant because it would then let you know whether (a) this person was improving, and (b) whether they need it to keep going, and having these particular services done for their health. I mean a few of them have given me feedback. (RN 016, pp.9-10)

I'll give you a prime example of it still occurring because the communication links aren't closed, and this is even with a [care] co-ordinator. So I've got a patient who comes out of hospital. ... She's got an ulcer on her heel. I get my [care] co-ordinator, after a lot of pushing, to actually get [domiciliary nursing agency] ... to come in and do it [wound care], but she doesn't ... She didn't get back to me and say, you know that the ulcer is being dressed now three days a week by [domiciliary nursing agency]. So needless to say our nursing sister [RN] went round to do it one day to find it'd been done the day before. So that was a long winded description to tell you that you know we still have quite a bit to do on closing the communication gaps. (Dr 007, pp.12-13)

I think it was a few weeks after, she'd developed a deep vein thrombosis [DVT] in the meantime and I didn't know about that. And I could have helped her more ... if I'd known. Because she needed help with putting stockings on and hiring of stuff and I didn't know that she'd had that problem and she said to me you know it would have been a bit easier if I could've had some nursing assistance. I guess nobody else had thought to offer that to her. (RN 012, p.2)

The ability to span settings and integrate contexts was an essential element of chronic condition care coordination, but was reliant on the effective transfer and communication of information. Although care coordinators were involved in gaining information and

transferring it between the members of the health care team, they did not feel that they had sufficient time to gather all the relevant information in a timely manner:

... what I'd like to do if I had more time is catch up with the participants more frequently. You know, sometimes it might only be at review of the care plan. But I'd like to be able—I mean I've rung them you know probably a couple of times maybe once a month to see how they're getting on but I'd like to be able to ring them more often and catch up and see you know, if they need other things or if there's alternate arrangements besides funding that we can use. (RN 012, p.11)

***Theme two: relationship-based care.***

Enhanced relationships with patients were a distinguishing feature of chronic condition care coordination. GPs recognized that when RNs were able to obtain additional information from patients, the GP was supported to provide more responsive care:

Although it's good in a way that you know, she [patient] knows there's someone there who will listen to her. And, you know who she can talk to but I think sometimes they tend to rely more on the nurses rather than going to discuss their situation with their GPs. (RN 012, p.11)

When a team approach was used, GPs were relieved that they did not have to do all the work associated with chronic condition care coordination, “I don't think GPs have all the answers. It's nice to be able to call in someone who can help people, motivate them as well as to look after their health care” (Dr 005, p.10). RNs also recognized the role they had in relationship-based chronic condition care coordination. However, in some cases their commitment to this feature of chronic condition care coordination encouraged them to make themselves *very* available to patients, creating some blurring of boundaries:

It is a combination of me and the doctor whom she sees. But yeah [patient] always runs things by me. And if there's something I think she needs, I'll give her a ring or she'll ring me. A lot of the—well many of the [patients] have got my mobile number so that if I'm not here at work, they can contact me if they've got a problem, on my mobile. (RN 016, p.2)

Even when relationships were well established with patients, the opportunity to re-focus the care towards chronic condition care coordination provided the impetus for new and sometimes unexpected information to be shared:

... but there was one [patient] who I'd known for some time and the first thing he said was, oh I'd like some counselling. And I nearly fell off the chair because he would have been the last person in the world that I would have thought had needed counselling. But yes when he explained, he then explained to me why, and it all made sense and off he went to his counselling and yeah, came back and he's fine. Yeah so it's just a case of asking. I think asking patients the question, because there are lots of times I think when people aren't asked what they would like. It's sort of said, this is what you should do, and this is what you will do, but nobody, or very few people, bother to say, well, what would you like?. (RN 016, p. 3)

Establishing relationships with patients was time consuming in that it required more than single face-to-face events. However, participants believed the time was well spent because it assisted the care coordinator to holistically focus on the needs of patients:

... She [care coordinator] spends so much time with them. So she might spend an hour or a couple of hours and if they can't come here then she'll go to their home and talk to them and I think it's less threatening than them having to come in [to the general practice] and in a shorter time, have to try and think of all these things. You know, because often it takes a while for patients to thaw out, if you understand what I'm saying, and then they feel more comfortable because they don't have to think of things quickly and they may forget things. But if she's with them for a long period of time, she can sort of ask questions that might stimulate their memory in different areas. So I think you're able to cover more ground. (Dr 001, p.3)

Effective relationships were based on trust, "Well I think it's improved. I think they [the patients] learnt to trust us. They realise that we're there to help them" (RN 014, p.6). Effective relationships meant that patients no longer felt alone with their illness:

I think she's [patient] realizing that people have got an understanding. She [patient] only said this to me the other day, she [patient] said, "I realize now that I'm not on my own", you know, with the illness that she's [patient] got with the chronic problem that she's [patient] got, that people are prepared to help me, that yeah, I'm not on my own any more. (RN 014, p.1)

When team members were able to establish trust-based relationships with patients, they were able to more easily determine what patients required. Participants believed that

trust was dependent on the caring intent of the health professional and would not develop in the absence of caring behaviour:

... so I think the trust improves and I think when there's a trusting relationship, then I think health improves as well. And I think that the patients also feel there is somebody who really cares about me. Not just my illness. I'm not a number. I'm not a disease. I'm a whole person and there is somebody who cares about me and who is interested in helping the total me. And I think that does an enormous amount to give a patient a better sense of wellness. Just because somebody cares. (Dr 001, p.8)

***Theme three: agreed roles and routines.***

Identifiable tasks associated with chronic condition care coordination were abundant in the data. These tasks included assessment of patients, identification of patients requiring chronic condition care coordination, negotiating goals of care with patients, arranging care, monitoring care, and follow-up and review of patients. Team members needed to agree on who did the work and how it was done.

Nurses were frequently allocated responsibility for care planning, "... the care plans are mine this time. You know, like a lot of the time I think that they're my care plans and even the doctor sometimes sees them as my care plans" (RN 013, p.16). They encouraged patients to discuss concerns with their GP, "So I encourage them to go and talk to their doctor about what their needs are for a care plan" (RN 012, p.4). Sometimes the GP would take responsibility for care planning, but they often found it too time consuming:

You know I wouldn't recommend something if I didn't feel that the patient needed it. So I discuss with the patient when I'm doing the care plan ... [The nurse] will have talked to them as well, and I'll look at all the information and then see if there's any other areas that we could help that patient in by talking to them and then just write a list of these things, like the most appropriate to keep them healthy and well and out of hospital and all of that kind of thing and then I'll write those things down on the care plan and then at that stage I'll discuss it with the patient and likewise [the nurse] will ... then we'll just—she'll take over from there to try and access those. (Dr 008, p.3)

But it's still not—it's still very, very difficult for GPs to do care plans ... And you have to do a few before you get the hang of it. So the GPs that haven't done them and we're just so busy and I probably ... have ... quite a number that are on the go, but you know it takes time to complete them and to just to finalise them. (Dr 007, p.4)

Irrespective of who was responsible for undertaking tasks associated with chronic condition care coordination, it was essential that they were efficient at performing that task.

The way care planning was conducted was goal-based, "I mean I've sort of asked her what her goals and needs were. And that's where we worked it out from there" (RN 014, p.2). However, in practice, patient goals rarely determined the basis of chronic condition care coordination. Health care professionals did not recognize that they might have different goals to those of patients and often used their judgement to determine what would be offered to patients, "Well most times I would be the one that would suggest that's what I wanted. And then the service coordinator would help me find the one that was going to be best" (Dr 009, p.5). When multiple team members were involved, they did not always agree about care pathways:

I actually wanted some counselling, you know, a psychologist, an intervention for his care plan, but his GP didn't think that was necessary ... this GP knows his clients very well and so I have to respect him on that. And also he's a—I'm not putting it aside, I still will raise that issue and I still—I'm even more convinced now that this man needs to have that sort of intervention. (RN 013 p.1)

Although RNs were often allocated the role of completing a care plan, GPs had ultimate responsibility for directing and managing the care of patients, and believed they had a well-established understanding of the type of care and services their patients should be offered:

... And I think it's what you know of the person that is very difficult to define. But it's where I think GPs feel they've often known these people for a few years, so [I] know what they've [patients] tried in the past and how successful they've [patients] been in bringing about a movement towards some health improvement. (Dr 002, p.6)

The way in which RNs interacted with GPs regarding patient care differed between general practices. Some RNs would book an appointment with the GP in advance, whereas others would communicate patient care in an ad hoc or convenient manner:

Oh [RN] basically would pop in and she would just make a twenty minute appointment and come in, we'd sit down and she'd say well this is what we've got available; this is what we can do. She'd probably do that about every fortnight. (Dr 004, p.7)

I'd say she [RN] co-ordinates everything. I just—all I've got is the care plan on my computer. And a reminder system when to renew it and things like that. (Dr 004, p.2)

Because it's hard to follow up all the time and I think that's where a lot of people are finding it [difficult] and particularly if you don't have practice managers. You might have practice staff but not practice managers or practice nurses. So therefore you're doing a lot of the work. Well I find with mine [the general practices I work with] anyhow. (RN 014, pp.9-10)

***Theme four: committing to chronic condition care coordination.***

General practices needed to dedicate time and resources to chronic condition care coordination. The chronic condition care coordinator role was considered important even though the tasks associated with chronic condition care coordination were divided differently in different general practices. As part of this commitment, RNs needed to be provided with opportunities for training prior to embarking on a journey of chronic condition care coordination:

But we had a lot of training at the beginning about dealing with GPs and doing care plans and patients, GPs and their patients. Because the care plans the GPs are doing are different to the nursing care plans. So yeah I guess we had to look at that culture of it as well. And I guess nurses are used to dealing with patients and involving them in their care plans because we do that anyway. (RN 012, p.5)

The role of RNs as care coordinators needed to be supported within the general practice, and planning needed to occur to ensure that the role was continued once it had been established. Individual expectations regarding the role and purpose of chronic condition care coordinators needed to be explored, RNs needed to be physically present in the general practice, and succession planning needed to be addressed:

I think for us it's taken the [care] coordinator—we've had a couple of different service coordinators—I guess what I envisaged happening early on wasn't actually what happened. So it's been a bit difficult to get into the swing of having them here and part of the team. The [care] coordinator has certainly done some good things for us but we've only physically been able to see her—well, at various times it's varied, but there was some times when the [care] coordinator changed and there were chunks of time when we didn't see them at all. So it's not a judgement on any one [care] coordinator, it was probably because they had too many people that they were looking after. (Dr 009, p.2)

Continuity was believed to be essential to care provision because when disruption occurred, there was an accompanying sense of loss—loss of gains, loss of benefits, and loss of the sense of being known and understood, “But that nurse also ended up leaving community health so we lost a lot of the gains that we'd, she had gained with the GPs ....” (RN 015, p.2). Similarly, “... So that if that person goes, all the benefits it really just walks with that person” (RN 015, p.2), and:

I think what's been difficult is if the person that you know goes on leave and it's handed over to somebody else. They don't know us, they don't know the patients, and then it becomes almost counter-productive. So I think it needs—it's worked best when there's been—I mean [care coordinator] is the second one we've had and then in the interim there's been a few other people and people have been away. So there needs to be consistency for it to work well. (Dr 002, p.3)

To deal with issues surrounding continuity and relationship building, some GPs believed that it would be preferable for care coordinators to be employed by the general practice. GPs believed that it would be easier to commit to chronic condition care coordination if they had more control over the processes and the challenges associated with spanning cultural boundaries were not present:

Well you're dealing with cultural changes which take time. You're dealing with the fact that many factors that are outside of our control, like accessibility to the [care] co-ordinator. I mean in some ways I would prefer some of that function to be done by our RN who is paid for her time to do it so that it could be done by the person sitting at the other end of the surgery [general practice]. Rather than having to fax something off to somebody and wait for a response back and all that sort of thing. (Dr 002, p.9)

## **Conclusion.**

The aim of this study was to understand the difference between the work of usual chronic condition care and the work of chronic condition care coordination by examining how health professionals who had been involved in chronic condition care coordination in the general practice context experienced and defined the work. Four themes were identified that distinguished chronic condition care coordination from usual care, namely, the ability to span cultural, knowledge and settings boundaries; the development of relationship-based care; agreement about roles and routines; and demonstrated commitment to chronic condition care coordination.

The first theme referred to the impact of boundary spanning on access to services, and the transfer of information between parties in the care relationship. Boundary spanning was based on understanding the professional and team culture within the general practice and was dependent on trust and respect. When professional and team cultures were not successfully spanned, tension could result. When externally-based care coordinators brought new information into the general practice, internal team members were able to move beyond usual care, accessing different services and resources for their patients. Sharing information and knowledge was considered to be beneficial for patients. Thus, one outcome of the work of chronic condition care coordination that was different from usual care was increased access to services. Nevertheless, gaps and duplication of services could still occur when boundaries were not spanned adequately. These gaps were counterproductive to the goals of chronic condition care coordination.

The second theme referred to the relationship that was formed with the patients as a consequence of adopting a chronic condition care coordination approach. When relationships were developed specifically for the purpose of increasing chronic condition care coordination, there was evidence that patients were forthcoming with new information. Thus, chronic condition care coordination was differentiated from usual care because the information shared during the patient encounter was more comprehensive which resulted in an opportunity to provide more holistic, goal-based care.

The third theme referred to agreement about the roles and routines associated with chronic condition care coordination. These processes and practices formed the structures that were used within general practices to convey information regarding

chronic condition care coordination across time. Although care planning was reported to be goal-based, team members did not always agree about what the patients required. Thus, the way in which chronic condition care coordination was integrated into general practice contexts was likely to be different.

The fourth theme referred to the ongoing commitment that was needed from general practice if chronic condition care coordination was to be implemented successfully. Demonstrated actions were required in the form of training, retention and succession planning. Although the way in which general practices committed to chronic condition care coordination differed across general practices, the more advanced forms of chronic condition care coordination provided continuity for patients and team members beyond that provided by usual care.

Any model of chronic condition care coordination will need to negotiate with existing professional and organizational cultures and address issues associated with integrating a new model of care into existing contexts. Relationships and relationship continuity need to be taken into account. Identifying and allocating tasks associated with chronic condition care coordination need to be negotiated. The next step in the action research cycle will, therefore, investigate how the tasks of chronic condition care coordination can be allocated to RNs and identify issues that are likely to be associated with the implementation of a model of RN-provided chronic condition care coordination in the general practice context.



## Chapter Seven

### **Results of Study 4—Supporting Nurses to Provide Chronic Condition Care Coordination**

This chapter presents the results of a study that used thematic analysis to identify factors that were likely to affect the way in which general practices would be able to implement a model of RN-provided chronic condition care coordination. Study 4 was the final study undertaken in Action Research Cycle 1. In the previous study (Chapter 6), participants who had been involved in the Coordinated Care Trials described how chronic condition care coordination required the ability to span cultural, knowledge and settings boundaries; development of relation-based care; agreement about roles and routines; and ongoing commitment to this approach. Thus, this study aimed to gain an understanding of the factors associated with implementation of RN-provided chronic condition care coordination. In addition, I sought to identify the types of support that RNs and general practices would require to be able to implement RN-provided chronic condition care coordination.

#### **Participants.**

Thirteen participants engaged in three stakeholder focus groups. Recruitment processes are described in Chapter 3. Participants included four male GPs, five female RNs, two male Division of General Practice staff, and two female Division of General Practice staff. Across these participants, seven general practices were represented (i.e., the sample included 3 GP/Nurse pairs from the same practices). One RN was employed at an Indigenous Health Service. Table 6 below outlines the participant characteristics.

Table 6:

*Characteristics of Participants in Study 4*

Participant	Organizational Type	Profession	Gender
1	General Practice	General Practitioner	Male
2	General Practice	General Practitioner	Male
3	General Practice	General Practitioner	Male
4	General Practice	General Practitioner	Male
5	General Practice	Registered Nurse	Female
6	General Practice	Registered Nurse	Female
7	General Practice	Registered Nurse	Female
8	General Practice	Registered Nurse	Female
9	Indigenous Health Service	Registered Nurse	Female
10	Division of General Practice	Practice Facilitator	Female
11	Division of General Practice	Practice Facilitator	Female
12	Division of General Practice	Chief Executive Officer	Male
13	Division of General Practice	Program Manager	Male

**Results.**

In discussing the ways in which chronic condition care coordination could be promoted and provided by RNs in general practice, five major themes were identified. These five areas were thought to require considerable attention to assist RNs provide chronic condition care coordination. The themes included (a) conceptual confusion about the meaning of chronic condition care coordination, (b) developing a whole-of-practice culture that facilitated the nurses' role in chronic condition care coordination, (c) increasing the capacity of general practice to develop tested and trusted partnerships, (d) understanding the financial models associated with providing chronic condition care coordination in a business context, and (e) developing, defining and recognizing the professional role of RNs in chronic condition care coordination.

There was clearly no single model for understanding chronic condition care coordination or an approach that would suit everyone. The data indicated that general practices all worked in different ways, even in relation to the same activity, concept or process. Further, variability was evident across individual patients and populations (e.g., Indigenous groups, Nursing Homes). Thus, there was a need for a flexible model of RN-

provided chronic condition care coordination that could provide broad operating principles, but be applied in a range of circumstances. Indeed, the data suggested that a range of models was possible, with many approaches having worked in the past.

***Theme one: conceptual confusion.***

Chronic condition care coordination was considered to be an increasingly necessary strategy for managing complex health conditions, but the nature and extent of chronic condition care coordination undertaken at the general practice level varied considerably. Chronic condition care coordination was an ambiguous term that meant different things to different people and was considered by some to reflect usual care. Indeed, some participants queried the extent to which chronic condition care coordination was little more than good quality practice that GPs had “been doing for years” (GP FG3, p.9). Other participants clearly identified areas where this type of model extended traditional practice and employed RNs specifically “to conduct care planning” (GP FG1, p.2).

Participants were able to identify major components of chronic condition care coordination such as assessment, planning, referral, monitoring and review, recall and follow-up, and self-management support. Generally, these components were consistent with Medicare funding initiatives such as Enhanced Primary Care (EPC), General Practice Management Plans (GPMPs) and Team Care Arrangements (TCAs) indicating that funding frameworks defined practice. These components had been implemented in a range of ways depending on the nature of each general practice. The variable implementation processes clearly reflected the GPs’ philosophical approach to care, “I don’t sit there and talk about their care coordination, I talk about their health” (GP FG3, p.22), with some GPs commenting that they “know what works best with my patients and my [general] practice” (GP FG1, p.3). Nevertheless, in general practices where chronic condition care coordination was adopted, the GPs were “the centre person of any care coordination because of the way that it’s set up legally” (RN FG3, p.2). This confusion had obvious implications for quality improvement, workload allocation and workforce autonomy that had not been resolved adequately by any of the general practices. In particular, absence of a clear model meant that it was also not clear what skills and resources would be needed to adopt RN-provided chronic condition care coordination in reality.

### ***Theme two: cultural change.***

The need for a gradual shift towards RN-provided, general practice-based chronic condition care coordination was repeatedly highlighted. Indeed, it was considered essential that adopting RN-provided chronic condition care coordination had to “work with what’s going on in the [general] practice” because “... if you start doing something that’s different, you’re gone” (GP FG1, p.19). Thus, participants considered that developing a model of care that included RNs as providers of chronic condition care coordination would require not “get[ting] to the solution too quickly” (GP FG1, p.27). Internally, general practices required attitudinal shifts that enabled GPs to trust RNs to engage in chronic condition care coordination activities and for all parties to understand the RNs’ role. For example, “I’m just trying to get around why suddenly we need a coordinator to do the stuff that we’ve [GPs] been doing for years” (GP FG3, p.9). Such a shift would require a chronic condition care coordination role to be understood, agreed on and separated from the RNs treatment room role because:

If you are doing coordinated care, you’ve got to have a designated nurse. You can’t be pulling your nurse out of the treatment room to go and do a care plan whilst they’re halfway through an ECG ... What I’m saying by that is if a nurse is doing an ECG, you can’t say to them that you have got a care plan sitting here to be done, stop that, come and do that [the care plan] ... or halfway through a care plan ... because you are at a certain level with a patient. (RN FG3, p.3)

Time needed to be allocated for the RNs to provide chronic condition care coordination because they required “isolated time” (RN FG1, p.17). Contingency plans would be needed for managing workload when regular care coordinators have holidays or days off from work because “...nobody works everyday and you’ve got holidays. You then have a contingency plan in the [general] practice for when they have breaks” (RN FG2, p.14).

Participants noted that education was required to ensure that patients understood the value of chronic condition coordinated care, participated fully in the process and made the best use of the resources available to them, “You need to educate the patient, have the system first, and then educate staff so that everything goes through to the right person” (RN FG2, p.13). Some participants, however, considered that education alone was insufficient to change the behaviours of some patients:

They're [patients] either going to be people who do it [engage with the coordinated care process] ... or they're just like the rest of us, they don't really look after their health. They think it's a good idea when they talk to you, but how many people maintain a healthy lifestyle? (GP FG3, p.9)

I agree with your research about those [patients] who take it [chronic condition care coordination] up are fantastic, become very responsible for their own health. We've got the data to prove how well they do. There are a percentage of those who drive our staff nuts because we can't get hold of them, it's too hard, they don't want to know about it. [They have the attitude] "I'll drop dead and you've got to rescue me". (GP FG1, p.2)

It was noted that chronic condition care coordination could not be forced on patients anymore than it could be forced on service providers:

There are lots of patients that I have ... They'll sit there and listen because they're nice and polite, but it might mean nothing to them. Or they might just say "thank you, goodbye". There are patients that have never cooperated [with care coordination]. (GP FG3, p.15)

Thus, although attempts were made to engage in chronic condition care coordination, participants noted that patients did not always cooperate. However, some familiar routines and practices coincidentally supported chronic condition care coordination. For example, prescription guidelines encouraged patients to return to see their GP on a regular basis for review because:

You [GP] get to see your patient for a couple of reasons. If you've [patient] got a chronic illness or you [patient] have a number of them, then usually, you're [patient] going to be on some medication. So the medication, depending on what you're [patient] on, usually is a maximum of six months. Some of the other medications are three months. I mean, if they run out of medication, they automatically come back. You can guarantee it. (GP FG3, p.29)

***Theme three: trusted and tested partnerships.***

Participants all agreed that RNs would need to be supported to provide chronic condition care coordination. RNs generally relied on personal relationships with external services, GPs and each other. Considerable support was available from external agencies, "The Division [of general practice] is very good" (RN FG3, p.16). Each

general practice nominated different team members who were considered appropriate to provide support for chronic condition care coordination:

I think our receptionist would know more than both of us about who to ring for this and who to contact for that, because they are often asked and they'd know more about that sort of thing than me. (RN FG2, p.13)

RN participants relied heavily on trusted and tried partnerships within the team and their broader network (i.e., the Practice Nurse network) when developing their chronic condition care coordination role.

The success of any model was thought to hinge on the relationships between GPs and RNs, "It's the GP and the coordinator that have to share that information [relating to care coordination]" (RN FG2, p.16). RNs commented that GPs needed to trust their ability. GPs also commented on their need to learn to trust RNs. It was considered by some participants that developing a trusting relationship between GPs and RNs would be easily achieved because "You work with your nurse a lot ... you are always talking to your nurse ... you talk to your nurses far more than you talk to your [general practice] partners" (GP FG3, p.3). However, the tenuous nature of relationships was noted in that the success of relationships was considered to be based on personality, "Maybe you have to work with someone because you work with someone, but your relationship is based on personalities, not on the fact that you have to work with them" (GP FG3, p.5). Once a trust-based relationship was established, the role of the RN in chronic condition care coordination became accepted practice:

... so I had to prove myself, that I wasn't going to mismanage and I wasn't going to overrule what they [the GPs] were saying ... initially, they'd email me and they'd say "Mrs Jones for a GPMP. She needs this, she needs that, and that." And now I get a name—no comment, no disease mentioned, and I have to do all the research. Half the time I have to go into the past history, there's nothing ... so they've [the GPs] gotten lazy now. (RN FG1, p.10)

In terms of external relationships, a pragmatic approach was adopted by participants:

... what I always did was, first and foremost, spoke with a doctor and asked who the people were that the doctor liked to use and what providers the doctor was engaged with, because it's their patient ... Then, I would contact those providers and ask if they are interested in being part of our EPC program. (RN FG3, p.6)

This information was then integrated with other research focused on the cost to the patient, or the ease with which the relationship developed and the responsiveness of the service providers:

... I rang all of the local physios in my area and dieticians and said, “Look I’m about to inundate you, what are you going to offer my patients and I want them to be charged not too much over their Medicare rebate” ... That’s how I first chose the allied health [service providers]. (RN FG1, p.4)

The way I choose them is whether they [service providers] will answer my faxes. And if they’ve got their systems worked out, I’ll work with them. But if their systems are diabolical like most of them, I won’t [work with them]. (GP FG1, p.4)

There was no systematic way of locating and engaging with local health service providers. This knowledge was dependent on the relationships built by individual RNs or GPs. A consistent and effective way of engaging with and forming relationships with external agencies was important. Some participants considered that these relationships would require “nurturing” so that “... you’ve got some sort of two-way communication practice” (RN FG2, p.26) because “... [When] the provider and the GP are not communicating, then things have fallen through” (RN FG2, p.28). Indeed, “part of the team care arrangement is that you’ve got to have communication” (GP FG2, p.26). Participants were enthusiastic about the prospect of gaining knowledge of local service providers because their lack of knowledge in this area was problematic and time consuming.

Information sharing between general practices and hospitals was particularly problematic and appeared to require higher level negotiation to remove the responsibility on nurses to track patient movements or specialist reports, “Even if they’ve [patients] been in hospital you have poor information out of hospital” (GP FG2, p.5). Lack of communication with the hospital sector made care planning a repetitious and time-intensive process. Clearly, there was a need for strong partnerships between general practices and externally-based service providers that were supported by communication protocols of sufficient formality to ensure that referrals proceeded smoothly. In the absence of these pathways, referral was less likely or would be restricted to a small number of providers with personal links to the general practice staff.

*Theme four: business models and the financial context.*

The engagement of RNs in chronic condition care coordination was dependent on the philosophy and business model of individual general practices. General practices operated in different ways:

...in some practices there's lots of GPs and patients see whichever GP is available. In other practices presumably most of the patients come because of the GP they see. (GP FG3, p.2)

Within this small sample of general practices, there was no consistent ratio of RNs to GPs, leaving some RNs with workloads unlikely to promote their engagement in chronic condition care coordination:

... if you've got one GP, two GPs, that's how many you have to appease in the one person. If you've got five, six, seven, and still only one nurse ... because a lot of surgeries [general practices] only employ one nurse. (RN FG3, p.3)

... You've got different roles in different size [general] practices, and nurses. Small [general] practices, big [general] practices ... We've always had a practice nurse on when patients need to be seen. I'm horrified [when I hear about] [general] practices that have 10 doctors and do not have a practice nurse. (GP FG1, p.16)

Thus, it is essential that the individual nature of general practices is recognized and accommodated when implementing chronic condition care coordination. Although there may be patterns of commonality across larger samples of general practices, there is likely to be significant diversity in how individual general practices operate and thus, how they can accommodate chronic condition care coordination.

Participants commented on the need for education about the financial viability of RN-provided chronic condition care coordination. Some participants believed that chronic condition care coordination could facilitate efficient patient care and provide significant economic returns for general practices because "Care plans are quite well funded" (GP FG1, p.6). Similarly:

... and the reason, with due respect to all this corporate health that are doing coordinated care, there's only one reason [to explain why they're doing it]. The only reason they're doing it is the bottom line—nothing else. (GP FG3, p.9)

As a result, some participants believed that including an RN within the general practice team was desirable, “Depending on the type of [general] practice you have, there’s no way any surgery [general practice] could fail having a practice nurse” (RN FG3, p.15), whereas others believed that “They’d [the general practice] go broke [if they employed nurses for chronic condition care coordination]” (GP FG3, p.15). The financial viability of any model was important and participants indicated a need for a better understanding of the Medicare Benefits Scheme (MBS) and guidelines about how to use payment items effectively, “It’s sort of making the [Medicare] item numbers work proactively for you with little effort and with the best remuneration” (RN Wrap-up, p.2). Several GPs stated that the current structure of reimbursement for chronic condition care coordination activities was unnecessarily complicated and overlooked the value and innate simplicity of just providing good quality care because “Care coordination is too complicated ... I think a simpler system could help” (GP FG2, p.32). Developing relationships with external health care providers was also complicated by funding parameters:

There’s a whole process in place ... In order to give those referrals so that patients can claim them back through Medicare—and you can’t usually do that with allied health unless we go through the patient’s management plan. In order for that to happen, there are actually criteria in place that these surgeries [general practices] have to follow. So, for example, we have to document the GP management plan so that then those referrals are given to those allied health people. Those allied health people, in turn, have to give written feedback to the GP. And also you have a recall system in place so that a recall will come up on the patient’s name say at three or six months or whatever it is, so that then the whole process is reviewed. (RN FG3, p.12)

RNs also believed that if this issue of complexity was addressed, chronic condition care coordination might be easier to market within general practices.

***Theme five: professional definition, development and recognition.***

Participants all acknowledged a role for RNs in chronic condition care provision, “I totally agree with all the journals that there are lots of things a nurse can quite easily do that we do” (GP FG3, p.1). However, time, support, funding, and business models were key factors to be considered so that RNs could take increased responsibility for providing chronic condition care coordination. At a practical level, time was the greatest

challenge for RNs with some nurses identifying that they did not have the capacity to stretch themselves any further, “There’s no way we could do it. It’s not possible. I don’t have enough hours in the day now to be able to do that role” (RN FG1, p.19). It was noted that RNs often elected to work in general practice because of their non-work responsibilities (e.g., parenting). They often worked part-time and were already highly committed to extra-curricular activities aimed at increasing their skills.

Administration activities already consumed much of the RNs’ time, particularly if they were without access to a general practice receptionist. A supportive administrative team was ideal, “If you’ve got great admin [administration] staff, from the nurse’s point of view, its heaven” (RN FG3, p.9). It was also stressed that chronic condition care coordination was seen as an activity that could be provided by RNs, but would require a whole-of-general practice commitment because “It has to be a team” (GP FG3, p.24).

Chronic condition care coordination was seen as a time-intensive activity that could not be balanced with existing roles. A significant factor that compounded the impact of time and resource constraints was the absence of chronic condition care coordination models that could be easily and quickly implemented. This absence was considered extremely problematic for developing the capacity to implement and deliver chronic condition care coordination, “There’s nowhere near enough of it [training, resources, support], because there is no real model of what coordinated care is, and ... the expected knowledge that you [RN] would have” (RN FG3, p.6). Consequently, there was a need for the recognition and development of simple chronic condition care coordination models so nurses could engage fully in its provision.

RNs noted that they were often professionally isolated, “That’s a big thing in general practice ... they’re [RNs] working isolated” (RN FG3, p.1). Therefore, if RNs did engage in chronic condition care coordination, there would be a need for support networks focused specifically on the activity of interest to improve their skills. Some participants referred to the “Primary Health Nurses” network as a suitable vehicle for facilitating chronic condition care coordination. Participants also believed that there was a significant role for the Division in providing a mentor role, developing and distributing resources, and possibly funding services or support at the general practice level.

Participants believed RNs already conducted various aspects of care planning (e.g., patient education), but could play a bigger role in this area. Both RNs and GPs noted that not all RNs would want to take on chronic condition care coordination, “There are nurses who are interested in this stuff and there are nurses who honestly shouldn’t” (RN FG3, p.26). Some GPs preferred RNs to adapt to all areas within the general practice rather than specialising in chronic condition care coordination, “I think GPs don’t like the idea of treatment nurse, practice nurse, chronic disease manager, chronic care co-ordinator. They like people to be able to interchange” (GP FG2, p.17). Similarly, some RNs preferred to do treatment only, chronic condition care coordination only or combine the two. However, both GPs and RNs believed that effective chronic condition care coordination required a “natural aptitude” and skills in time management, business planning and organization. They noted that “Doing a co-ordinated care role as opposed to a practice nurse [role]... obviously [RNs] still need good people skills to be a practice nurse and some are good and some are bad” (GP FG2, p.16). RNs who chose to work with chronic condition care coordination were likely to enjoy the work because “Nurses are just like anybody else, they have areas that they have a better interest in” (RN FG3, p.4). Chronic condition care coordination was viewed as a time-intensive process involving the preparation of documents; assessments and reviews; and arranging time for review by a GP. RNs required a physical space for meeting privately with patients and time to do so without interruptions.

### **Designing and implementing an intervention: Findings from Studies 1 – 4**

Following the completion of Study 4, and as part of the larger research trial, intervention which was based on the findings from Studies 1 to 4 was developed and implemented. Table 8 below outlines the main findings from these studies, and the subsequent features that were required in the intervention (refer Chapter 3 and Appendix A).

Table 7:

#### *Summary of Findings of Studies 1-4 and Implications for Intervention Design*

Study	Findings from Studies 1 – 4	Implications for the intervention
1. Concept Analysis	Concept of care coordination poorly defined	Shared understanding of care coordination through common theoretical frameworks, education and discussion
	Specific tasks of care coordination identified	Include person-centred care,

Study	Findings from Studies 1 – 4	Implications for the intervention
	Person-centred care and self-management support key difference between care coordination and usual care	and self-management support as well as assessment, care planning, monitoring in the intervention
	Crossing system boundaries required	Include mechanisms for linking with services external to general practice
2. Mapping usual care	Some tasks of chronic condition care are also tasks of usual care	Apply a flexible model of care that is based on, but extends usual care
	General practice contexts are heterogeneous	Reach agreement about who is doing what work
	Care tasks are not health professional dependent	
	Processes for providing care are different	Include person-centred care and self-management support in the intervention
	Person-centred care and self-management support not evident	
3. Defining care coordination	Spanning knowledge, settings and cultural boundaries are a key feature of care coordination	Determine existing culture and knowledge within general practices through general practice and nurse preparation
		Build boundary spanning capability into a model of care through communication channels and networks
	Care provision is based on relationships	Build relationship-basis of care into a model of care through theoretical frameworks and processes designed to focus on the patient
	There are agreed roles and routines	Identify and agree on roles and routines
4. Supporting RNs to provide care coordination	Concept of care coordination poorly defined	Shared understanding of care coordination through common theoretical frameworks, education and discussion
	Cultural change required	Influence existing culture and knowledge within general practices through general practice and nurse preparation
	Reliance on trusted relationships	
	Professional roles need to be defined	Determine existing roles and responsibilities

Study	Findings from Studies 1 – 4	Implications for the intervention
		Agree on new roles and responsibilities
	Importance of business and financial contexts	Build on existing practices
		Incorporate business and financial needs

### **Conclusion.**

The aim of this chapter was to understand the factors associated with implementation of RN-provided chronic condition care coordination. The results have indicated that, to be accepted in the general practice context, a model of RN-provided chronic condition care coordination would need to respond to the heterogeneity of the context and be supported by developmental processes that engendered clarity about the work and cultural change within the whole general practice. There was evidence that RNs and GPs had divergent views about what RN-provided chronic condition care coordination was and what would be required for implementation. Therefore, finding ways for achieving clarity and promoting cultural change within general practices will be critical to implementation. There was some overlap between roles and routines associated with usual care and chronic condition care coordination which contributed to confusion about the differences between the two types of care. This situation increases the implementation challenges because it manifested as resistance among some health care professionals in some cases. Implementation of an RN-provided model of chronic condition care coordination will need to be accompanied by efforts to increase capacity for partnerships with other service providers. Implementation will also need to be accompanied by adequately developed processes that recognize and support the RNs' role, and identify and utilize effective financial models.

Study 4 was also the completion of Action Research Cycle 1, meaning that the next step that was taken in the broader research project was to develop a localized model of RN-provided chronic condition care coordination and to plan implementation strategies, develop and deliver relevant education, and implement the new model of care (steps 5 to 8 in the PEPPA framework—refer table 2, p.36). The next chapter will explore the results of the final study.



## Chapter Eight

### Results of Study 5—Implementing Chronic Condition Care Coordination

This chapter presents the results of the final study in this research. In the study, I used thematic analysis to explore how a model of RN-provided chronic condition care coordination was implemented in general practice. The aim of the study was to understand how RN-provided chronic condition care coordination was implemented within an optimal locally-responsive and supportive network. This intervention was designed in conjunction with the local Division, participating RNs, and in response to the findings of the previous studies (1 – 4). Specifically, in Study 1 (Chapter 4) the literature was explored and a concept analysis of care coordination was completed. In Study 2 (Chapter 5), usual chronic condition care was investigated and mapped. Then, in Study 3 (Chapter 6) GPs and RNs who were experienced with chronic condition care coordination were asked about their understanding of the work. In Study 4 (Chapter 7) perceptions about factors that were likely to impact on RN-provided chronic condition care coordination in general practice were explored. The findings of each of these studies, together with stakeholder feedback and a synthesis of the literature, were combined to develop an intervention which was part of the larger study (outlined in Chapter 3 and Appendix A, pp.185-196). This chapter contains the findings of the final component of Action Research Cycle 2.

#### **Participants.**

Eleven general practices expressed interest in the study and were invited by the Division to participate. Recruitment details are outlined in Chapter 3. Six of these general practices met the selection criteria (i.e., an experienced RN was involved in usual chronic condition care, the general practice managers supported the intervention, the general practice management systems were organized and maintained, the RNs had access to necessary resources, and the general practice could demonstrate capacity to meet the demands of the trial). One general practice withdrew from the study prior to commencement of the intervention. Five general practices remained in the study and included one solo GP general practice and four group GP general practices. Each general practice employed at least one RN, although only the group GP general practices employed dedicated chronic disease management RNs. A total of nine RNs

from these general practices participated in the final study. Six participants were general practice RNs (i.e., one general practice was represented by two RNs who shared the chronic disease management role), and three were RN General Practice Liaison Officers (GPLOs) employed by the Division to provide pivotal support to the general practice RNs. Characteristics of the participants are outlined in Table 7 below.

Table 8:

*Characteristics of participants in Study 5*

Participant	Organization Type	Profession	Gender
1	General Practice	Registered Nurse	Female
2	General Practice	Registered Nurse	Female
3	General Practice	Registered Nurse	Female
4	General Practice	Registered Nurse	Female
5	General Practice	Registered Nurse	Female
6	General Practice	Registered Nurse	Female
7	Division of General Practice	GPLO	Female
8	Division of General Practice	GPLO	Female
9	Division of General Practice	GPLO	Female

## **Results.**

Three themes emerged that explained how RN-provided chronic condition care coordination was implemented in general practice. The first theme referred to the pre-requisites for RN-provided chronic condition care coordination. Four sub-themes were identified as pre-requisites, including models for funding care; the importance of engaging key power-brokers; the importance of leadership and a shared vision for chronic condition care coordination; and the value of a broad RNs' skills base. The second theme referred to the intervention in context and was associated with the way in which the intervention matched the needs of the context, how time was allocated and managed, and the importance of taking "baby steps". The third theme reflected outcomes that could be achieved when RN-provided chronic condition care coordination was implemented in an optimal context. Outcomes included improved relationships with patients and improved health care outcomes. For some RNs, these

outcomes led to a transformation of their work practices. Similarly, RNs believed that for some GPs and general practices, these outcomes combined with evidence of financial sustainability led to changes in the acceptance of RN-provided chronic condition care coordination.

***Theme one: pre-requisites of RN-provided chronic condition care coordination.***

*Funding chronic condition care coordination.*

Funding streams were fundamental to the business of general practice. Participants frequently referred to funding as a barrier to RN-provided chronic condition care coordination. In the intervention study, general practices received additional funding to reimburse them for the time RNs were required to contribute to the intervention. In the absence of additional funding, participants believed that RN-provided chronic condition care coordination in general practice was heavily dependent on Medicare funding and could not eventuate. Differences in funding interpretation and application within general practices impacted on how chronic condition care coordination could be provided by RNs. Thus, participants believed that general practices were "... going to need a lot more information on all those item numbers ..." (GPLO FG, p.15) before chronic condition care coordination could become sustainable. Participants also believed that existing funding mechanisms were insufficient, "We need to pay them [RNs]. If we're not going to pay them [adequately], I don't think they're going to take it on" (GPLO FG, p.40).

Ironically, the existing funding system for chronic condition care was thought to contribute to care fragmentation rather than care coordination. Despite the fact that Medicare item numbers were introduced to improve care, they created a piecemeal approach:

And again it gets back to our health system, Medicare, it's done through silly item numbers for and on behalf of the GP ... So until you change the system that supports this ... you're just going to get all of this ad hoc fragmented care ... patch here, patch there. (GPLO FG, p.11)

Participants concluded that, although RNs were ideally placed to provide chronic condition care coordination, the funding system was unsupportive and counterproductive:

Our Medicare system is fraught the way it's set up, because it's all based around doctors' item numbers and still general practice predominantly is very acute care, reactive care. It's not structured for primary care. Until we shift that model, and that's linked in with Medicare numbers, we're going to have this ad hoc, fragmented care and this model needs to be sold at the top. It needs to be sold at the top. Here is the answer to keeping people out of hospitals, coordinated care, and until general practice can take that by the horns and roll it out from the top, from the doctors—so it needs to be sold to the GPs, and the practice managers, because a lot of them, are practice managers that are in the GPs' ears. (GPLO FG, p.36)

Remuneration for RNs was particularly contentious because it restricted the activities they could undertake and the length of time they could allocate to chronic condition care coordination. There was agreement amongst participants that usual chronic condition care could be financially viable. However, a model of care that sought to improve quality outcomes for patients by including RNs in care coordination was believed to be incompatible with financial viability:

Look, chronic disease is viable. It's very viable. It's huge. And I've got the figures, because I used to collate them every month for my thirteen practices. It's massive. It makes huge dollars, if it's done properly. But it doesn't fit with that model [RN-provided chronic condition care coordination]. (GPLO FG, p.38)

Participants believed that it was not possible to provide chronic condition care coordination according to existing Medicare guidelines within the time-frame and remuneration available. The Medicare rebate for any nurse-provided activity was consistently quoted as a non-variable payment of approximately \$11.00 per activity irrespective of the time taken. Thus, the longer duration interventions that were required for RN-provided chronic condition care coordination were believed to be non-viable. Furthermore, the Medicare funding system did not promote a team approach to chronic condition care coordination:

Until there's a model for general practice nursing, specialist generalist nursing which incorporates not just acute, but primary care, and all those other things that we [RNs] do, it's [RN-provided chronic condition care coordination] going to sit there. We need our health system to support that model and yes, it would be great if it came down from the top—this is what we want, this is how we do it, and you know, a million dollar question, how can we market that; for everyone to be involved, right from the time when the patient walks in the door? (GPLO FG, p.8)

Participants stated that although there were standards to guide general practice, they were often used to ensure that the general practice would not fail a Medicare audit<sup>8</sup> (i.e., an audit to determine if care provision was consistent with the parameters of the Medicare item numbers claimed) rather than to guide care quality. On many occasions, RNs believed that the tasks associated with following guidelines were too onerous. Given the risk of failure if item numbers were used incorrectly, it was not surprising that some general practices chose not to implement chronic condition care coordination:

One of the big things ..., not particularly to do with the money, was to look at the health and ageing standard for chronic disease management. It is about a 60-page document. If you read that, there is a set standard for chronic disease management and nobody follows it really if you look at it. To give a person half an hour to do everything that is involved in a 60-page document, it really is impossible. So if you say, like I have pretty much put it on the doctors and said, "If you want to read it fine, I will give you the summary. This is what we need to do for our patients, and we are not doing it at all. We are still billing those item numbers, when we get audited, you are going to get your bum [sic] kicked, because you are doing one twentieth of what you are meant to do". (Final FG, p.13)

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<sup>8</sup> If auditors determine that GPs have defrauded the Medical Benefits Scheme, GPs' Medicare provider numbers can be revoked for a period of time. Without a provider number, patients are unable to claim remuneration from Medicare and are required to pay for the entire cost of their visit to a GP. Because patients do not have to enrol with a single GP or general practice in Australia, they are able to change GPs to avoid paying the entire cost. Thus, failing an audit can have significant financial consequences for GPs.

Paying RNs at a level commensurate with their skills was complex, a source of frustration for RNs, and contradictory to the business enterprise of general practice, with its current recruitment processes, and limited career opportunities for RNs:

I agree with this whole business climate because that is how I work. But the only reservation is, and this is a bad way of saying it, we are lining the GPs' pockets again, and not empowering the nurses. This is nurse led. This is about us running clinics and being paid to run the clinics, and every time we put a business plan that if we did is a corporate type of thing, you give this to [general] practices, and the first thing a GP is going to say is, "Ha, economic recession ... I am not going to pay the nurse any more than \$25.00 per hour". Whereas, effectively, nurses should be going in and demanding \$45.00 - \$50.00 an hour. And you are still in a dead end career because you can't progress ... because you are lining GPs' pockets. And we are talking about recruitment as well. We are trying to make RN-provided clinics viable. So how do they become financially viable without the GP ticking the Medicare box? ... I think there is a big gap between working as a nurse with patients to management. There is no nice position in between that you can move on from practice nursing. (Final FG, p. 37)

*Engaging power-brokers.*

The way in which chronic condition care coordination tasks were divided between RNs and GPs was dependent on how remuneration mechanisms were interpreted. Even when financial viability was addressed, general practices did not always support RN-provided chronic condition care coordination, indicating the likelihood of other mechanisms:

So that [a business case] was done, but that doesn't seem to have been enough to convince that [general] practice, even though she's [the RN] delivered. And therein lies the problem, exactly. By saying that, so they want the money and they've got the money and they're great about that, but they don't want to backfill with support, or pay her [the RN] for the umpteen zillion hours she's put in outside the nine to five Monday to Friday. So the model really has showcased how it was financial. It really does. And is the nurse worth that money? Of course she is, and more. (GPLO FG, p.3)

Occasionally, however, it was not the GP, but the practice manager that participants identified as the key power-broker. Participants believed that GPs held a powerful role and could either financially support RNs to provide chronic condition care coordination, or view RN-provided chronic condition care coordination as a financial burden:

Doctors see money going out to the nurses but they forget that if it [chronic condition care coordination] wasn't there, it [money] wouldn't be coming in. So, it's not just fifty percent going out, and that it is that percentage coming in ... That is the mindset that we need to change.... (Final FG, p.14)

Practice managers were often described as the team members with financial responsibility for the business of general practice, whereas participants believed that RNs were responsible for quality patient outcomes.

Irrespective of the source of power, RNs needed to be able to recognize where the power lay, and find meaningful ways to work with the power-broker to achieve RN-provided chronic condition care coordination:

The biggest thing with me was having my practice manager going into bat for me, because when I started at the practice, I wouldn't have been able to get any of the stuff that I did, except that she said, "I am employing you to do these things, and I want you to run it, and I have these expectations", and so it really didn't have a lot to do with what the doctors were saying.... (Final FG, p.25)

Change occurred when RNs were able to use the relationships they had established with key power-brokers to facilitate chronic condition care coordination. RNs, therefore, needed to be successful negotiators and masterfully use existing relationships to implement change:

That's what I'm saying. It comes to a certain person. Personal skill set, but not just relationships with your GPs. It's relationship building and that's why you really can't have a brand new nurse coming into a [general] practice who hasn't got a relationship with the [general] practice, taking this role on. Because you've got to have those [relationships] established, and trust. You've got to have the trust with you, because effectively although they don't admit it ... [the] GP is handing over care to their nurse. So, I'm sorry, these guys [GPs] sign off and send it [payment claims for care plans] off, they didn't do anything with it. So

you've got to have the relationship set up that they know that you know what you're doing and they can trust you to make the right decisions. (GPLO FG, p.21)

... but we have two main principal doctors that own the [general] practice. So for me, they are the two driving forces and they then talk to the other doctors who maybe only work one or two days a week. They pass on that information so it is not coming from me. It is coming from the bosses sort of thing, and that is when things get done. Like if I mention something to one of the doctors who only works a couple of days a week, they go, "Oh yes", but if I say to one of the principals can you have a word, then instantly it is done. So it is sort of that hierarchy knowing who to talk to and what time.... (Final FG, p.21)

Relationship-building between GPs and RNs needed to occur in supportive rather than competitive contexts. Supportive environments were those in which the skills and abilities of team members were recognized. Roles, responsibilities, and routines needed to be agreed and appropriately divided. However, supportive environments went beyond the boundaries of the general practice and needed to exist at all levels of the health care system:

And to do so, we need to educate doctors that, you know, nurses don't want to become, dare I say it, mini doctors. They want to become maxi nurses, and maxi nurses do have time to spend with the patients ... [and] unless it's [the benefits of the developed nurse role] evident, they [GPs] resist time, giving nurses that time ... [So you need to] educat[e] doctors that you know, nurses can do it ... building that relationship. (GPLO FG, p.36)

Engaging GPs in the implementation of programs such as RN-provided chronic condition care coordination, although important, did not appear to have been a priority in some general practices, "I'll be completely honest with you ... most of the GPs didn't even know that it was going on" (GPLO FG, p.10). However, in these cases, RNs acknowledged that sustainability was dependent on "... educating the doctors about your successes in a non-threatening way" (Final FG, p.22). In some general practices, even when attempts were made to engage GPs in the process and despite initial agreement from GPs, they did not engage with the intervention:

... I went to the doctors' meeting to explain to them what we were going to do ... and they actually were very enthusiastic about what we were talking about, and

that was fine. But I actually believe that there is a bit of passive aggressiveness that is actually [that GPs] don't really want to get that involved. They don't want to give up their patients. (Final FG, pp.21-22)

Identifying and engaging with key power-brokers in general practice was essential to the successful implementation of RN-provided chronic condition care coordination. Participants recognized the role of GPs in establishing RN-provided chronic condition care coordination and relied on the trust-based relationships they had established with GPs to support the implementation process. However, GPs were generally not engaged with the intervention and there was not a shared vision for RN-provided chronic condition care coordination.

*Leadership and a shared vision.*

Sustainable RN-provided chronic condition care coordination required leadership, "You've got to have a visionary leader" (GPLO FG, p.9). Clinical leadership was also required, and participants believed that RNs were ideally situated to do so:

Yes, and you need that clinical leadership, and that's not normally doctors, and at the moment we don't have that model. Very rarely we've got doctors, practice managers, nurses, we need you know clinical leadership. Let practice managers do what they want to do with the non-clinical stuff. We need clinical leadership ... it needs to be nurse-driven, or clinically-driven. The GPs are too busy to do it, so who better to do it, than the nurses? (GPLO FG, p.36)

Although participants identified a clear clinical leadership role for RNs, there was no real agreement about the parameters of the role:

I was thinking that everything we're saying, just keeps coming back to that nurse-driven, nurse personality, so I think, and if you, to understand why there's no minimum criteria, you do really need to look at the history of [general] practice nursing because it's developed ad hoc. It's only just coming into its stride now. (GPLO FG, p.19)

As a result, participants discussed a reliance on the personality and drive of individual RNs to develop their place in chronic condition care coordination rather than a historical and embedded place for RNs in chronic condition care coordination in general practice

“Because that’s the lack of credibility around nursing, it is the lack of acknowledgement around RNs as professionals, particularly around [general] practice nursing” (Final FG, p.27). The ad hoc evolution of the RN role in general practice had challenged RNs. Without a shared vision or agreement about the role of RNs in general practice, participants believed that RNs had not successfully negotiated professional boundaries:

... It’s about the boundaries, I think. It’s tricky, it’s tricky. It’s only tricky because it’s changing the way that things are done ... We also don’t have the workforce ... The general practice role of nurses has evolved and [now] they just do everything and add a bit on. (GPLO FG, p.45)

Despite concerns about the boundaries of their work, RNs who were able to adjust to the environment and develop trust-based relationships with doctors enjoyed a sense of freedom that allowed them to provide chronic condition care coordination:

I’m pretty much completely autonomous. I generate my own searches, so I just send out letters and I ring people up. I don’t get permission from the doctors. They have all said that if I think that they [patients] need it [chronic condition care coordination], then I can do it. Like a patient will come in for a doctor and they will say, “What are you here for?” and I will say, “Well, they are diabetic and they haven’t had a care plan and they’ve been diabetic for fifteen years” and they go, “I suppose”. So I get my own people in.... (Final FG, p. 23)

A shared vision was essential for successful implementation of RN-provided chronic condition care coordination. This vision, if shared, enabled space, time and a dedicated place for RN-provided chronic condition care coordination within the everyday work of general practice:

See, a couple of [general] practices I can think of that have a nurse doing both roles. She has, or they have set days and so the GPs know on those days, they’re [the GP] responsible for all the clinical [work that the nurse would otherwise do]. Because she’s doing chronic disease management and they [the nurse] don’t get interrupted. (GPLO FG, p.45)

The importance of a shared vision was most obvious when it was absent. Often, team members held different views about the roles and routines associated with RN-provided chronic condition care coordination. If general practices could not isolate time for RNs,

they needed to employ more than one RN. RN-provided chronic condition care coordination was more time consuming than treatment room care. Comprehensive assessment of chronic condition care coordination needs and negotiation of appropriate interventions took longer than, for example, immunisations, weighing infants, electrocardiograms and simple wound care. Non-medical members of the general practice team were not considered to be a suitable alternative to dedicated RN-time for chronic condition care coordination, "... you cannot have a receptionist leading chronic disease management. I don't care what anyone says, you can't" (GPLO FG, p.9). There was an implied link between funding, time allocation, and the business structure and focus of individual general practices that was expressed by how time for RN-provided chronic condition care coordination was allocated and managed.

When teams did not have a vision for chronic condition care coordination, when they did not collaborate, when roles were not unanimously agreed upon, and when resources such as space and time were not well negotiated, the experiences of RNs were unlikely to be positive. A nurturing, proactive workplace culture was most important, "It's the culture ... proactive, not reactive" (GPLO FG, p.47). Even in successful and supportive general practices, RNs faced barriers, "... I mean even [RN] had barriers in her [general] practice. It came down to the nurse wanting to make it happen for the patients" (GPLO FG, p.48). For some RNs, it was other RNs who were most resistant to working in a supportive manner, "... The main thing that didn't work was the third [RN] ..." (Final FG, p.19) and, "It is trying to get a treatment room from the other [RN] ... and trying to coordinate that with colleagues that are fairly resistant to what is going on" (Final FG, p.12).

Conversely, when teams were able to work collaboratively, when a vision for care provision had been established and when roles were agreed and shared, then routines were established. Once work routines were developed, they continued forward through time with little effort. Established routines were beneficial because they assisted general practice teams to work collaboratively and streamline work processes so that a continuous and seemingly easy flow of patient care was achievable:

... because I found that the reception staff where I work pretty much the only thing that they have to do with any of it [the process of chronic condition care coordination] is that they book my appointments and I have a card at the front

that says [RN] appointments, half an hour with a ten minute gap in between. They know exactly when somebody rings up and says I need to book in with [RN] because my letters actually say, “Ring [RN] for an appointment”. They know. They look at that card and they know exactly how to book in my patients on exactly what times. (Final FG, p.20)

Often, the barriers RNs experienced related to resourcing and infrastructure “Because of time and because of time allocation and because of allocation of a confidential environment and allocation of space which at our [general] practice ... is a little bit of an issue—so time and resources” (Final FG, p.9). When physical spaces were allocated to RN-provided chronic condition care coordination, but were still required to fulfil their original clinical purpose (e.g., wound dressings, immunizations), there were usually struggles between RNs. Some participants believed that disagreement about space utilization reflected both a resistance to change and existing hierarchical structures amongst members of the general practice team:

The only problem is that the room is sometimes the number one nurses’ office. So therefore, the practice nurse would get her knickers in a twist about using the laptop in the treatment room and being in the treatment room when we didn’t have certain allocated times. That didn’t happen very often, but yes that was my main thing that I have been struggling with—cultural resistance. (Final FG, p.19)

Without an agreed and shared vision for RN-provided chronic condition care coordination, RNs relied on their own strength and resilience to successfully implement RN-provided chronic condition care coordination, “... but she was that strong ..., that she’s overcome the barriers that she had faced, and it’s probably been, well is one of the most successful [general practices] ...” (GPLO FG, p.6). Success in an unsupportive environment was dependent on the drive of the RN, “Personally, I found it was mostly nurse-driven ... there was no practice manager involvement and minimal doctor involvement. Just nurse-driven” (GPLO FG, p.1).

In extreme examples, the absence of a shared vision resulted in behaviour that was described by participants as sabotage, “... and that is one of the barriers. It’s called a saboteur” (Final FG, p.2). Participants believed that individual control rather than shared vision resulted in high levels of resistance from other team members, “Lack of control. The nurse will take over control. Practice managers feeling inferior and GPs

thinking that their nurses are going to take over their patients” (GPLO FG, p.36). There was evidence however that any member of the general practice team, including other RNs, could and did resist the introduction of RN-provided chronic condition care coordination. GPs were established as key power-brokers both from financial and workplace culture perspectives. The power and responsibility for creating a culture that was responsive to change were also placed with GPs, “It is changing the doctors’ mentality and the culture of the practice for change” (Final FG, p.13).

*The value of RNs broad skill base.*

Paradoxically, RNs were expected to be both autonomous practitioners and team players. They needed to possess a broad range of professional skills, attitudes, knowledge and behaviours. Knowledge of the funding mechanisms associated with chronic condition care coordination was particularly important:

...and you do have to have that knowledge of item numbers [Medicare funding codes], especially if you haven’t come from general practice. Not everyone knows what an item number is, let alone the explanatory notes on them, the legal jargon. And that gets back to me saying it is an advanced role. (GPLO FG, p.50)

Participants highlighted the importance of RNs being experienced because chronic condition care coordination was an advanced role. Although some participants believed that passion for chronic disease management could negate inexperience, the engagement of inexperienced RNs in chronic condition care coordination was generally considered to be inappropriate. Although training was available, experience, life skills and personal drive were thought to be most important:

Patient-centred care, personality wise, they need to be self-driven. They certainly need to be motivated and self-driven. And have a vision. They need to be motivated ... Yes they do, they need to be able to think outside the box, because this stuff is not black and white. This is okay. I’ve got this patient sitting in front of me and I had a patient sitting in front of me an hour ago, with exactly the same conditions, could have the same clinical data, everything, but hang on a sec [second], this person’s almost homeless. This one hasn’t got five dollars to buy the next meal, how am I going to put services in place to assist that patient but also look after their condition and you’ve got to be able to, what’s the word I’m

looking for, not resource, you've got to be able to set up networks, you've got to actually and I guess that comes into being self-driven, you've got to think, and outside the square, okay, I need to do this, now work back. How do I get the service in place to assist that patient? And it won't be black and white.... (GPLO FG, p.20)

There were many aspects of RN-provided chronic condition care coordination that contributed to the belief that the role was an advanced one. However, it was not just clinical knowledge that needed to be advanced. Rather, RNs who were providing chronic condition care coordination needed to be skilled at negotiating the contexts within which they worked (e.g., general practice, health system, funding, etc.). RNs also required the ability to negotiate the team environment, understand and utilize the power relationships within the environment, and adapt to the funding available for chronic condition care coordination.

The skills RNs needed to provide chronic condition care coordination were not likely to be acquired in other settings. Participants believed that RNs could not be sourced from the aged or acute care sectors. They believed that RNs trained in these sectors were unprepared for the demands of work in general practice. Even though RNs developed valuable disease-related knowledge and skills in other contexts, some participants believed that this was insufficient in general practice:

... because when I did two years in a hospital and then went to practice nursing and I looked after diabetic patients, but I didn't know the first thing about diabetes, really, even after studying at university. So you have got to want to actually look for that yourself ... you have got to be very self-motivated and be pro-active. (Final FG, p.27)

Participants identified that, to be able to implement RN-provided chronic condition care coordination, RNs needed a learning orientation and further training. However, they were imprecise about how RNs would identify skill-gaps or translate previous experience into current practice.

Participants identified that, although health-related resources were available in communities, it required skill to develop and maintain local knowledge. Even though there had been a concerted effort by state-wide organizations to develop resource

directories “services changed daily” (GPLO FG, p.23), and RNs frequently relied on established relationships and ways of working to assist patients to access health care services:

... you rang one person, and they say, “No we can’t help you with that, but have you thought about ... ?” and you’ll ring that person [and] they’ll say, “We could do this, but we can’t do that, but these people do that.” And I still drag out the phonebook, and go, “Right, let’s find whatever” and you just build your resources. (GPLO FG, p.22)

Maintaining local knowledge was time consuming and not always provided in a format that RNs could easily access. Participants believed that external service providers would frequently supply information to general practices, but it was not always presented in a way, or at a time that was most convenient for the general practice. Thus, RNs needed to proactively establish and maintain links and to continually update knowledge about resource availability in a constantly changing environment.

***Theme two: the intervention in context.***

Participants believed that sustainable RN-provided chronic condition care coordination was dependent on the ease with which the model of care could be implemented, “We have to make it easy and we have to make it sustainable ... we have to make it user-friendly” (GPLO FG, p.50). A user-friendly model would be pragmatic, clear, uncomplicated, flexible and able to be implemented with or without training, “Presumably what we will end up with is a notional model that will have some individual variations for people to manage within their own [general] practices, but it will say ... this is the minimum standard” (Final FG, p.13). If a pragmatic, clear, user-friendly model of chronic condition care coordination could be developed, it would be highly regarded by general practice:

But I think the key to chronic disease management is that [general] practices want a model to implement. The problem is that it is so confusing, it is so hard to get your head around it, to get it started, that if we could actually simplify that and say, this is what you need, this is what we can do for you, this is how you can roll it out and this is what you need to do to sustain it, they’ll [general practices] go, “Pick me, pick me”, because it is complicated. (GPLO FG, p.48)

Sustainable chronic condition care coordination would require “go[ing] right back to the basics of chronic disease management” (GPLO FG, p.13). Getting back to the basics would be an iterative process that required negotiation, understanding and incorporation of RN-provided chronic condition care coordination in the context of the current work in general practices, “... part of the feedback to me was they’re [RNs] doing lots of it anyway, because it is similar to the care planning pathway. So the model would have to incorporate that ...” (GPLO FG, p.2). A flexible, user-friendly, and ultimately sustainable model of RN-provided chronic condition care coordination would, therefore, need to be contextually relevant and responsive.

Before RN-provided chronic condition care coordination could be widely adopted in general practice, confusion about the difference between usual care and chronic condition care coordination needed to be alleviated. Participants identified three important outcomes that would need to be clarified and agreed upon, namely (a) clinical improvement, (b) patient well-being, and (c) financial viability, “... we can look at clinical outcomes ... but has the patient improved?” (GPLO FG, p.4); “It’s got to be able to show patient outcomes... [and] it’s got to show the patient benefits from a patient’s perspective” (GPLO FG, p.3). Importantly, RN-provided chronic condition care coordination needed to be financially viable, “... [it] is the win, win. You have to have the outcome and you have to have the money, because it [general practice] is private practice” (Final FG, p.37).

There appeared to be a disconnect, at least in the minds of some participants, between financial motivations and motivations based on patient outcomes, “ ... it [a general practice that was identified as a leader in RN-provided chronic disease management] was a corporate company so interestingly enough it was money-driven ... it was money-driven, because it was corporate. It wasn’t patient driven” (Final FG, p.12). Thus, some general practices have identified that patient and financial motivations for RN-provided chronic condition care coordination can co-exist. Patient outcomes were less tangible than other outcomes and not as easily defined, except that they went beyond clinical measurements and were essential to the success of chronic condition care coordination, “Because, we can look at clinical outcomes and go, ‘Oh look, they’ve improved’, but has the patient improved?” (GPLO FG, p.4)?

*Allocating time for RN-provided chronic condition care coordination.*

Participants identified that time allocation was an important pre-requisite for RN-provided chronic condition care coordination. However, the way in which time was utilized was equally important. Participants believed that the amount of time required to implement and deliver the model of RN-provided chronic condition care coordination was more onerous than had been anticipated. Time constraints had been imposed on the intervention trial to meet the reporting requirements of the Division to their funding body. Participants concluded that implementing a program without allowing sufficient time was burdensome, created stress, and inhibited the level of understanding that was needed. Time constraints also restricted reflection of what was working well and what needed to be adjusted:

I honestly think [that if we had more time] we would have seen a massive difference (a) in the stress of the nurses from needing to complete it, (b) in our understanding because you would have had more time to work around it and we could have learnt from things that happened ... and then shared that ... . (GPLO FG, p.13)

RNs also referred to the difficulty they experience in managing time associated with the patient interaction. The consequence of having time to provide care was that "... things became more ... patient-centred" (GPLO FG, p.5), but the context of general practice meant it was not always possible to spend the time required or desired, "... in a busy [general] practice it is hard to spend that time" (Final FG, p.10).

Some participants believed that RNs needed to manage consultation time in the same way GPs managed time:

It's like doctors' consultations. We have this thing that is called twelve minutes slip. The first minute is for the doctors to open their notes before anyone comes in, to know what you [the patient] are doing here ... and the consultation is seven or eight minutes and then three minutes to tidy up before the next patient comes in. So that buffer is really quite important if you are setting up things ... ready for the next patient. (Final FG, p.21)

However, the way RNs managed their consultation time differed from GPs, who were often perceived to be running late for appointments. RNs all ensured that patients knew

they needed to be on time for appointments, “I actually say to my patients, I say, ‘I am not actually like the doctors; you need to turn up on time for my appointments,’ because sometimes they wait an hour to see a doctor” (Final FG, p.19). RNs were often non-negotiable when enforcing appointment times with patients:

If they are more than fifteen minutes late for my clinic, I actually don’t see them ... I see about twelve to fifteen [patients with] care plans a day, so I cannot be late. And they have got the message, and they won’t be late for my appointments. But I do it in a nice kind-hearted way. (Final FG, p.19)

The time that was allocated for RN-provided chronic condition care coordination could vary between general practices depending on the interaction between motivation, team culture and the interpretation of funding mechanisms. Some RNs routinely had both the time and the opportunity to provide chronic condition care coordination. The allocation and management of RNs’ time for chronic condition care coordination was frequently an expression of the interaction between the context of individual general practices and the funding context.

In an increasingly digital society, time could be better managed if an electronic format was used based on “good templates” (Final FG, p.11). However, RN-provided chronic condition care coordination could not be easily digitised because “... [if] it was tick the boxes, spit out the care plan, spit out the health assessment ... [then] we are not dealing with the patient as a holistic person” (Final FG, p.28). Nevertheless, electronic platforms could be useful tools to assist RNs communicate the information they gathered from patients to GPs who were diagnosing and managing care:

I have short cuts ... I highlight and I mark in red the stuff that you [the GP] need to speak to the patient about ... so when they [patient] go and see the doctor, they [the GP] open up the file, [which] flashes up this patient needs this and then they deal with it. (Final FG, p.23)

Thus, an optimal model of RN-provided chronic condition care coordination needed to utilize an electronic environment to facilitate the interaction between health professionals, the general practice environment, and care coordination. However, it also needed to respond to the diverse needs of patients.

Although time allocation was important to providing chronic condition care coordination in the general practice, there was also a different dimension to time required for implementation of the intervention model. Implementing a formalized model of RN-provided chronic condition care coordination would not happen quickly. However, it was “definitely worth pursuing, definitely [and] trying to overcome those barriers. Systemic [change] takes a long time, but small baby steps, we will get there” (GPLO FG, p.48). Some RNs recommended “a staged roll out” (GPLO FG, p.27) in which participation was voluntary, “I think you’ve got to put it out there and let people put their hands up” (GPLO FG, p.43). The new model needed to be individualised, “But when you offered it to [general] practices ... tailor it towards each [general] practice” (Final FG, p.5). Tailoring the program at the level of each general practice would require well planned and delivered preparation of RNs and general practice teams because “... planning is nine-tenths of the job well done, a really good planning information workshop, questions and answers, you know the expectations, all that stuff ... so they really get the foundation stone laid in terms of framework ...” (GPLO FG, p.14). If such an individualised approach was not possible, then expectations needed to be well-managed from the beginning of the implementation process. Without preparation, planning, and expectation management there was a real risk that any model of care coordination would be unsustainable. Interestingly, this endorsement of the preparation process had also emerged clearly from Studies 1 to 4, but its implementation was thwarted by Division staff and by RNs themselves because it did not fit their context.

#### *Mentoring and support.*

Participants identified individual capacity and professional isolation of RNs as two significant issues that needed to be addressed if RN-provided chronic condition care coordination was to be successful. They believed that mentoring would assist in overcoming these issues. Although Division GPLOs regularly adopted a mentoring role with RNs, their capacity to do so in a timely manner was limited, and they had struggled to assist RNs during the intervention trial, “The support’s been really, really, hard. I’ve struggled severely” (GPLO FG, p.11). Even experienced RNs felt unprepared for RN-provided chronic condition care coordination:

This is a whole new trial, of which no one knew what to expect, of which it blew out from all our original plans, and then we tried to, you know, sort of catch up ... It's been really, really, difficult ... . (GPLO FG, p.11)

The result was that the GPLOs also began to feel isolated, “I suppose that’s the word, disconnected. I felt disconnected ... whereas I hadn’t felt like that before, but I, when I thought about it myself, well I can’t do it for them ...” (GPLO FG, p.12). Thus, mentors also required supportive networks, “I think you need to have a key contact ... it would be too much for one person, because it can quite easily do your head in when you’re getting the same questions every single day, day in, day out” (GPLO FG, p.24). An alternative to relying on GPLOs to mentor RNs was to delegate the mentoring role to experienced general practice RNs, but diligence would be required to ensure these RNs were adequately remunerated in an already time-poor and funding restricted environment:

If you put it [mentoring] out there to them, you could put it to them, and under what conditions and how many [general practices] and you know how many hours ... There’s some nurses who would work for nothing, but you don’t really want to promote that model because we do that [work for nothing] anyway. (GPLO FG, p.26)

Even when mentoring was available, engagement by RNs was not guaranteed. RNs in the intervention trial did not use all the support available to them. Electronic mail was considered to be an appropriate method for communicating and sharing information and support, but this method did not merge easily into the RNs normal way of working, “... they [RNs] had the email support, but they were always too busy to use it. So they know about the emails and that, but there was nothing, it wasn’t used” (GPLO FG, p.12). Many types of support were needed to progress new practices in a timely, ordered manner.

### ***Theme three: achieving outcomes and transforming professional practice.***

When RN-provided chronic condition care coordination was implemented in an optimal care context, the capacity for improved patient relationships was increased, general practice outcomes were improved, and workforce satisfaction improved. When these conditions were met, transformation of professional practice was possible, and the

opportunity arose to market models of chronic condition care coordination to a wider general practice audience:

I do think that if we come up with a great model that was not excessive in regards to time and it really needs to be quite simple, quite easy to implement, but we do need to show that the dollar figures are there, we would get some [general] practices that would take it up because they can see the outcomes. And I can think of two or three that would probably do that because they're GPs that it's about patient outcomes, it's not about dollars, but we want this for the majority, not the minority, and if they can't see that at least their wages, their nurses' wages are going to be paid and their on-costs [then they won't be interested]. (GPLO FG, p.41)

When the context was successfully negotiated and support was available for RN-provided chronic condition care coordination, positive patient outcomes were even more achievable. Participants attributed positive patient outcomes to the ongoing relationship they were able to build with patients. They believed that the personal, holistic, longitudinal interaction between RNs and patients was integral to assisting patients achieve and sustain health-related behavioural changes:

... You might be monitoring stuff, but to actually get a patient to change their behaviour, that has got a period of time that it is going to take, and monitoring what has happened twelve months down the track is something separate. (Final FG, p.17)

Importantly, health care was improved when the relationship with the patient was enhanced. Participants provided many examples of instances where patients shared important health-related information during RN-provided chronic condition care coordination that had previously not been shared with members of the general practice team. When patients shared information, care was able to be provided in a different way, and positive health outcomes were more likely. RNs were then able to provide information to the GP that would otherwise have been overlooked because patients did not always share important health-related information during standard GP consultations. Time was the most common factor that participants believed positively altered the care relationship:

... The relationship that you thought that you had with people before and thinking that you know them very well and you know them as a couple and everything else. But it brings out different things when you actually got one on one time with people in a closed room, and you do learn a lot more about people and they sort of come for this visit to the doctor and they are not seeing me, but they are waving at you. You know they feel that they have got that personal touch with you, and I think that is wonderful, and I think that is more than what it was before, even though having a good relationship with them before, but I think this goes even further and I think that is important. (Final FG, p.10)

... To identify things that I wouldn't have thought was occurring. Problems at home, no support, for one patient particularly [who was] caring for his ill wife. He was fairly well himself, but because he was caring for her, he was wearing himself out, and I didn't know that, and I know the couple quite well. I thought he was coping well, but he wasn't. (Final FG, p.9)

So I am finding now on that third visit, when I am saying to the doctors, "Did you know that Mrs So and So, did you know that she was actually drinking with her anti-depressants?" "No, I didn't know that, why didn't she tell me?" "Well," I said, "It is just because we had a little bit of extra time to talk about it and we have just got this nice little relationship going at the moment and she said it would be okay for me to let you know". And that was fine, because the doctor said, "That's good, because I can actually deal with it now". (Final FG, p.22)

Participants believed that the outcomes they were able to achieve because of the intervention were satisfying and rewarding. Initially, the intervention was time-consuming and required RNs to practice in a different way. However, when patients began to respond positively, they described a feeling of professional satisfaction:

... then I started, and hey, I am getting some good feedback from these patients and I am learning stuff, and I am actually feeling like I am a nursing person, you know. That was great, but didn't come in the beginning, it was really rushed ... . (Final FG, pp. 17-18)

It is that true role of the nurse and it is so fabulous, that care factor that we have. It was self-worth. I felt, "Wow, this is what it's all about". I've helped somebody.

Somebody knows I care and that is a really good feeling. Oh yes, and that is why we're nurses. Yes, I think that is what defines nurses. (Final FG, p.10)

Building relationships that achieved improved health outcomes for patients was a rewarding experience for many participants, "I really think building relationships with the patients, it really has been awesome. I didn't think I could feel so good about it to be honest" (Final FG, p.9). Participants also believed that the relationship was beneficial to patients, "I do it because it benefits the patient and that is what I do as a nurse" (Final FG, p.14). RNs also experienced positive outcomes when they felt they were able to care for patients in ways that were previously not possible. For some participants, this process resulted in transformation of their professional practice. They gradually found different ways of interacting with patients that were patient-centred rather than professionally directed:

... You know that [patient with a] urinary tract infection I wouldn't have picked up. I was treating her with her diabetes, let us go along with blood sugars, oh they were fine, and your BP is fine, but to actually identify other problems, that I had time to do. It was her concern, not mine ... but if you are treating a patient holistically, that is great. You can identify that and treat it. She had had it for months, she didn't tell the doctor. (Final FG, p.9)

In the beginning, she [RN] was trying to set the goals for patients, but then she learnt through the motivational interviewing ... and then she realized that she can't start dictating and I think that there was that transformation that took place with probably all of the nurses, although as you say, they were the pick of the cream. They were dedicated and do want to see change in general practice in terms of motivational interviewing and patient outcomes. (GPLO FG, p.6)

Participants believed that the care they provided supported the care provided by GPs:

The nurse does 99.9% of the work; they [patients] literally go to the doctor for ten minutes. And again, it is the relationship that has been built between the doctor and the nurse for them to have confidence in the nurse delivering ... and it's not happening overnight, it is a relationship that has been developing for two and a half years. (Final FG, p.13)

Most participants referred to the “special” relationship that developed because of the RN-provided chronic condition care coordination, “I absolutely agree. I think that the patients feel special. I feel that they are almost saying sometimes to the doctors ‘[RN] sorted this out for me, so I [just] need my script today’ and that sort of thing” (Final FG, p.10). Participants stated that patients were more highly motivated to make agreed lifestyle changes when they felt special:

I am also going to do this for the nurse. There was a bit of that come through and by the second time, they realized that they had actually made a change in the lifestyle, that they had already started by that little bit [of weight] they had lost, or all of a sudden they felt a little bit better or all of a sudden it was, “This is about me”, so for me that was really good. (Final FG, p.15)

The relationship between the patient and the RN was able to develop because of the time made available and the person-centred processes that were built into the model. Participants believed that skills such as motivational interviewing and goal-setting were most valuable.

One participant did not believe there was any difference between usual care and RN-provided chronic condition care. However, the participant remained focused on the financial viability of care provision rather than the importance of relationship development with patients, person-centred holistic care, and the possibility of improving health outcomes. Rather, her perception was that chronic disease was already well-managed and that maintaining the current health status of patients was an adequate goal of care provision, “There is this misconception that people with chronic disease are badly managed, and they aren’t ...” (Final FG, p.7).

... Can I just say ... that what [some general practices] have been doing and what I have been doing in all my years of chronic disease management effectively is no different to what we are proposing. If you have the business case which shows the item numbers which shows the process, do you know what I mean? A big part is making people realize and having that business case first—that it is viable, and it can work, and I certainly know that [practice manager] believes that it does work and can work and she is one of the ones out there promoting it. So, I agree that there are [general] practices that aren’t doing it, and they are the ones we need to change and convince through this, but the reality is, the current model

does work if it is used properly, and it is financially viable and there is enough time to see the patients, and it doesn't have great restrictions [on which patients can access the care]. (Final FG, p.36)

**Summary—challenge, conflict, rewards.**

The contribution of the context—the external health care system and the internal general practice—to the implementation of programs such as RN-provided chronic condition care coordination cannot be underestimated. Frequently, these programs are promoted as a way of improving health care by providing increased quality and access, and reduced fragmentation of services. These problems are created by the complexity of the context in which health care is delivered. Ironically, this same context impacts on the implementation of RN-provided chronic condition care coordination. This study has shown that implementation of programs cannot be isolated from the context in which they exist.

A key feature of this intervention was that chronic condition care coordination was RN-provided. However, RNs had variable skill sets, knowledge and abilities. Furthermore, the personal attributes of individual RNs and the role of these characteristics on the ability of RNs to function as effective team members and autonomous health care professionals were identified. The personal drive, vision and leadership qualities of individual RNs and general practices contributed to the ability or inability of general practices to implement RN-provided chronic condition care coordination. However, the role and skills of RNs did not adequately account for the success or lack of success in implementation. Rather, it was the attitude of the entire general practice team towards RN-provided chronic condition care coordination and the relationships within the team that most affected implementation. Thus, considerable attention needed to be paid to the team environment, the team structure, and the power relationships within the team.

RNs who were providing chronic condition care coordination needed to be adept at navigating the complex context. Perhaps the most important context that required navigation was the funding parameters for RN-provided chronic condition care coordination. Navigating funding was essential to the financial viability of the general practice. Time allocation and the delegation of care tasks within general practices were closely linked to financial viability. Before RN-provided chronic condition care coordination would be widely accepted, general practices required adequate financial

information on which to make economically informed decisions. Another aspect of the broader system that required navigation was the service network. To successfully understand and locate external resources or services, RNs had to create and sustain relationships with external providers, but they also required the time to do so.

There were constant tensions for RNs who provided chronic condition care coordination. Doing so gave them the opportunity to utilize their skills and abilities, but they needed to develop trust-based relationships within the general practice beforehand. Simply possessing the skills and knowledge to perform the work was insufficient. Once the RNs had proven they were sufficiently skilled and able to be trusted, GPs often asked them to do more. However, doing more often meant that RNs needed to establish boundaries to safeguard themselves from being overworked in a funding environment that did not adequately remunerate them for their work:

I think that if the model proves anything, you really do need this care coordinator separate from anything else that you do, and that the model will show that the income that [it] generates ... will pay for itself. So you virtually need to separate that role, that coordination role from anything else that you'll do and you show how it is sustained and the system that we use at the moment in the way Medicare is funded does not support that at the moment. Every time that something new is introduced, it's like, get the nurse to do it, get the nurse to do it, get the nurse to do it. But the nurse is full to capacity now. It's like you know, everything, get the nurse. Where do they get the time? They're not giving us any more nurses, so that if anything this model has proven is that these nurses need the time. The time was worth it, wasn't it? (GPLO FG, p.2)

In summary, RNs needed to be (a) flexible, (b) able to understand and interpret guidelines in a local context, (c) able to function as independent and autonomous practitioners while simultaneously contributing effectively as team members, (d) skilled clinicians with highly developed personal characteristics, (e) knowledgeable about the financial value of care that they were providing from the perspective of both patients and the general practice, (f) efficient and effective managers of time, (g) efficient and effective creators and maintainers of relationships, (h) efficient and effective problem-solvers, (j) passionate about their work, (k) visionary leaders with a learning orientation, and (l) committed to achieving quality outcomes for patients and for general practices.

These tasks contributed to a process of coordinating and navigating the context within which care was implemented and delivered even though the intervention was based on coordinating the care for individual patients.

An optimal context for RN-provided chronic condition care coordination existed when (a) the general practice model was simple but complete, flexible yet structured, and formal but responsive; (b) the RN workforce was practically and theoretically skilled, and able to work independently, but received mentoring and support when necessary; (c) the culture of the general practice was team-based and inclusive, as well as business-oriented but fair; and (d) the general practice could define its place within the wider health care system.

Conversely, RN-provided chronic condition care coordination in general practice was challenged by competing priorities that existed among members of the general practice team, creating a less than optimal team environment characterized by tensions. The tensions that were most frequently identified were those relating to funding, the culture, and the existing workforce skill base and capacity. Some of the tensions were subtle and not easily identified. When optimal conditions existed, several conditions were more likely to occur, namely (a) deeper relationships between RNs and patients, (b) a holistic approach to care, (c) improved health care outcomes, and (d) a transformation of professional practice. RNs who experienced this transformation expressed high levels of satisfaction and commitment to new ways of working. They also believed that with evidence of financial viability, they could market the new model to GPs and practice managers.

### **Conclusion.**

This study represents the completion of Action Research Cycle 2. There was evidence that some aspects of the intervention had been adopted and integrated into professional practice and others had not. Those matters that were embedded were likely to have built on established practices within individual general practices prior to the implementation of the intervention. However, participants indicated that without additional sources, practice changes were unlikely to continue, and RNs would most probably revert to usual care delivery. This study has confirmed that the heterogeneity of general practice creates an impasse for implementation that can only be addressed through close

attention to shared and agreed understanding of RN-provided chronic condition care coordination. Complexity was deeply embedded in the health care system. The complex health care system and the place of general practice in the system needed to be understood and successfully negotiated if RN-provided chronic condition care was to be sustained. However, understanding RN-provided condition care coordination was not easily achieved and the distinction between it and usual care was often not apparent until RNs could reflect on the benefits. The final chapter in this thesis will use NPT as a framework to interpret the findings from Studies 1 to 5.

## Chapter 9

### **Embedding RN Provided Chronic Condition Care Coordination**

The studies reported in this thesis informed the design and implementation of an RN-provided chronic condition care coordination intervention trial. Each study informed further steps in the project. It is now important to consider how these studies form a collective whole. Integrating data from several studies can be achieved by using methods such as integrative review (Whittemore & Knafl, 2005). Approaches such as this are most useful when studies using mixed methods need to be integrated. Mixed methods were not included in this series of studies. As these studies were all based on qualitative data an integrative review will not be used to interpret the results. Instead, meaningful interpretation of the findings from these studies relied on the generative mechanisms provided by NPT and within that the features of the NPM. NPT was identified in Chapter 1 as an overarching theory that could be used to interpret what occurred during the implementation process. This series of studies was designed and conducted before NPT was published in its final form. Thus, the theory was used as a lens to interpret the findings but was not used to guide the data that was collected. According to May et al., (2010), this is one of the appropriate ways to apply NPT.

Normalization is defined by May and Finch (2009, p.540) as “...the work that actors do as they engage with some ensemble of activities (that may include new or changed ways of thinking, acting, and organizing) and by which means it becomes routinely embedded in the matrices of already existing, socially patterned, knowledge and practices”. May and Finch (2009) noted that interdependent contributions by both individuals and groups lead to processes associated with implementing, embedding and integrating practices.

In this chapter, using NPT as a framework, I will begin by discussing the findings from Studies 1 – 4. These studies focused on defining the nature of the work, including the structures and processes that would influence implementation and the ways of engaging participants in the work. Then, I will discuss Study 5 separately. Study 5 focused on “collective action” associated with implementation of a new practice. Thus, I will use the more specific NPM to interpret the findings of Study 5. I will conclude with a discussion regarding the implications of the findings on future practice.

### **Evidence of normalization mechanisms in the literature (Study 1).**

In Study 1 (Chapter 4) a broad definition of chronic condition care coordination was identified. There was evidence that implementation of chronic condition care coordination was defined at two levels. The first level included immediate group processes (i.e., the client level tasks and the team-based relationships), and the second level referred to broader structures and norms (i.e., system level coordination). There was a dearth of evidence to guide thinking about the processes needed to implement chronic condition care coordination in practice. Thus, the concept of chronic condition care coordination was poorly defined and there was little on which practitioners could draw to develop their professional practice.

Not only was the concept of chronic condition care coordination poorly defined, but so were key concepts such as self-management support and person-centred care (see, for example, Embrey, 2006 regarding self-management; and Mead & Bower, 2000 regarding patient-centred care). Centredness in care provision includes ideas such as client-centredness, family-centredness, patient-centredness, person-centredness, and relationship-centredness (Hughes, Bamford, & May, 2008). The ambiguity associated with the meaning of these terms indicated that, not only was the concept of chronic condition care coordination poorly differentiated, but some of the tasks associated with it were also poorly differentiated. Thus, it was unlikely that either chronic condition care coordination, or the tasks associated with it, would have sufficient shared meaning to be anchored in practice. Integration of RN-provided chronic condition care coordination in everyday practice was likely to be challenging when the underpinning tenets of the work of chronic condition care coordination were unclear and individually interpreted.

The processes of chronic condition care coordination identified in the literature were grounded in relationships, communication, learning communities, the use of guidelines and protocols and cooperative service delivery within a team structure. It was through the care team that health professionals were able to engage and interact with chronic condition care coordination. The care team did not exist in isolation. Rather, networks of integrated organizations were required. The work of chronic condition care coordination was not reliant on an individual or specific group of individuals. When teams of health care professionals were created to deliver chronic condition care

coordination, they needed to enrol other organizations and groups in their vision. Transfer and integration of chronic condition care coordination processes within the networks of health care professionals was reliant on communication processes and guidelines and protocols. Thus, the existing network structures, communication processes and ways of working were likely to impact on the extent that chronic condition care coordination was able to extend beyond individual care teams to include broader organizational networks.

Although moving beyond the general practice environment to engage the broader health care community was identified as important chronic condition care coordination work, developing care partnerships to provide ongoing healthcare was problematic. Activities that contributed to partnership formation by medical health care professionals had a minimum requirement of being cost-neutral to the health care professionals (Kendall, Ehrlich, Muenchberger, Young, & Wilkie, 2009). Partnership formation required a context where responsibility and decision-making authority were negotiated to avoid tension (Whitehead, 2007). Thus, organizing structures and social norms, and group processes and conventions were likely to either promote or inhibit the development of teams to implement and deliver chronic condition care coordination.

Four elements of system level chronic condition care coordination were identified, namely resource management, information management, integration and linkages. Resources and information management were key organizing structures that surrounded the implementation of chronic condition care coordination. Integration and linkages reflected the group processes and conventions that were associated with chronic condition care coordination. The most frequently reported systemic challenge was remuneration. Perverse incentives were identified within current funding structures. “Almost all financial incentives favor volume over quality and high-tech procedures over personalized care and prevention” (Fihn, et al., 2007, p.401). Additionally, there were comparatively few financial incentives that encouraged care coordination (Harris & Zwar, 2007; Hofmarcher, Oxley, & Rusticelli, 2007). Although chronic condition care coordination might result in lower overall care costs, physicians who seek to implement activities associated with it often endure the immediate costs of providing that care (O'Malley, et al., 2009). Thus, at the level of health care providers, the delivery of chronic condition care coordination was challenged by funding structures that

rewarded quantity rather than the quality of care, and failed to reimburse indirect chronic condition care coordination activities that did not involve face-to-face consultation (Bodenheimer, 2008). Wide adoption of high quality chronic condition care coordination would be dependent on fair remuneration for health care professionals who led teams (Fihn, et al., 2007).

### **Evidence of normalization mechanisms in usual care (Study 2).**

Study 2 (Chapter 5) contributed to understanding usual chronic condition care in the general practice context. It was clear that there was little consistency about roles or processes associated with usual care provision across general practices. The health professionals who were responsible for the tasks of usual care were different in different settings. Nevertheless, role definition, agreement, and understanding was essential because they impacted on the way that individual practitioners responded to, and became involved with chronic condition care coordination (McDonald, et al., 2010). Some general practices included a diverse group of health care professionals and others comprised a team of two (i.e., the GP and an RN who may or may not have been involved in care provision). Some team members had responsibility for delivering care, (e.g., GPs and RNs), and others were responsible for managing the business and patient flow within the general practice, (e.g., practice managers and reception staff).

Processes of usual care were also different across settings. Some tasks that were identified as being critical to chronic condition care coordination were also evident in usual care, namely assessment, monitoring and care planning. Unsurprisingly, these tasks were assigned interchangeably to either GPs or RNs (e.g., completing GPMPs, and making referrals to dieticians and exercise physiologists), and to RNs or non-clinical general practice staff (e.g., managing and monitoring recall and reminder registers). Thus the greatest difference between chronic condition care coordination and usual care was that chronic condition care coordination should include self-management support and person-centred care. Although possibly present in usual care, these were not obvious tasks of usual care. However, as revealed in the literature (Study 1), these two concepts were poorly differentiated and understood in professional practice. An important finding of Study 2 was that, even when guidelines were available, they were individually interpreted and there was significant variation in the way they were applied across different general practices. Thus, not only was the concept of chronic condition

care coordination poorly differentiated in the literature (Study 1), but the context into which it was to be implemented was diverse and inconsistent. Within this inconsistent context, existing collective structures and processes such as guidelines were interpreted individually.

### **Evidence of normalization mechanisms in care coordination (Study 3).**

In Study 3 (Chapter 6) the implementation of chronic condition care coordination was heavily dependent on the ability of care coordinators to negotiate complex multi-level group processes and organizational structures. Care coordinators needed to be able to successfully span multiple boundaries and establish relationships at all levels (i.e., patients, general practice, external service providers and the broader health system). To do this, care coordinators required agreement about roles and routines associated with chronic condition care coordination, as well as commitment and resources. Boundary spanning was identified as a key mechanism for health care teams to share individual and group definitions about the specific elements of chronic condition care coordination. Boundary spanning was especially important because it was used to span professional cultures, local area knowledge about resources, and different health care settings. Thus, boundary spanning was the mediating mechanism that was used to integrate the organizing structures and social norms, and the group processes and conventions. Individuals who performed boundary spanning roles needed to be able to build effective personal relationships, negotiate, network and manage complex and interdependent relationships, and understand and manage different motives, roles and responsibilities (Williams, 2002). Thus, identifying and supporting individuals or groups of individuals who had the ability to span boundaries was essential to defining, implementing, and understanding the work of chronic condition care coordination within group and organizational contexts.

Relationships within teams and with patients needed time to develop and were used to share meaning about chronic condition care coordination. The way in which individuals understood their work and shared their professional knowledge and culture developed over time and was dependant on many aspects including personality, team structure, external influences, trust, respect and continuity of the health care professional in the chronic condition care coordination role. When the chronic condition care coordination role was not supported, or when role continuity was severed, there was an associated

sense of loss. Thus, chronic condition care coordination was anchored in established relationships that continued through time.

Participants believed that good relationships with patients resulted in positive patient outcomes and new information that guided care. When health professionals were able to identify the positive outcomes that occurred from developing person-centred care relationships with patients, there was evidence of a shift in their way of thinking about chronic condition care coordination. When a shift occurred, they were enthusiastic about the importance of chronic condition care coordination and were committed to continuing with the work. Person-centred care included both the organization of health care around the needs of individual patients and a focus on the preferences, beliefs, expectations and needs of the individual (Lutz & Bowers, 2000). This finding supported Study 1 in that a key difference between chronic condition care coordination and usual care was the inclusion of self-management support and person-centred care in practice. Person-centred care was manifested experientially (i.e., through the stories that participants told of their experience with chronic condition care coordination) rather than as a prescribed set of tasks or behaviours that could be clearly articulated. This study suggested that it is insufficient to simply define a new practice. Instead, it is necessary to create circumstances in which new practices can be experienced, reflected upon, understood more deeply and therefore, re-defined.

The team environment was used to share understanding about the work of chronic condition care coordination and to negotiate the boundaries of the work. This finding is consistent with research undertaken by Gabbay and le May (2004) who found that GPs and RNs relied primarily on interactions with each other and opinion leaders to acquire tacit knowledge about guidelines for practice. However, general practice teams needed to commit to adopting chronic condition care coordination before negotiating the boundaries of the work. Successfully spanning professional and team boundaries allowed teams to integrate and share individual and group-based understanding of the work of chronic condition care coordination. Thus, individual and group definition and understanding about the work of chronic condition care coordination were closely linked and relationships were the mechanisms through which the parameters of the work were established and communicated.

#### **Support for RN-provided chronic condition care coordination (Study 4).**

Study 4 (Chapter 7) investigated the factors that were likely to influence implementation of RN-provided chronic condition care coordination. Overwhelmingly, general practice staff were confused about the meaning of chronic condition care coordination, which was unsurprising given that there was little evidence of a clear definition of chronic condition care coordination either in the literature or among other health care professionals. In the absence of a collective understanding, chronic condition care coordination was defined, interpreted, and understood at an individual health professional level. Thus, if general practices were going to be able to implement a model of RN-provided chronic condition care coordination, they would need to establish a shared meaning of the work. A process of cultural change would be needed before RN-provided chronic condition care coordination could be integrated into the general practice context. Participants considered that implementation of RN-provided chronic condition care coordination would need to leverage existing and familiar practices that supported it.

Trusted and tested partnerships between members of general practice teams were likely to affect whether or not RN-provided chronic condition care coordination was considered legitimate by team members. If chronic condition care was to be considered legitimate, co-operative team interactions were required (Belanger & Rodriguez, 2008). The way in which care teams interacted and defined clinical roles impacted on who was involved in the care team (Wagner, 2000). Although RNs believed that they had a legitimate role in chronic condition care coordination, the role of RNs in general practice has traditionally been poorly defined. Historically, the work they perform has been shaped by government policy using funding and business models that govern individual practices, rather than through discipline-based competency standards or practice networks (ANF, 2005). Partnerships and the ongoing development and recognition of RNs as legitimate care coordinators required time commitments that were frequently beyond the capacity of individual RNs and general practices. Thus, strategies would need to be developed to increase the capacity of general practices to implement RN-provided chronic condition care coordination.

Repeatedly, the financial and business contexts of general practice were highlighted as areas of tension. Irrespective of the definition of chronic condition care coordination,

there was consensus that it must be financially viable or individual general practices would not engage with it. Although GPs were funded on a fee-for service basis, RNs were salaried employees (Southern, Young, Dunt, Appleby, & Batterham, 2002). The real challenge for implementing RN-provided chronic condition care coordination in the Australian context may arise, not from implementing theoretical models of chronic condition care coordination, but from the small business nature of general practice. Implementation of RN-provided chronic condition care coordination will require evidence of financial viability of the business enterprise before practice change can be sought. Thus, robust change management techniques may need to be combined with realistic financial analysis of existing and new care delivery models to achieve successful engagement of general practices with RN-provided chronic condition care coordination.

### **Implementing RN-Provided Chronic Condition Care Coordination – “collective action”**

Once Action Research Cycle 1 was completed and the intervention was developed, implementation of the intervention was reliant on the “collective action” of health care professionals working in general practice. Therefore, Study 5 (Chapter 8) will be discussed in terms of the “interactional workability”, “relational integration”, “contextual integration” and “skill-set workability” of the intervention. These components of “collective action” form the Normalization Process Model (NPM) which sits within NPT (May, 2006; May & Finch, 2009). In 2006, May provided four hypotheses that define the NPM. It is pertinent to use these hypotheses to guide the interpretation of the findings of Study 5. The hypotheses are that a complex intervention is disposed to normalization if:

1. It confers an interactional advantage, in flexibly accomplishing congruence (i.e., interactions between agents—cooperation, legitimacy and conduct) and disposal (i.e., the effects of interactions between agents—goals, meanings and outcomes).
2. It equals or improves relational integration through accountability (i.e., validity, expertise and dispersal / rules) and confidence (i.e., credibility, utility and authority) within networks.

3. It improves skill-set workability by calibrating to an agreed skill-set (i.e., performance—boundaries, autonomy and quality) at a recognizable location in the division of labour (i.e., allocation—distribution, definition and surveillance).
4. It supports contextual integration by conferring an advantage on an organization in flexibly executing (i.e., resourcing, power and evaluation) and realizing work (i.e., risk, action and value).

***“Interactional Workability”—how the practice was operationalized.***

There was evidence in Study 5 (Chapter 8) that participants believed the care relationships with patients had improved because of the intervention, resulting in improved clinical measurements and overall patient well-being. Keleher and her colleagues (2007) found that, within their scope of practice, nurses were able to achieve improved health care outcomes for patients that were similar to those doctors could achieve. RNs were well positioned to develop care relationships because they were appropriately skilled to assess the health, social, and emotional well-being of older people and, in many cases, patients provided RNs with information that they did not routinely share with their GP (Phillips, et al., 2007). In Study 5, three factors were believed to be instrumental in improving the care relationship, namely (a) the time that was made available for developing the relationship, (b) goal-setting and identifying areas of concern from the point of view of the patient, and (c) the skills and knowledge of the nurse. Other authors have reached the same conclusion (Patterson, et al., 2007).

When nurses had time to engage in effective goal-setting with patients, they reported that patients were more motivated. Although motivational interviewing was the technique used to assist patients, the time required to engage with the technique was frequently a limiting factor. Approaches that were based on problem-solving and goal-setting (e.g., self-management support) have previously been identified as appropriate for achieving positive health outcomes for patients (Bodenheimer, Lorig, Holman, & Grumbach, 2002; Lorig & Holman, 2003). However, they have not been successfully established in general practice in Australia, perhaps because they require transformational change to become effectively embedded (Lawn, 2010).

Increased time spent with patients to provide chronic condition care coordination was a unique feature of both the intervention reported in both Studies 3 and 5. The process of funding care coordination, either through direct funding to the general practice in the case of the intervention in this study, or through the provision of externally-based and funded care coordinators in Study 3 diverged from existing chronic condition care funding mechanisms. However, in both cases the funding was used to allocate extra time required to provide chronic condition care coordination. Without this extra time, chronic condition care coordination was generally not considered practical in busy general practices. Usually, RNs' use of time was relatively unstructured (Phillips, et al., 2008). However, the study by Phillips and her colleagues (2008) also found that RNs performed an average of 17.4 activities per hour with some RNs performing as many as 36 activities per hour (i.e., one activity every 100 seconds). Thus, it was unsurprising that extended periods of time required for chronic condition care coordination were frequently believed to be unavailable or impractical.

In summary, RN-provided chronic condition care coordination can be operationalized within general practice. Successful implementation was believed to increase the motivation of patients and created positive outcomes for patients. RN-provided chronic condition care coordination “fits” with the work of RNs in general practice. Sufficient time was allocated to RN-provided chronic condition care coordination when it was seen as legitimate (i.e., financially viable) by all parties. When the work was performed in a way that allowed meaningful goals to be shared within the patient encounter, positive patient outcomes became evident. These outcomes further legitimated the conduct and encouraged cooperation among all parties, thus creating a cumulative impetus for change in structures, processes, attitudes, understanding and practices.

***“Relational Integration”—the impact on inter-professional relationships.***

Hierarchies existed in the general practice environment and needed to be negotiated. Professional hierarchies were usually based on discipline or employment status (Phillips, et al., 2008). RNs were almost always employees of the general practice (Mills & Fitzgerald, 2008); with the result that authority to utilize their clinical expertise depended on the nature of the relationship between RNs and their employers (usually GPs). RNs needed to effectively span professional and cultural boundaries to negotiate hierarchically-based care provision. They negotiated hierarchies by relying on their

ability to identify and engage key power-brokers in the general practice. Although practice managers were sometimes identified as important power-brokers because they managed the financial viability of the general practice, GPs exerted a powerful influence on both the business operations and health care provision processes.

The importance of leadership and a shared vision for chronic condition care coordination were identified. Nevertheless, participants believed that general practices functioned without clearly articulated visions for the future or strategic planning. Participants believed that the absence of a shared vision meant that implementation of interventions such as RN-provided chronic condition care coordination were reliant on individual passion and a drive for taking positive action. Thus, participants viewed RNs as change agents.

Because GPs were identified as key power-brokers, RNs who sought to implement interventions relied on established trust-based relationships with GPs. They managed and massaged these relationships to effect change. When RNs successfully built trust-based relationships with GPs, they were free to practice autonomously. However, autonomous practice meant that RNs needed to be able to negotiate the boundaries of their work to prevent being over-worked. RNs did not want to replace the work that GPs were doing, rather they wanted to become “maxi” nurses. This finding is supported by other researchers. For example, Halcomb and her colleagues (2004, p.141) stated that, “Whilst general practitioners are clearly central stakeholders in the general practice setting, it is vital that nurses take the opportunity to shape their future professional practice and develop models of collaborative nursing practice to enhance client outcomes”. In some general practices, implementation of RN-provided chronic condition care coordination contributed to the disintegration of relationships that were not well-established or trust-based. At the extreme, failure of these relationships was described as “sabotage”.

In Study 1, it was identified that chronic condition care coordination was reliant on the input of a multidisciplinary team. However, not all GPs actively engaged with the intervention in Study 5. This finding is consistent with the findings of other researchers who found that GPs rarely engaged with multidisciplinary teamwork and were less positive about collaboration and teamwork than nurses (Hansson, Arvemo, Marklund, Gedda, & Mattsson, 2009; Hansson, et al., 2008). However, the GPs in Study 3

(Chapter 6) were overtly involved with care provision and the multidisciplinary team. There were two major differences between the two studies. First the intervention in Study 3 was a Commonwealth mandated and funded intervention, whereas in Study 5 the intervention had been a local Division initiative that was implemented over a short period of time and had limited funding. This difference suggested that the organizing context (i.e., Commonwealth versus locally mandated interventions) affected the accountability and confidence of participating power-brokers in the intervention. Second, the Division in Study 3 actively engaged GPs in the study design and delivery of chronic condition care coordination, whereas in Study 5, the Division focused on the role of RNs in the provision of chronic condition care coordination, and on occasion, adopted a gatekeeping role to reduce access to GPs. The rationale given by Division staff for non-inclusion of GPs in data collection at the end of the study was primarily based on the time that would be required and the busy nature of GPs work. Division staff considered that obtaining information from individual GPs about RN-provided chronic condition care coordination was time-intensive and an unnecessary imposition on time-poor GPs. This difference suggested that the group processes and conventions affected the accountability and confidence of participating power-brokers in the intervention.

Participants identified that nurses in general practice experienced a sense of isolation from their peers. They sought mentoring and support to feel more connected within a network of RNs. RNs in general practice were frequently isolated from their nursing peers even though they often built strong relationships with GPs (Halcomb, Meadley, & Streeter, 2009; Halcomb, Patterson, & Davidson, 2006). Despite an articulated need for mentoring and support, participants actively rejected electronic methods of connecting, instead favouring traditional methods of communication such as telephones and meetings which were the norm within these nursing networks. Thus, the validity and utility of new support mechanisms was affected by group processes.

In summary, there was a structure of authority within the general practice setting that influenced the implementation of RN-provided chronic condition care coordination. RNs needed to negotiate power-based relationships to enhance their credibility. They needed support to develop their expertise. When RNs had an opportunity to demonstrate the validity of chronic condition care coordination; credibility, trust and shared

understanding about the practice was engendered among GPs who then participated. Practice change was experientially-based and depended on creating an opportunity for RNs to build their relationships with GPs which enhanced the credibility of their role in the work. Thus, the authoritative structures became less hierarchical and the contribution of RNs was validated.

*“Skill-Set Workability”—the “fit” with existing skill-sets.*

Participants identified that RNs required a broad set of skills to conduct the work associated with chronic condition care coordination. RNs were able to provide individually-focused primary care within a team environment, and had an essential role in providing chronic condition care when they were given the authority and capacity to utilize their clinical knowledge and skills (Halcomb, Davidson, & Patterson, 2008; Porritt, 2007). Thus, the engagement of RNs in roles that effectively utilized their training and clinical skill base could significantly change the way in which chronic disease management occurred in general practice (Halcomb, Davidson, Salamonson, Ollerton, & Griffiths, 2008).

Frequently, participants referred to the role of RNs in chronic condition care coordination as being advanced because of complex patient needs and complex funding environments. Indeed, participants believed that RNs required a unique set of skills to be able to work in general practice, and that the required skills were not readily obtainable in other settings. Although these unique skills often related to understanding and negotiating funding mechanisms, participants also referred to a set of clinical skills (e.g., diabetes care) that were different than those required in other settings (e.g., hospitals and aged care settings). Thus, RNs working in general practice relied on clinical, people and organizational skills and a small business orientation (Phillips, et al., 2008) to establish the boundaries of their role. However, RNs required education, training and support (Siegloff, St John, Keleher, & Patterson, 2007), because chronic condition care coordination contrasted with traditional hospital-based training which emphasized technical and task-orientated acute care (Macdonald, Rogers, Blakeman, & Bower, 2008; Patterson, et al., 2007; Willis, et al., 2000b).

Clinical leadership, personal drive and the ability to negotiate with patients, other team members, and the broader network of health care providers were believed to be

necessary skills of RNs. This finding is consistent with that of Phillips and her colleagues (2008) who commented that nurses function as “agents of connectivity” between different disciplines within the general practice setting. The ability to interact with the broader network of health care providers was especially important to access the health-related resources that patients required. This finding was consistent with the finding in Study 3 that chronic condition care coordination was dependent on the ability of individuals to span cultural, knowledge and resource boundaries.

When participants successfully implemented RN-provided chronic condition care coordination, some described a transformation of their professional practice. Although they believed they were providing holistic patient-centred care prior to the intervention, the opportunity to approach care more actively resulted in a different type of relationship with patients. When they were able to achieve a different type of relationship, they were more satisfied with their role and felt as if their skills and abilities were being utilized in a way that was consistent with their view of the nursing profession. Other researchers have found that effective role development increased RNs’ job satisfaction and improved the quality of care provision (Senior, 2008).

In summary, RN-provided chronic condition care coordination provided RNs with an opportunity to improve the way their skills were used. RNs were able to practice more autonomously, and different boundaries relating to the work they performed were established. After the intervention, RNs defined their professional role and their work more positively and with satisfaction. Once again, practice change was experientially-based. When RNs had the opportunity to test and monitor their skills, they realized that the quality of the care they were providing had improved which led to transformation of practice.

***“Contextual Integration”—the “fit” within the organizational context.***

The organizational context created the most challenges for embedding RN-provided chronic condition care coordination. Several barriers were evident in the way that relationships were established and skill-sets were utilized. For example, when shared vision was absent, then the way in which relationships were formed and work was divided between team-members remained ad hoc, based on power hierarchies and reliant on personal drive and individual leadership. The funding environment and

financial viability within the business of general practice was ever-present in discussions about RN-provided chronic condition care coordination. This finding was not unexpected because funding in the Australian health care system is structured in a way that limits the scope and type of care that nurses in general practice can provide (Parker & Keleher, 2008). Business planning was thought to be one way of negotiating RN-provided chronic condition care coordination within existing funding parameters. Nevertheless, business planning was not seen as a panacea.

Remuneration for the work that RNs performed was contentious. Participants occasionally referred to remuneration as a basis for interpreting the value of their work. When they believed that they were not adequately remunerated according to their skills and knowledge, they expressed frustration, dissatisfaction and a belief that there was no career pathway available to them. Without a national salary scale for RNs working in general practice, there were marked discrepancies in remuneration for RNs across general practices. This discrepancy has also been noted across different Australian states (Phillips, et al., 2008).

Allocating space for RN-provided chronic condition care coordination was identified as essential for successful implementation. However, the infrastructure of general practice has traditionally been designed for GP-consulting rather than for team-based care provision (Jackson, 2006). Therefore, adequate planning for the implementation of RN-provided chronic condition care coordination was essential. Planning required a shift towards a team-based approach to care delivery and a shift from a focus on acute, reactive, treatment room care to a focus on pro-active, ongoing, team-based care. This shift was reliant on the ability of teams to establish and maintain local area knowledge and networks that were based on trust. Both networks and local area knowledge required time to establish and maintain. Thus, RN-provided chronic condition care coordination differed from usual care. RNs believed that “baby steps” were necessary to achieve successful implementation of RN-provided chronic condition care coordination.

In summary, RN-provided chronic condition care coordination would work if it was adequately resourced at all levels. Instead, it was viewed as a risk by some general practices. In these circumstances, there was a negative evaluation of, and a lack of value for, RN-provided chronic condition care coordination. Thus, the ability of nurses to influence the organizing structures and social norms, and group processes and

conventions that impacted on their practice was limited. GPs and their associated institutions (e.g., the Division) remained the major power-broker which hampered change. However, in some circumstances the impetus for change was created when GPs recognized the value of implementing the model (i.e., patient outcomes, financial viability, and change in workload). Unless financial viability could be proved, general practices were unlikely to participate, so the enthusiasm and change experienced by individual RNs became irrelevant.

### **Implications for practice.**

Within this study, two key findings have important implications for future implementation of programs such as RN-provided chronic condition care coordination in general practice. They are (a) the impact of boundary spanning as a strategy for negotiating organizational structures and social norms when dealing with ill-defined and poorly understood practice, and (b) the importance of providing opportunities for transformation as a strategy for negotiating the group processes and conventions that then influence definition and understanding of, and engagement with, the practice. Even without coherent understanding of a practice, a structured and deliberate exposure to a theoretically and contextually appropriate practice that led to positive effects resulted in enrolment and a deeper understanding of the concept. Although many other themes were evident in the findings, these two had the most significant impact on the normalization of RN-provided chronic condition care coordination.

#### *Boundary spanning.*

Boundary spanning skills were necessary to interpret the multiple levels of chronic condition care coordination and implement the work of RN-provided chronic condition care coordination in the general practice setting. When complex problems crossed boundaries (e.g., the need to cross professional and contextual boundaries to deliver chronic condition care coordination), inter-organizational boundary spanning skills which utilized existing relationships and interconnections and a capacity building approach were required (Williams, 2002). The majority of the boundary spanning work that was undertaken by participants in the intervention related to spanning the cultural boundaries within the general practice environment, and did not include broader inter-

organizational boundary spanning. However, as shown in Study 3, this broader type of boundary spanning was beneficial for improving patient outcomes.

Although participants in Study 5 were keen to establish knowledge of external resources, they did not undertake knowledge sharing in this area. Neither did they actively engage in referring patients to health care professionals who delivered care outside their pre-existing referral networks. Therefore, future implementation of RN-provided chronic condition care coordination needs to increase the capacity of general practices to span organizational boundaries and transfer knowledge beyond already existing networks. Future implementation studies need to explore ways of identifying and resourcing boundary spanners. However, future studies also need to ensure that the work is appropriately defined, agreed and understood because ambiguity impedes the transfer and acquisition of new knowledge (Van Wijk, Jansen, & Lyles, 2008). Furthermore, when ambiguity exists, knowledge acquisition and transfer between organizations is more adversely affected than knowledge acquisition within organizations.

#### *Transformation opportunities.*

Transformation of individual RN practice was the second important finding in this series of studies. Transformation of RN-provided chronic condition care coordination occurred when there was a shift in the way RNs understood the practice. Paradigmatic shifts such as these occurred when reflective practice and revision of an individual's frame of reference were combined (E. W. Taylor, 2008). Frames of reference have been defined as the "associations, concepts, values, feelings, [and] conditioned responses" that adults use to define their world (Mezirow, 1997, p.5). When a shift occurred, RNs were able to define the work of chronic condition care coordination in a different way and were able to work with, and advocate for, patients differently. When RNs were able to communicate new information about patients needs with GPs, they also had the opportunity to influence the existing group processes and conventions that surrounded chronic condition care coordination in general practice. Future implementation studies need to include opportunities for stakeholders to experience a shift in their practice. However, they also need to create opportunities for stakeholders to identify the changes that have occurred, reflect on the meaning of their transformation, and share their experience with other stakeholders. Without "reflexive monitoring" shifts in thinking

did not happen. Thus, future studies that focus on the implementation of programs in general practice need to simultaneously build capacity for “reflexive monitoring” and “coherence” regarding the work.

### **Limitations.**

The studies in this thesis would potentially have been strengthened if NPT had been available at the time of design of the study. Nevertheless, the series of studies aligned with the components of NPT. Meanings that were shared, learned and experienced by people in their social contexts were reflected in the way people practiced (May & Finch, 2009). Although the series of studies reported in this thesis sought to understand the meaning of RN-led chronic condition care coordination, not all team members within the context were included in the implementation process. As a result of Division gatekeeping in the final implementation study, I was unable to engage with GPs or other general practice staff members to explore their perspectives. Therefore, the perspectives that were being delivered were the interpretation of the RNs and GPLO participants who were working within the general practice context. Because of the unique context in which these studies were conducted, action research was the chosen research method utilized. Thus, the results of the studies might not be meaningful in other situations (Checkland & Howell, 1998). Future studies would be strengthened by obtaining the viewpoint of all members of the health care team involved with the intervention.

The intervention was designed and implemented in the general practice context. Although the broader health system had been considered during the design of the intervention, participants were reluctant to establish broader networks within the health care system. For this reason, a full model of RN-provided chronic condition care coordination was not implemented. If time had been available to include further action research cycles, more complete implementation of a model of RN-provided chronic condition care coordination may have been achievable. It will be important for future studies to continue to find ways of moving chronic condition care coordination beyond the boundaries of single facilities or institutions if care fragmentation is to be reduced. A possible solution lies in the identification of boundary spanners prior to designing implementation processes.

The intervention trial focused entirely on the role of RNs in the provision of chronic condition care coordination. There was no discussion regarding which health care professional was most appropriate to provide chronic condition care coordination. It will be important that future studies investigate whether or not RNs are the most appropriate health care professional to provide chronic condition care coordination or if other members of the health care team are better or equally placed to provide chronic condition care coordination. The current study indicated that RNs believed they were suitable health care professionals and capable of transforming their practice to coordinate care and enable positive health care outcomes for patients.

## **Conclusion**

When the intervention trial was first proposed, there was an assumption that the work of chronic condition care required coordination in the general practice setting to overcome fragmentation. The Division had received funding for RN-provided provide chronic condition care coordination. Thus, using an action research approach, a suitable intervention was designed. The first action research cycle focused on defining the work of RN-provided chronic condition care coordination and determining who would do the work and how they might do it.

The context into which the implementation of an RN-provided chronic condition care coordination intervention occurred was complex. The concept of chronic condition care coordination was poorly defined, both theoretically and practically. The way in which chronic condition care coordination was differentiated, understood and anchored in practical routines and processes differed between general practice teams.

When the intervention was implemented in the second action research cycle, only some elements of RN-provided chronic condition care coordination were implemented, and these elements were most often closely aligned with usual care practices. It became clear that the organizing structures (i.e., funding), and group processes (i.e., team functioning and health professional roles) influenced which elements of RN-provided chronic condition care coordination became embedded. According to NPT, the only generative mechanism that influences organizing structures and social norms and group processes and conventions is “reflexive monitoring” (i.e., how the work is understood). In the current study, boundary spanning and transformation were two strategies that

most closely enabled “reflexive monitoring” and facilitated its impact on organizational structures and social norms, and group processes and conventions. If these two strategies could be harnessed, then new practices were more likely to become embedded.

An implementation challenge arose when the way that the work was understood differed according to individual health professionals, health professional groups or health care organizations. For some participants, the work of RN-provided chronic condition care coordination was understood in terms of the quality of the patient relationship and the quality of health care outcomes for the patient. Some of these participants experienced a transformation of their professional practice when they saw the positive health outcomes for patients. For other participants, the work of RN-provided chronic condition care coordination was understood from the point of view of the cost-effectiveness of the work. These participants experienced a transformation when they perceived a financially viable approach to chronic condition care coordination. Thus, the way that individuals, groups and organizations understood the work of chronic condition care coordination was dependent on different goals and values. Thus, successful implementation of new practices was reliant not only on how the work was defined, but also on how the work was appraised and valued (i.e., “reflexive monitoring”).

The contribution of this thesis to NPT is that it highlights the prominence of “reflexive monitoring” in the process of normalization. Underpinning both strategies of boundary spanning and transformation was the need to build “reflexive monitoring” processes early in the implementation process. Very recently, a similar finding has emerged from the work of Gunn et al., (2010) which was also conducted in general practice. Thus, a research objective for the future is to examine the importance of this component across a range of settings. Further, ways of engendering “reflexive monitoring” earlier in the process of implementation should be sought, perhaps even before fully coherent definitions of the work had been established.

The contribution of this thesis to practice is the finding that boundary spanners and opportunities for transformation impacted on the influential organizing structures and social norms, and group processes and conventions. The way in which this occurred is unclear, but it could be assumed that it is through a process of “reflexive monitoring”.

For instance, RNs who experienced a transformation did so because they identified positive patient outcomes resulting in a positive appraisal of the practice. Boundary spanners developed a broader understanding of their context and were able to develop skills and ways of working that gave them the capacity to adopt chronic condition care coordination. However, this assumption needs to be tested further.



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## Appendix A

### Designing the Active Care Management Program (ACMP)

Although chronic condition care coordination is frequently promoted as an effective means of improving care quality, the processes associated with chronic condition care coordination in general practice are not entirely clear. The findings from Studies 1 to 4 revealed a number of features that were essential to the successful implementation of an RN-provided chronic condition care coordination intervention and/or distinguished this type of care from usual care. This Appendix contains a brief description of the intervention that was designed on the basis of these findings. The intervention, which became known as the Active Care Management Program (ACMP)<sup>9</sup>, consisted of three parts (i.e., general practice preparation, nurse preparation and a patient intervention) that were designed for implementation in an environment of mentoring and support outlined in Chapter 3).

#### **General practice preparation.**

The results of Studies 1 to 4 indicated that general practices needed to be prepared for the introduction of RN-provided chronic condition care coordination. First, the roles and routines associated with chronic condition care coordination needed to be determined and agreed. Thus, a program of general practice preparation was designed to include assessment of the (a) current role and duties of practice staff, (b) additional roles and duties anticipated, (c) organizational climate, (d) existing skills and expertise in the team, (e) existing systems of complex chronic disease management, (f) practical implementation considerations, and (g) current care provision environment that was developed. The program was designed using the guidelines developed by the Agency for Health Care Research and Quality<sup>10</sup> (AHRQ). However, key stakeholders within the

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<sup>9</sup> The program was named the Active Care Management Program by the Division and the RNs to represent a more active version of the care management they usually provided.

<sup>10</sup> The AHRQ guidelines were retrieved from <http://www.ahrq.gov/ppip/manual/> on 4<sup>th</sup> December 2008. However, they are no longer available on the website. Alternative guidelines have not been sought or developed in the ACMP because the key stakeholders did not actively endorse the general practice preparation component of the program. Further development of the program will require that alternative guidelines be developed.

Division did not endorse the formal inclusion of general practice preparation within the intervention. Thus, the process of assessing existing contexts and practices remained optional. Although nurses were encouraged to complete the self-assessment process within their general practices, only one nurse returned the completed worksheets. Thus, although all nurses may have conducted some part of the preparation program, this component was not operationalized as planned.

### **Practice nurse preparation.**

Nurses have predominately been educated, trained and worked within acute health care systems orientated towards rapid diagnosis and treatment (Halcomb, Davidson, & Patterson, 2008). Chronic condition care coordination, on the other hand, requires ongoing intervention, care continuity, coordination of skills and resources, and aims to achieve maintenance of, or incremental gains in, health and well-being. It was evident that chronic condition care coordination required the use of inter-related philosophies and frameworks that are consistent with providing health care provision within an integrated system. Thus, as identified in Studies 1 to 4, it was important to equip nurses with the skills and information required to provide chronic condition care coordination. To prepare RNs for the provision of chronic condition care coordination, they attended a series of workshops that addressed the important tasks, theories and processes they would be required to use during the intervention. Three major theories were selected to guide the nurses' thinking—the International Classification of Functioning, Disability and Health (ICF), self-management support, and person-centred care. These theories were selected to address the findings of Studies 1 to 4 that identified the importance of attention to context-based planning, relationships, and person-centred care and self-management support as essential factors that differentiated chronic condition care coordination from usual care.

### ***The ICF as a philosophical framework for care delivery.***

The International Classification of Functioning, Disability and Health (ICF) is a comprehensive classification and coding system that classifies the degree of functioning and disability associated with health conditions (World Health Organization, 2002). It integrates the medical and social models of disability and adopts a biopsychosocial approach to health. Current disease management paradigms, although highly relevant to

disease symptoms and physical manifestations of disease, do not consistently address the impact of the environmental and personal contexts that contribute to individual experiences of disease. Historically, nursing assessment has paid little attention to the manner in which individuals participate in their social worlds (Kearney & Pryor, 2004). Nevertheless, the social and physical environments of a person are integral to effective disease management (Clark, Gong, & Kaciroti, 2001). Therefore, the ICF was adopted as a framework for assessment and reaching agreement about the health-related goals and priorities of patients with chronic conditions.

The ICF framework provided structure that would enhance a contextual approach to care delivery that moved beyond a biomedical approach towards an ecological approach that identified how a range of factors impacted on health. The importance of this framework to chronic condition care coordination has been noted by other researchers, who have stated that ‘... if nurses are to be effective partners in a multidisciplinary health system, they need to understand the basis and application of the ICF because of its international use across disciplines’ (Kearney & Pryor, 2004, p.166).

#### ***Self-management support in a general practice environment.***

Self-management support was one of the features that distinguished usual care from chronic condition care coordination (refer Chapter 4). For RNs, a focus on supporting self-management meant a shift away from clinical outcomes towards a focus on the day-to-day problems of living with a chronic illness. Self-management can be supported in the general practice environment, but several pre-conditions must be met. Researchers have described multiple strategies and organizational characteristics that are required to support and integrate self-management in the general practice context (see, for example Coleman & Newton, 2005; Crespo & Shewsberry, 2007; Shetty & Brownson, 2007). Many of these strategies are reliant on developing an understanding of individual contexts and require processes that will embed self-management within usual care provision. Thus, the development of a self-management orientation within contexts such as general practice is dependent on individual practitioners and their capacity to understand clients as unique individuals, with preferences, characteristics and circumstances that guide their choices about services, treatment and healthy lifestyles (Sidani, 2003). It is also dependent on the capacity of health care professionals to respond flexibly to clients’ needs and changing lifestyles and provide knowledge in an

interactive way that is based on equal contributions of listening, understanding, and imparting information. An ecological approach to self-management was adopted for this study because it offered nurses a way of thinking about the factors that could support or hinder self-management (Fisher, et al., 2005).

### ***Person-centred care.***

Person-centred care is the second feature of chronic condition care coordination that distinguishes it from usual care. Two different approaches to person-centred care were identified by Michie, Miles and Weinman (2003), namely, the “patient perspective” approach and the “patient activation” approach, the latter of which was selected for the current study. The patient activation approach focuses on active client participation through question-asking and spontaneous statement-making about patient concerns. Practicing in a person-centered way requires the health professional to (a) facilitate decision making by sharing and integrating information, (b) mutually recognize the values of others, (c) be transparent regarding their intentions and motives, (d) negotiate, and (e) recognize the uniqueness and value of individuals (McCormack, 2003). Radwin, Cabral and Wilkes (2009) concluded that achieving person-centered care requires technical skill. Price (2006) outlined several required skills including (a) active listening to demonstrate understanding, (b) asking questions sensitively, (c) allocating resources equitably, and (d) collaborating with other healthcare practitioners to ensure that people are provided with the care they require. Thus, the ACMP required nurses to develop skills in collaborative goal-setting, motivational interviewing, and monitoring goal attainment, all of which were included in the training.

### **Patient intervention.**

In Studies 1 to 4, it was repeatedly identified that assessment, monitoring and recall, and follow-up were routine tasks associated with chronic condition care coordination. To improve the management of chronic conditions, health-promoting, behaviour-based interventions that support patients and their families are recommended (Caress, Luker, & Chalmers, 2010). Within Australian general practice settings, brief health behavioural interventions are becoming well-established practices for promoting the health and well-being of individuals. To facilitate these tasks, the Royal Australian College of General Practitioners (RACGP) adopted the 5As framework (Royal Australian College of

General Practitioners, 2004). The RACGP framework endorses a process described as “Ask”, “Assess”, “Advise”, “Assist” and “Arrange”. Other authors include “Agree”, which reflects the process of joint decision-making (Glasgow, Emont, & Miller, 2006; Whitlock, Orleans, Pender, & Allan, 2002). Table 9 below outlines the interactions between the patient intervention and the underpinning theories and concepts. The intervention consisted of four key sessions, each lasting thirty to forty-five minutes and follow-up sessions as determined by the nurses and their patients. The intervention sessions occurred at regular time intervals (every six weeks) over a six-month period of time. Session 1 focused on “Assessing” and “Advising”; Session 2 focused on the process of identifying areas of concern and “Agreeing” on goals and actions; and Session 3 focused on “Assisting” the patient by monitoring progress, building supports and “Arranging” other resources or services needed to assist patients to achieve their goals. Finally, Session 4 focused on ongoing follow-up of the patient and making decisions about further intervention. Details of the sessions are more fully described below.

The first session in the patient intervention focused on “Asking”, “Assessing”, and “Advising”. Chronic condition care needs to be tailored according to identified individual needs. Thus, assessment included determining patients’ knowledge, preferences, beliefs, and attitudes to identify those most in need of intervention (Goldstein, Whitlock, & DePue, 2004; Whitlock, et al., 2002).

In terms of “Advising”, brief clinician advice is especially effective when dealing with tobacco and risky alcohol use, particularly when the information is personalised (Goldstein, et al., 2004). The “Advise” step included a brief intervention using Lifescript Tools (Kinect Australia, 2005) which are familiar to GPs and give individuals the opportunity to use relevant information to initiate changes themselves. It is not a complete patient education intervention, but provides reliable information and guidance.

The second session of the intervention was pivotal to an active care relationship, namely “Agreeing”. Actively involving patients in collaborative goal-setting improves outcomes (Goldstein, et al., 2004). Successful negotiation of the “Agree” step requires (a) collaborative problem definition (Steiner, et al., 2002; Wagner, Austin, & Von Korff, 1996), (b) solution-focused goal setting (Wagner, et al., 1996), (c) developing an

action plan (Wagner, et al., 1996), and (d) mobilising natural supports (Goldstein, et al., 2004). Each of these actions was embedded into the second session.

The third session focused on the tasks of “Assisting” and “Arranging”. This session included behavioural counselling and the development of an individually-tailored action plan (Goldstein, et al., 2004). Assisting patients included reviewing progress to date, discussing barriers to progress, celebrating successes, revising goals as necessary, ascertaining the usefulness of natural support systems, and identifying future strategies (Whitlock, et al., 2002). Skills associated with motivational interviewing and self-management support were integral to this component of the program.

“Arranging” was the final step of the third session and included making plans for sustained follow-up if necessary (Goldstein, et al., 2004). Current and ongoing knowledge regarding resource availability within the broader health care community are essential to successfully undertaking the “Arrange” step. Establishing links with relevant community resources to achieve effective chronic-illness care is especially important when providing care to vulnerable and underserved populations (Glasgow, Orleans, & Wagner, 2001). Thus, network development and referral and liaison skills are essential to achieve arrangement of ongoing support and care. This session was repeated at least once, but might continue as negotiated between the RN and patient.

Table 9:

*The Interconnection between Elements of the Patient Intervention and Underpinning Theories and Concepts*

Task	Tools and Process	Theory or Concept
Assess	Complete <i>Health Risk Assessment</i> (Kinect Australia, 2005) (HRA) with client and initial <i>Clinical Indicators Screen</i> (CIS).	ICF Framework
Advise	Discuss the following with client and ensure: <ul style="list-style-type: none"> <li>(a) Understanding of information about relevant diseases (using handouts from Peak Organizations or existing resources).</li> <li>(b) Comparison of nurse measured client clinical indicators to recommended levels of clinical indicators.</li> <li>(c) Comparison of client self-reported levels of health</li> </ul>	Motivational interviewing Self-management support Collaborative goal setting

Task	Tools and Process	Theory or Concept
	<p>risk behaviours (using Lifescripts Information sheets and prescriptions (Kinect Australia, 2005) to recommended levels.</p> <p>(d) Discussion about change process and complete Readiness for Change Scale.</p> <p>(e) Patients are given any basic resources that might promote change.</p>	Goal attainment scaling
Agree	<p>Interview client about progress since last month and then:</p> <p>(a) Complete an <i>Areas of Concern</i> (AoC) Interview about bodily functioning, activity, participation, personal and environmental factors that help or hinder clients.</p> <p>(b) Complete a <i>Goal Attainment Sheet</i> (GAS) and solution focused questioning.</p> <p>(c) Develop a <i>Goal Action Plan</i> (AP).</p> <p>(d) Mobilise natural supports and inspire commitment through encouragement and motivational interviewing.</p>	<p>Goal attainment scaling</p> <p>ICF framework</p> <p>Motivational interviewing</p> <p>Ecological models of self-management</p>
Assist	<p>Interview client about progress since previous appointment and complete <i>Goal Attainment Sheet</i> (GAS).</p> <p>Discuss barriers to progress, celebrate successes, revise goals if necessary, check on usefulness of natural support systems and identify further strategies.</p> <p>Consider including family or other support people in subsequent session.</p>	<p>Goal setting</p> <p>Motivational interviewing</p> <p>Ecological models of self-management</p>
Arrange	<p>Make appropriate referrals to specialists, community services, self-management training courses or other external resources needed to support client's goals.</p>	Ecological models of self-management

## Conclusion.

The ACMP is a comprehensive, whole-of-practice program designed to facilitate RN-provided chronic condition care coordination. Based on evidence gathered across multiple general practice settings, the ACMP included three components (i.e., general practice preparation, RN preparation, and a patient intervention) in an environment of mentoring and support. The important step of preparing the general practice team for the inclusion of the program was rejected by the Division on the basis that it was too

demanding for the general practice. Instead, they recommended a process of self-assessment of existing practices, which was only fully completed by one RN. The entire program included mentoring and support from the research team and the nurse facilitators at the Division. The purpose of the ongoing mentoring and support was to assist RNs implement the ACMP.

The patient intervention drew on theory that addressed the findings of Studies 1 to 4. It built on existing chronic condition care practices as much as possible. Workshops were provided to prepare RNs and expose them to frameworks such as the ICF, person-centred practice, motivational interviewing, contextual assessment and collaborative goal setting within their work routine.

# The 5A's Model

## SESSION 1

**ASSESS** Patient completed assessment (Clinical Indicators Screen and Lifescripts Assessment) and received feedback on health behaviours

DATE: \_\_\_\_\_ NOTES:

**ADVISE** Make relevant, specific RECOMMENDATIONS for behaviour change using Lifescripts tools.

DATE: \_\_\_\_\_ NOTES:

## SESSION 2

**AGREE** Collaboratively identify AREAS OF CONCERN (AoC Interview) and appropriate GOALS (Goal Attainment Sheet).

DATE: \_\_\_\_\_ NOTES:

## SESSION 3

**ASSIST** Collaboratively develop an ACTION PLAN

DATE: \_\_\_\_\_ NOTES:

**ARRANGE** Make any necessary referrals for the client

DATE: \_\_\_\_\_ NOTES:

## SESSION 4

**FOLLOW UP:** Follow up and continue to record client interactions on EVENT CHART



# PRACTICE PREPARATION

## *Active Care Management Program*

### *Steps to Implementation*

#### Assess your systems readiness for change

- Assess staff values and beliefs
- Elicit patient opinions
- Introduce Active Care Management concepts

#### Assess your current management of Chronic Disease

- Assess current chronic disease services
- Assess current individual health professional and group (practice) systems
- Assess current clinical flow

#### Establish a process for delivering Active Care Management

- Obtain staff and administrative support
- Assign responsibility for tasks
- Determine the flow of information and materials

#### Evaluate your system

- Review and feedback
- Record
- Evaluate against goals

#### Reassess, Readjust, Refine

**Repeat process as often as necessary**





Today's Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
ID No: \_\_\_\_\_

## Appendix B

# Participant Information Sheet

## Improving Chronic Disease Management in General Practice

### What is this research about?

This study will examine the health and well-being of people living in the South East Queensland region. The study is being conducted by Griffith University and will help us to understand the impact of strategies to improve health services. The study aims to understand the factors that influence health and well-being for people who have a chronic condition. The research is being led by Professor Elizabeth Kendall, and other members of the University research team Ms Ronita Neal, Ms Carolyn Ehrlich and Dr Heidi Muenchberger.

### Who will see the results?

Unless you choose to share your results with your colleagues, no-one else will be able to identify your results. Any information that can identify you will remain confidential. It will not be disclosed unless you give permission to do so, and except as required by law. In any published information arising from the study, information will be provided in such a way that you cannot be identified. Only summarized data will be made publicly available so as to maintain your confidentiality. Your results will be stored securely in a lockable filing cabinet at Griffith University Logan campus. Information you provide for this study will be retained for a minimum of 5 years. After this time, your results will be destroyed.

### Who is eligible to participate?

If you have been invited to participate in this intervention, you are eligible to take part. To participate you must be over 18 years of age and are currently working in general practice. If you are unsure about your eligibility for the study, please contact the research team on Email: [projecthealth@griffith.edu.au](mailto:projecthealth@griffith.edu.au) or Telephone: 07 3382 1295

### What is involved?

If you choose to participate, you will be asked to complete either an individual or a focus group interview on one or more occasions. Questions will include items that relate to how you currently provide health care to people with chronic conditions. Some questions may be of a personal nature but you will be free to skip questions that you feel uncomfortable answering.

## Do I have to participate?

No. Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Your decision not to take part will not affect your relationship with your employer of the Division of General Practice.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

## POSSIBLE BENEFITS

By taking part in this study, you may become more aware of how you provide health care to people and strategies to assist you to provide health care to people with chronic conditions. The results of this study will potentially assist the way that health services are delivered to people with chronic conditions in the future.

## POSSIBLE RISKS

There are no major risks to your participation in the project, although you will potentially learn more about how to provide health care. All information will be de-identified and your responses will not be revealed to other parties, including MAIC.

## Ethical clearance

This project will be carried out according to the *National Statement on Ethical Conduct in Research Involving Humans* (June 1999) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

Any concerns about the conduct of this research project should be directed to the Manager, Research Ethics, Office for Research, Bray Centre, Nathan Campus, Griffith University (ph 3875 5585 or [research-ethics@griffith.edu.au](mailto:research-ethics@griffith.edu.au))

**Thank you for your interest in this research**



<b>Today's Date</b> ____/____/____ <b>ID No:</b> _____
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## Consent Form

### Improving Chronic Disease Management in General Practice

1. I have read the Participant Information Sheet regarding my involvement in the project. I have had the opportunity to ask further questions and am satisfied that I understand the project.
2. I understand that if I agree to participate in this project, I will be asked to complete an interview on one or more occasions.
3. I have been informed that participation in the project is voluntary and I may withdraw at my own request at any time and that this decision will involve no penalty or loss of benefit as a result of my withdrawal.
4. I also understand that if I participate in the project, and choose to withdraw before its completion, no explanation is required.
5. I understand that information obtained will be stored in strict security and will not be disclosed to parties outside the project team. Confidentiality of the data collected or any personal records identifying myself will be maintained throughout the project and all data will be de-identified prior to sharing information with other researchers. Data collected will be stored securely in a lockable filing cabinet at the Research Centre for Clinical Practice Innovation at Griffith University's Logan campus. My results will only be identified by an ID number and will not be stored with this consent form.
6. I understand that if I have any complaints concerning the manner in which a research project is conducted, I may discuss this issue with the Manager, Research Ethics, Office for Research, Bray Centre, Nathan Campus, Griffith University (ph 3875 5585 or [research-ethics@griffith.edu.au](mailto:research-ethics@griffith.edu.au)).

#### *Privacy Statement*

The conduct of this research involves the collection, access and/or use of your de-identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded. For further information consult the Griffith University Privacy Plan at [www.griffith.edu.au/ua/aa/vc/pp](http://www.griffith.edu.au/ua/aa/vc/pp) or telephone (07) 3875 5585.

**Your Name (print)** .....

**Signature**.....**Date**.....