Exploring the Role of Communication Structures and Networks of Senior Staff in a Public Hospital's Clinical Directorate

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Abstract

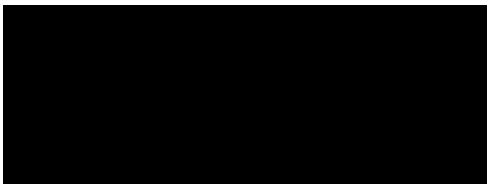
The clinical directorate (CD) governance structure of contemporary tertiary healthcare facilities was introduced to Australian hospitals three decades ago. The principle reasons for the change from the previous traditional professional model were to streamline patient care, reduce the costs of providing healthcare, and to ensure a patient-centred approach to healthcare for all Australians. Thirty years on, hospital executives continue to refine structures while paying close attention to the strategic aims and goals of their organisations. However, the effect of these structures on communication between executives, and the likely impact on their managerial roles and relationships, has received limited attention. To address this problem, this study employed a mixed methods approach to understand the influence of the CD structure on executive communication behaviours.

The focus of enquiry was the communication structures and networks of senior staff. The approach enabled an interactional view of executive communication networks in a tertiary healthcare facility in Melbourne. Three theories underpinned the study design that methodologically employed a social constructivist and social network analysis approach to answer the research questions. The constructivist position was taken because the focus was individuals' understanding of processes. Internally generated understandings of the world are distinct from social constructionism where understanding processes is an interactive, collaborative domain (Raskin & Debany 2018). Ten members of the facility's executive team provided data, which when analysed showed that communications were an intricately balanced phenomenon influenced by the structure of the organisation, their own agency, and that of their colleagues and peers. The project was undertaken in a time of change for the project organisation. The structure of the organisation was evolving under focused refinements by the executive team to create a fit for purpose. Findings suggest that apart from structural rebuilding, executives were personally challenged in establishing communication relationships with others in the context of a changing hospital structure. Noting the importance of wider hierarchical communication, this study focused on intra-executive team communication within the CD, the rationale being that if the executive team communicated well, a consistent message would be conveyed to reports (Keyton et al.

2013). Outcomes from the project demonstrated the importance of trust relationships to achieve effective communication and diffuse information. Effective communication is defined as having skills to transfer knowledge in a complex, cross-functional environment and to be competent in the transfer of knowledge to engage others (Waldeck et al. 2012). Enabling communication was dependent on established relationships, which were influenced by previous work collaborations, proximity, and familiarity. Hindrances to communication were excessive workloads, less time to establish and maintain contact between peers, geographical separation, presence of silos, and behavioural factors, which included limiting contact with other disciplines, exclusion from meetings, and limiting avenues for the development of long-term relationships. The findings contribute to the extant literature by developing the inchoate knowledge of agentive human behaviours within the CD. The emphasis on theoretical integration provides a robust account on which to build further research. Communication pathways and processes have implications for leadership effectiveness, which in turn affects the practice of teams and subsequent staff, system, and patient outcomes. Recommendations for action and future research are discussed.

Declaration

I, Marina Grace Keenan, declare that the DBA thesis entitled *Exploring the Role of Communication Structures and Networks of Senior Staff in a Public Hospital's Clinical Directorate* is no more than 65,000 words in length including quotations and exclusive of tables, figures, appendices, bibliography, references, and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.



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Dedication

This thesis is dedicated to my dad, Frank. Dad, here is the other 8%, with my love x

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To my mother Carmel, my sister Bronwyn (our PhD), my children Tones, Dan, and Grace, my wonderful friends Maree and John Doherty, and my lifelong mentors Lyn and Graeme Hardiman, you have laughed, cried, endured, and celebrated with me. Thank you for your love and support.

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List of Abbreviations

AT	activity theory
ANT	actor–network theory
CEO	chief executive officer
COO	chief operating officer
CD	clinical directorate
CUSP	Comprehensive Unit Safety Program
DL	distributed leadership
DLT	distributed leadership theory
HREC	Human Research Ethics Committee
IS	information systems
LMX	leader–member exchange
NHMRC	National Health & Medical Research Council
OB	organisational behaviour
SNA	social network analysis
ST	structuration theory

The thesis contains many acronyms. To improve readability, acronyms are included in full at the first mention in each chapter.

Chapter 1. Introduction

Over the past 30 years, the governance structures of tertiary hospitals in Australia have undergone significant change. The rearrangement of the traditional design, which was in place for more than a century in Australian hospitals, was introduced to reduce healthcare spending and, importantly, to streamline patient care (Degeling et al. 2006). The latter was achieved by grouping staff along service lines; the purpose was to improve efficiencies in patient care and the patient experience (Braithwaite 2006, p. 92). The reduction in healthcare spending remains, to this day, an equivocal achievement within the scholarship of the clinical directorate (CD). Recent studies suggest interprofessional collaboration within the CD structure has improved healthcare processes and achieved better patient outcomes and patient satisfaction (Braithwaite et al. 2016). The structure is known locally by several names, such as CD or business service unit. Equally, the arrangement of directorates or units varies significantly between healthcare centres. Healthcare centres are defined as organisations that administer care for serious health problems requiring specialist teams (Corbett et al. 2019). Globally, the change was a worldwide phenomenon with origins in the United States but was adopted by other Western countries (Braithwaite 2006) such as the United Kingdom (Button & Roberts 1997) and Italy (Lega 2008). Global reform was indicative of the worldwide problems associated with patient care and hospital management (Lega 2008).

Australia embraced this change in 1989 in response to the National Health Strategy of the time. Braithwaite (2006) identified extant research around the introduction of the new structural arrangements with a focus on design. Braithwaite and other Australian authors such as Dedman, Nowak, and Klass (2011) are critical of the lack of consideration given to the fundamental shift in relationships required between disciplines such as medicine and nursing. The shift required is best described as a more open, collegial, team-based approach to patient care, where communication is not based on rank or expertise (Iedema & Degeling 2001) and which requires some professionals to take on managerial roles. Research efforts continue to largely bypass the changes and subsequent issues that have eventuated from the integration of professions within the CD structure. The void in inquiry, however, provides

an opportunity to investigate and understand this complex phenomenon and is the purpose of this thesis.

In seizing this opportunity, the current research study was designed to illuminate the relationships between senior health professionals 30 years after the introduction of the CD governance structure. Senior health professionals are the executive staff of the focus hospital and constitute the unit of analysis in the study. The phenomenon under study in this thesis focuses on how these professionals communicated with each other with reference to the structures in which they worked (Braithwaite 2006). Braithwaite and Westbrook (2004) and Dedman, Nowak, and Klass (2011) found the CD's implementation lacked understanding of the effects of reorganising longstanding relationships to complement the new structure. Arguably, extant literature has not recognised team integration as a part of the CD's success story (Boyce & Law 2003). While the CD structure has been lauded for many achievements, such as significant streamlining of patient care (Duffield et al. 2006), the changes for staff could provide a valuable perspective. The disciplines of medicine, nursing, allied health, and management not only endeavour to maintain their autonomy to apply their professional expertise, but do so in the context of teamworking, where patient management is the domain of many disciplines (Degeling et al. 2003). Continuing to practise as a healthcare professional and maintaining professional relationships with others may be complicated when professional roles are juxtaposed with management responsibility (Duffield et al. 2007; Fulop & Day 2010).

1.1 Case Study Hospital

The case study hospital was situated in a suburb of Melbourne, Victoria. By comparison to other major healthcare institutions in Melbourne, this hospital was relatively new. The organisation was established as a result of the Victorian Hospitals Planning Board, where the Victorian government under Premier Jeff Kennett in the 1990s sought to amalgamate individually managed hospitals and relocate public hospitals away from the central business district (CBD) and inner city. The main hospital was opened in the late 1990s and included three satellite centres (Study Site Foundation 2017). The service has since grown to include two more satellite centres, accommodating a wide range of services for its clients. The health service provided care for one of the most diverse populations in

Victoria. The catchment community included residents from 126 different countries, speaking over 120 different languages (Study Site Foundation 2017). The service covered six local government areas and was one of the fastest growing communities in Australia (Study Site Foundation 2017). This corridor of Melbourne was expected to grow by 59% between 2016 and 2031.

The healthcare organisation supported a wide range of diverse specialty care services delivered via five satellite locations, including the main acute care health service centre. Over fifty different services were offered to and strategically located within the catchment. These services catered to newborn and paediatrics through to the elderly, supporting living healthy lives and assisting patients to live with chronic illness. The services included mainstream medical and surgical care, obstetrics and gynaecological care, and paediatrics and oncology. Allied healthcare formed a significant part of the care services and included physiotherapy, podiatry, social work, audiology, and aged-care assessments. The network also served the greater Victorian community through the organ and tissue donation service. Many of these services were also offered to outpatients, with more than 4,000 outpatient appointments undertaken weekly (Study Site Strategic Plan 2016–19).

The organisation's governance structure (Appendix A) was reflective of contemporary hospital governance structures in Australia. At the top of this structure were members of the office of the chief executive, the chief executive, and professional governance. The second tier consisted of a mixture of clinical and nonclinical staff who held the positions of general manager and executive director. In general terms, clinical staff held general manager positions, while nonclinical staff (not employed or qualified to undertake patient care) held executive director positions. A further position of clinical director was responsible for the divisions of clinical service offered by the organisation. Each general manager or executive director led directors of specialty areas. These included allied health, pharmacy, risk management, quality and service improvement, environmental services, and access and performance. There were 28 directorate specialties within the governance structure, incorporating both clinical and nonclinical aspects of hospital management and patient care. The breadth of services available together with the specialised treatments offered by the focus hospital classifies this service as a tertiary centre (Corbett et al. 2019).

Establishing a governance structure within this relatively new hospital had been a difficult process and continued to evolve. In 2014 to 2015, the executive group came under scrutiny when the hospital failed to meet state government key performance indicators. Failure in 2014 to meet targets for emergency and surgical care was followed by resignations of senior executives, including the chief executive officer (CEO) just prior to the release of performance figures in 2015. While information about this executive spill is scarce and should be treated with discretion, the unprecedented growth within the hospital's catchment appears to have contributed largely to the hospital's failings. The ramifications of the sudden change in executive in 2015 and the rebuilding since have continued to affect the current executive group. The outcomes of this project suggest rebuilding comes in many forms, not only in terms of structural changes but also in terms of changing personal work practices. At the time of the study, communication systems appeared indicative of the types of relationships between executives. The executive cohort was in flux with a frequently changing membership. Established trust relationships between executives were few, demonstrated by inconsistencies and the haphazard nature of communication pathways displayed by the cohort. Current hospital strategies appeared to be impacted by inconsistencies in structure and communication systems with all but a few executives showing sophisticated communication systems of a constant nature. Linkages between hospital strategy and structure and communication have continued to be at the centre of the rebuilding process with several executives acknowledging the need to standardise knowledge sharing and structural growth.

The hospital was approached because it met the criterion of being a tertiary healthcare centre. The hospital had an ongoing commitment to research through its research facility and agreed to take part. The introduction was guided by the request of the focus hospital's governance committee and was facilitated by a joint steering committee.

1.2 Problem Statement

The purpose of restructures in healthcare is to achieve improvements in resource management that lead to desired patient outcomes and improved experiences through staff performance. Communication between staff and patients is the foundation on which trust, care, and confidence are built. Communication between professionals in healthcare has

drawn criticism from many perspectives (Kral & Kralova 2016; Productivity Commission 2018; Yuen, Chen & Ng 2016); perhaps the most widely stated problem is that of the impact on patient care when patients do not understand the course of their care nor question the care given (Weller, Boyd & Cumin 2014). Communication problems, however, can extend much further than affecting patients' rights to choose care, staff satisfaction (Sochalski, Aiken & Fagin 1997), and well-being; communication within the healthcare system is also significantly influenced (Duffield et al. 2007).

Braithwaite (2006) noted the introduction of the CD structure challenged deep-seated behaviours of professionals in healthcare. New managerial roles represented a significant shift in processes that had been in place for many years. Braithwaite's early studies (2005, 2006, 2008) of the structure determined changes in staff behaviours to adjust to the new governance structure. Changing long-term practices of reporting, communicating, and work is problematic in the setting of a new governance structure. The current project provided an opportunity to revisit the day-to-day practices of healthcare staff to determine whether behaviours had adapted to the structure or whether resistance from healthcare staff persisted. The complex nature of health professionals' work can be assisted when the structure of the workplace is conducive to giving and acquiring knowledge through channels that support opportunities for staff to collaborate. These channels must be easy to access and provide links to the right personnel who have the skills to give advice and direction. Commonly understood channels contribute to ease in communication. Communication channels ideally reflect a logical flow of information and are understood by staff who work within and beyond the area of work (Bartels et al. 2009; Hickey et al. 2012; Luo et al. 2016; West 1999).

Because of the nature of the complex hospital environment, potential alternate communication channels can be established to expedite work issues. These types of channels are often established through professional alliances, friendships where colleagues have previously worked together, or loss of trust in mandated communication pathways (Scott 2007). Collateral routes may also open when the structure of reporting pathways is not efficient or easy to access. Through recursive practice, these alternate pathways may become established within hospital routines (Rabol et al. 2012). In considering the possibility of a disorganised communication system and its inherent associated problems,

understanding how and why professionals choose communication pathways may bring a greater understanding of how the hospital structure affects these relationships **(**Rabol et al. 2012). New knowledge may then be applied to reform mandated communication lines to improve services among professionals and between professionals and patients.

The forgoing challenges gave rise to the following research question:

In what ways do the communication pathways of the clinical directorate structure of hospitals support diffusion of information between executive and senior staff?

More specifically, the subordinate questions were as follows:

a. How are communication pathways currently implemented in the clinical directorate of the case study hospital?

b. How does the clinical directorate structure influence effective operation of these systems from the perspective of staff?

c. What aspects of structural arrangements specifically affect effective communication, and how do staff overcome these barriers?

1.3 Aims and Objectives

The major aim of the project was to understand the pathways CD staff members used to ensure their communication with others was effective. These pathways were examined in two ways: first to establish whether they constituted the communication channels mandated by the organisation and second to examine whether the communication pathways chosen by CD staff presented barriers or enablers to achieving effective communication relationships with others.

The study was designed to investigate the effects of communication, with the following objectives:

- To describe individual approaches to communication in the CD that were designed to achieve work outcomes;

- To explore challenges to communication between senior executives and their reports; and
- To discover the communication pathways and networks among the CD and estimate the potential effects of dispersing responsibilities.

The study is embedded in a theoretical approach. Theory is defined as a group of constructs and related variables providing a systematic view of a phenomenon. Identifying and applying constructs and variables occur to explain behaviours and attitudes, identify themes, and guide research activity (Creswell 2014). The process theories of structuration theory (ST; Giddens 1984), activity theory (AT; Engestrom 1987), and distributed leadership theory (DLT; Bolden 2011; Gronn 2000) were applied to construct a conceptual understanding of the impact of staff actions within the CD when communicating with others.

1.4 Contribution to Knowledge

The findings of this study contribute to the field of organisational behaviour (OB), particularly when applied to healthcare leadership. The study design responds to recent calls for multilevel, qualitative perspectives of complex contemporary organisations (Greenwood & Miller 2010; Paruchuri et al. 2018; Yuen, Chen & Ng 2016). The presence of microsociological processes in macro structures becomes evident when the multilevel approach is used. Macrolevel effects may also be evident in microstructures using the same approach (Bitektine et al. 2018). Using organisational theory, the study highlights agency within the healthcare sector at the micro, meso, and macro levels to understand how staff manipulate mandated communication pathways and overcome complexities in their work through communication. The study also drew on leadership theory to understand how work is delegated in a healthcare system where responsibilities are often dispersed both geographically and because of the organisation's governance structure. The theories in this research were chosen as each applies to understanding aspects of OB at different yet interconnected levels. The complexity of the CD required understanding from different perspectives to frame the research and interpret the results. The different lens each theory affords explained and justified the study's results. Connections between micro (individual),

meso (teams), and macro (leaders) of communication were illuminated by the construct of each theory overlapping with the other. ST guides the understanding of the use of agentive behaviour, the importance of trust, and the use of power in individual behaviour. AT incorporates individual behaviour and extends this behaviour to teams and to individuals who comprise teams. AT also refers to cross-boundary interaction, which is commonplace in healthcare. DLT was offered as suitable to the CD's structure following the literature review; this theory also incorporates individual behaviour and is relevant in leading teams.

The results showed communication between executives was contingent on both endogenous and exogenous factors. The contribution encompasses perspectives on communication theorised through the individual, the team, and leaders within the field. Understanding communication among the executive at three levels was contingent not only on using a multiple-theory approach, but also on finding a theoretical basis that could be applied to explain OB at one level and could interact with other theories (i.e., common constructs) to illustrate the experience of any team member as an individual, as part of a team, and as a leader.

The approach links directly to the research questions by focusing on human behaviour at individual, team, and leader levels: the internal dynamic human ecosystem. How humans behave at these levels is important in terms of effective communication and diffusion of information. Diffusion of information is a broad term to describe the passing of information between people. Agentive or hindrance behaviour will curtail the flow of information to others. Conversely, sophisticated, well-developed structural methods of communicating will enhance information flow.

While the restructuring of hospital governance systems was designed to make the delivery of healthcare more efficient and effective by improving patient care and lowering costs (Braithwaite et al. 2006), little consideration was given to how these changes would affect relationships between professional disciplines (Braithwaite 2006). Scholars and practitioners have debated about how disciplines such as medicine (Bleakley 2013; Dedman, Nowak & Klass 2011), nursing (Barrow et al. 2015), and allied health(Strasen 1991) would function in the team environment. However, in the ensuing 30 years, these discussions of the CD context for communication have received minimal elaboration

(Braithwaite 2006). This research contributes to knowledge about how staff establish and maintain their interdisciplinary relationships and what mechanisms of communication they employ to maintain their independence as professionals within the team environment and as leaders. New knowledge includes how the CD structure supports their communication in their everyday practice. The findings have implications for the practical arrangements for clinical directors and the communication flow among them within healthcare facilities.

1.5 Statement of Significance

The restructuring of hospitals has redefined communication channels between all levels of staff. Research suggests this reorganisation of relationships and pathways to communicate presents challenges for staff to achieve targets regarding patient care and to maintain positive working relationships between disciplines (Kral & Kralova 2016; Rabol et al. 2012). The barriers to effective communication in hospitals are crucial to understand and address. The decline of studies of the CD structure contributes to a void in understanding how contemporary healthcare staff can improve their relationships in a multiteam environment. Communication pathways may be improved to stimulate positive working relationships between the many professions working in the healthcare sector (Braithwaite et al. 2012). The present research brings an alternative perspective to understanding OB in healthcare through taking a multiple-theory approach. Employing three behavioural theories in a single inquiry into communication at individual, team, and leadership levels aimed to create an integrated perspective of possible influences on the nuances of communication between senior directorate leaders in the tertiary healthcare environment.

1.6 Definition of Terms

The following definitions refer to the terms used within the literature. Though the original authors clearly stated their ontological stance, how others have subsequently interpreted their work is also considered.

Clinical directorate (CD). These are aggregations of clinical services, comprising related wards defined by the specialty offered, units, and departments. The groupings are known by titles such as medical services or cancer services and are functions as well as

structures. They are intermediate organisational entities between the whole hospital on the one hand and the wards, units, and departments on the other, led by one or more senior clinician with business and administrative staff support (Braithwaite et al. 2005, p. 1150).

Structuration theory (ST). Giddens (1984) suggests there is a recursive relationship between structure (external forces such as rules, resources, and social systems/macro) and agency (capability to make a difference/micro); both structure and agency are important and equal in their influence on the individual. ST is intended to demonstrate the complex interrelations of human freedom (or agency) and determination (or structure) (Oppong 2014, p. 113), where "individual choices are seen [as being] partially constrained, but [they] remain choices nonetheless" (Bratton et al. 2007, p. 373).

Activity theory (AT). AT takes the perspective that practice is an activity and examines the associations between events and the context in which they occur. AT posits an agenda for understanding the interactions between people and their contexts by taking a social science viewpoint (Blackler, Crump & McDonald 2000 p. 278).

Distributed leadership theory (DLT). DLT is relatively new compared with AT and ST and is concerned with the social distribution of leadership. Two elements distinguishing DLT from other leadership theories are, first, the notion that the leadership function is dispersed over the work of several individuals, and second, that "the leadership task is accomplished through the interaction of multiple leaders" (Fulop & Day 2010, p. 348).

Actor. Defined as one who acts or does: a doer.

Agent. Defined as one who acts or is a doer; this term also includes one who has the power or autonomy to do (Webster Dictionary 2019).

Leader and leadership. According to Chiu, Balkundi, and Weinberg (2017), managers are perceived as leaders when they exhibit positive traits, build meaningful relationships, and have high organisational commitment. Internalising these traits and acting upon them constitutes leadership.

Manager and management. The terms manager and management are described within the literature as one who undertakes specific functions in organisations. These functions include planning, organising, staff management, budgeting, and reporting (Macleod 2012).

This is distinct from enacting leadership qualities (Do & Nuth 2019). DiGrolamo & Tkach 2017 make a distinction between these two terms stating leadership is guiding staff towards a vision and motivating staff to achieve the vision, while management involves working with staff to achieve daily tasks and organisational goals (DiGrolamo & Tkach 2017, p. 196).

1.7 Structure of Thesis

To begin, this chapter introduced the concept of the CD and, within the problem statement, outlined the importance of undertaking the current study. Communication between healthcare disciplines was the core of the inquiry, which was extended to understand the influence of organisational structure on communication pathways. The research questions provided the scope of the inquiry, supported by the aims in understanding the types of communication pathways used and how these influenced communication relationships. The potential contributions were outlined and significance of the research approach described. Chapter 2 presents a review of literature relevant to the project. The discussion includes a systematic literature review of the theoretical component. Chapters 3 and 4 describe the methodology and methods informing the research design and includes discussion around the application of theory along with introducing social network analysis (SNA) as a key methodology for interpreting the data emerging from the inquiry.

Chapter 5 brings to light the results of Phase 1 of data analysis. The structural coding illustrates the salient conceptual phrases from the interview data and contributes to the subsequent metasynthesis. The metasynthesis is the product of individually coded data drawn together into one narrative. The theoretical framework phases are employed to understand the multiple levels of communication within the CD. The final round of analysis is completed in Chapter 6 where the social networks are examined and qualitative and quantitative data are integrated.

The barriers and enablers of communication are illustrated in Chapter 7, using the human activity framework and a short narrative concerning the interplay of leadership activity within the CD. Chapter 8 draws the thesis to a close with conclusions and

recommendations; the results of the project are summarised, and conclusions and further research directions offered.

Chapter 2. Literature Review

In this chapter presents the literature concerning the clinical directorate (CD) structure and the inherent issues surrounding its implementation and problems identified in the research question. The chapter begins with a systematic review of the literature. Databases were explored to locate and understand how the three theories used within this study have been applied, both singularly and together, in past research. Each theory is a single entity; however, for the purpose of the current study, the way they interconnect is also important as together they provide a multiple-perspective view of organisational behaviour (OB) within the multidisciplined hospital structure through the lens of communication. The epistemological approach of the research is then considered and justified for its importance in placing healthcare workers within the project. The latter part of the chapter focuses on communication within the CD and provides examples of prior research. The chapter finishes with a summary of the themes and contributions made through previous work.

2.1 Introduction

This systematic review critically analysed the extent to which three specific OB theories have been used to support social science research in healthcare management. These theories are structuration theory (ST; Giddens 1973), activity theory (AT; Engestrom 1987), and distributed leadership theory (DLT; Bolden 2011; Gronn 2000). The review sought to understand the prevalence of the three OB theories to justify, situate, and explicate the communication practices of healthcare executives. Hornett and Lee (2017) suggested wicked or novel problems are best approached in a holistic manner, strategically considering the problem within the surrounding context. Communication within healthcare and between healthcare executives constitutes a wicked problem because of the complexity of the surrounding context. Wickedness is defined by the processes of organisations that are hard to define and in flux. They are subject to different interpretations and while appearing reasonable to some are quite unacceptable to others (Fergusson 2019). Fergusson (2019) posited it is reasonable to assume that in all organisations, members will both dispute and celebrate goals and policies of management. In this research project, accounting for this

context was achieved by examining the problem from various perspectives using these nominated theories. Primary, secondary, and tertiary reviews were carried out using 10 databases. A multiple phase review is consistent with advice from Tranfield, Denyer, and Smart (2003) to identify studies with methodological scrutiny. The literature search did not reveal an extensive amount of empirical research on communication practices within hospital environments; therefore, it is unsurprising that no studies were found to incorporate these three theories. The conceptual approach to the current research appears to be unique; no empirical work was found to use a multiple-theory proposition for the purpose of healthcare communication research.

The rationale for this review was to identify other research endeavours that have used ST, AT, and DLT to understand how executive communication occurs in major hospital settings. Past research has focused on the outcomes of poor communication between healthcare staff and patients and interdisciplinary healthcare communication. Research of this kind is often associated with examining costs to patients, both financial in terms of compensation and in terms of years of life lost through death or incapacity. The current research supports the notion that poor communication can also have immediate and long-term implications for executive leaders of healthcare organisations. (Davis & Beale 2015).

Objective

The literature review includes theory from empirical research to inform the current project. Theoretically based analyses offer a uniquely rich and nuanced understanding of the results and implications of a project. The creative contribution of this review is to elaborate on the benefits of a multiple-theory approach to large, wicked problems in healthcare, such as interprofessional communication, and to demonstrate the value such an approach brings to findings of an empirical nature. Understanding research findings in the context of established theory enables future research to be supported in its objectives, helps clearly define method and methodology, and builds on established knowledge. Within this review, the literature was systematically appraised to find evidence of the application of the three theories relevant to health research with reference to communication. The review followed the standard protocol set by the Prisma-P initiative (Shamseer et al. 2015) and prior published studies (Chadwick & Travaglia 2017; James & Quirk 2017; Simmons et al.

2019). A tangent of interest was any approach using several theories to understand communication in healthcare empirical research. Synthesising theory use in this manner demonstrates the benefits of a multiple-theory approach in contemporary empirical research, the conditions in which it is applied, and whether the approach contributes to understanding problems consisting of many conceptual influences. The following discussion includes deconstructing each nominated theory and contemplating how each may be used singularly and together to explain and understand communication practices in the complex hospital environment.

2.2 Methods

Eligibility criteria

The review protocol was explicit in terms of inclusion criteria for this review. Excluded articles were those of clinical trial origin. Included articles used the OB theories nominated, and those theories had been applied in research undertaken in the healthcare sector. Articles were sourced only from journals rated A and A* according to the ABDC rankings and SCImago rankings of Q1 or Q2. Including articles of this calibre to inform the systematic review ensures the use of high-quality, well-executed research designs that have undergone stringent review processes, attracting high citation rates (Drivas & Kremmydas 2020). These qualities add to the strength of the systematic literature review.

The eligibility criteria are set out in Table 1. The rationale for the criteria in Column 3 describes the requirements of the systematic review to inform a research project that comprises a major component of the researcher's Doctorate in Business Administration.

Table 1. Eligibility criteria

1. Characteristics	2. Inclusion Criteria	3. Rationale
Study design Theory-based systematic review restricted to research using ST, AT, and DLT	1. Search terms: 1a. ST, AT, and DLT as combined theoretical basis 1b. ST or AT or DLT used in combination or alone and combined with communication in healthcare 1c. Theorist contributing significantly to the inception and growth of ST, AT, and DLT Methods: quantitative, qualitative, mixed methods	This review supports a doctoral thesis using specified theories to support findings in research. The review was limited to these theories to understand how they have been applied in previous studies. Inclusion of all research methods was intended to highlight the extent to which these theories have been applied.
Participants	2. Healthcare workers inclusive of clinical and nonclinical status, e.g., healthcare management, financial officers, infrastructure	The governance structures of tertiary hospitals implicate all hospital staff in pursuing targets and standards.
Setting	3. Tertiary hospitals	This study was set in the tertiary hospital sector.
Timeframes	4. No limit to when articles were published	Imposing a no-time-limit criterion was intended to capture as many studies as possible for consideration.
Information sources	5. Databases displaying emphasis in publishing research on OB and information systems (IS) research Journals with A and A* ranking, SCImago ranking Q1 and Q2	These criteria were employed to narrow the search to those databases that produce the best research. Journal rankings criterion ensured the quality of the articles reviewed would be consistent and high.
Language	6. Articles written in English	The author was restricted in translation of articles other than English.

Information sources

The database searches took place over a 4-week period from 1 April 2017 to 29 April 2017. The databases were chosen for their expertise in the OB and IS fields. Table 2 indicates the databases searched and their indicative fields of expertise.

Table 2. Databases included in search

Database	Area of Expertise
Academic Search Premier	Social sciences, computer sciences, ethnic studies
Business Collection	Business fields including management, human resources, and corporate governance
Business Source Complete	All disciplines of business including management
Computer Index Australasia	Communications
Directory of Open Access Journals	Extensive coverage of many fields including social sciences and business and economics
Emerald Online Library	Includes health and social care, IS, human resource management, and OB focus
Oxford Journals Online	Humanities and social sciences
SAGE Journals	Business, humanities, and social sciences
Scopus	Life, Social, Physical and Health sciences
Wiley Online Library	Health and social sciences

Synthesis of results

In total, 22 articles were identified as meeting most of the inclusion criteria; however, most of these did not meet the healthcare setting criteria. Two articles (Bilodeau & Potvin 2016; Szilagyi & Sims 1974) discussed studies that were undertaken in the healthcare setting; however, actor–network theory (ANT) and path–goal theory were applied in these examples. Szilagyi and Sims (1974) studied leader effectiveness in terms of psychological support of staff; however, their article and research did not include the use of theories relevant to the current systematic review. The search results nevertheless prompted a series of contextual considerations for a holistic approach to communication between healthcare executives. Most notable was the interaction between leader and follower (Bolden 2011;

Sparrowe & Liden 2005; Szilagyi & Sims 1974) and leadership qualities (Currie & Lockett 2011; Festing & Maletzky 2011; Gronn 2008). The conceptual paper by Festing and Maletzky (2011) incorporated both ST and leadership theory to understand expatriate leader performance and the social antecedents that govern successful adjustment. The multilevel approach in this study accounts for the complexity of different social systems to which expatriate leaders must adjust during work assignments. The strength of this work is found in the consideration of antecedents, modes, or strategies used to adjust and the psychological, social, and cultural outcomes. This context suggested the need for a multifactorial, multilevel (macro, meso, and micro) approach. The authors of the latter study aimed to reset current knowledge of adjustment issues and move to a holistic account of the process using a multilevel approach.

By comparison, Currie and Lockett (2011) discussed the context of leadership practice and how distributed leadership (DL) is enacted. Their work suggests a greater focus on the macro interplay between leader and structures. Their perspective is context specific and encourages thoughtful exploration of the interactions among leader, follower, and context. They suggested that the appropriateness of DL relates to contextual factors such as flatter organisational hierarchies and opportunities to leverage skills across organisational boundaries. This viewpoint differs from Festing and Maletzky's (2011) work where a presentation of only macro- and meso-level views of leadership was given without consideration of the individual and their role in enacting this type of leadership style.

A further contextual consideration to emerge from the review is that of social systems. Bolden's (2011) review of DL presents a collective social process drawing similarities to the work of others (Wittmer 1997), where actions of group members were judged by others in terms of socially acceptable behaviour. The theme shared by these two authors and further by Sparrowe and Liden (2005) is that socially driven influences are accumulated by individuals and then become manifest in behavioural actions. "Relationships" are the focus of these authors' theorising. These three articles also situate the notion of leaders of complex situations within the meso–macro perspective.

The search results confirmed only a small number of artefacts encompassed a diverse approach to investigating communication in healthcare. Limitations of previous studies

were apparent in the context of the current project. Few papers considered the micro-social aspect of leadership, preferring to focus on the qualities of leaders rather than on impetus for leader actions (Sparrowe & Liden 2005). Limited research into how leaders interact with structure was also apparent. DL has been commonly studied in schools (Yuen, Chen & Ng 2016) despite acknowledgement that the leadership style is suited to structures of healthcare (Currie et al. 2011). Despite recent calls for multiple level and multiple theoretical approaches to research (Paruchuri et al. 2018), limited examples were found that encompass a multifactorial approach. Extending these findings to incorporate all levels of influence by using several theories could contribute to greater clarity in understanding context, drivers, and actions of healthcare executives in terms of their communication practices. The review artefacts are listed in Table 3.

Table 3. Articles fitting most of the inclusion criteria

Author/s	Title	Inclusion Criteria	Summary
Barley & Tolbert (1997) Discussion paper	"Institutionalisation and Structuration: Studying the Links Between Action and Institution"	1, 4, 5, 6	Links the actions of actors with a larger social structure Suggests using ST as a general research strategy defining institutions at risk of change, charting flow of actions, examining scripts for evidence of change, linking findings from observational data to other sources of data on change
Berends, Boersma & Weggeman (2003) Ethnographic and historical study	"The Structuration of Organisational Learning"	1, 4, 5, 6	Uses ST to show how organisational learning has evolved from distributed social practice Practitioners should focus on social structures to enhance learning within organisations Limits: uses only one theory to explain organisational how leaning can be enhanced
Bilodeau & Potvin (2016) Conceptual paper	"Unpacking Complexity in Public Health Interventions With the Actor–Network Theory"	1, 2, 4, 5, 6	Builds on ANT ability to address relational and context-dependent interactions—connecting network entities—both human and nonhuman: network and interventions shape one another Focuses on dynamic and recursive interactions between intervention and its context
Bolden (2011) Literature review	"Distributed Leadership in Organisations: A Review of Theory and Research"	1, 4, 5, 6	DL is less focused on the behaviour and attributes of leaders and more focused on leadership as a collective social process: a group activity that works through and within relationships Literature review: most articles published in education, some in health, less in general business; discusses power and influence

Author/s	Title	Inclusion Criteria	Summary
			Supports an extension of leadership studies away from central figure to context-situated understanding using discourse analysis
Currie & Lockett (2011) Discussion paper	"Distributing Leadership in Health and Social Care: Concertive, Conjoint or Collective?"	1, 2, 4, 5, 6	Focuses on context; suggests collective leadership is most likely to occur in health; asks how DL is enacted Draws together many concepts from different theorists, but no true bounded explanation
Festing & Maletzky (2011) Conceptual paper	"Cross-Cultural Leadership Adjustment: A Multi-Level Framework Based on the Theory of Structuration"	1, 4, 5, 6	Uses ST and leadership theory to understand leadership in the context of expatriate adjustment; ST supports understanding of social antecedents of the adjustment process
Gronn (2008) Review of previous studies	"The Future of Distributed Leadership"	1, 4, 5	Sees DL as somewhere on the continuum between concentrated to dispersed leadership
Jarzabkowski (2008) Longitudinal study	"Shaping Strategy as a Structuration Process"	1, 4, 5, 6	Managerial behaviour embedded shapes strategy; top managers successfully shape new interpretations but lower levels do not
Liang et al. (2015) Empirical paper	"Employees' Exploration of Complex Systems: An Integrative View"	1, 4, 5, 6	Looks at three major components: task, system, organisational environment Field survey Employers could enhance uptake by increasing job autonomy, designing personalised training programs, and encouraging innovation through changing organisational climate

Author/s	Title	Inclusion Criteria	Summary
Makkonen, Olkkonen & Halinen (2012) Empirical paper	"Employees' Exploration of Complex Systems: An Integrative View"	1, 4, 5, 6	Empirical study using practice–theory framework: food-processing company—business relationships and networks
Papadopolous, Radnor & Merali (2011) Empirical paper	"The Role of Actor Associations in Understanding the Implementation of Lean Thinking in Healthcare"	1, 2, 4, 5, 6	ANT useful in tracking how actors shift their positions and network allegiances over time; set specifically in change process
Pentland, Haerem & Hillison (2010) Empirical paper	"Comparing Organisational Routines as Recurrent Patterns of Action"	1, 4, 5, 6	Argues that recursive patterns of action are excellent for studying organisational routines
Poole (2013) Discussion paper	"Structuration Research on Group Communication"	1, 4, 5, 6	Discusses the mechanisms of actors in group when arguing, i.e., micro-intentional moves, norms, and actions Research onto group communication is truly a mixed method undertaking
Pozzebon & Pinsonneault 2005 Discussion paper	"Challenges in Conducting Empirical Work Using Structuration Theory: Learning from IT Research"	1, 4, 5, 6	Two studies use ST (p. 1355) Focus: how organisational phenomena and how technology shapes organisations affect the development and use of technology Paper differentiates between ANT and ST
Sims, Hewitt & Harris (2015) Realist synthesis	"Evidence of a Shared Purpose, Critical Reflection, Innovation and Leadership in Interprofessional Healthcare Teams: A Realist Synthesis"	1, 4, 5, 6	Literature review of how teams work, identifying nine key mechanisms

Author/s	Title	Inclusion Criteria	Summary
Sparrowe & Liden (1997) Discussion paper	"Process and Structure in Leader–Member Exchange"	1, 4, 5, 6	Looks further than the traditional leader–member dyad and tries to clarify the exchange processes; SNA used to examine other leader–member relationships, perhaps those based on resources, power Leader–member exchange focuses on the quality of relationships; SNA focuses on structure of relationship: both complement each other—extends knowledge on leadership
Sparrowe & Liden (2005) Longitudinal study	"Two Routes to Influence: Integrating Leader–Member Exchange and Social Network Perspectives"	1, 4, 5, 6	Develops a theoretical model of the relational antecedents of influence How do members become influential? May have more access to resources through informal relationships
Szilagyi & Sims (1974) Empirical study	"An Exploration of Path Goal Theory of Leadership in a Healthcare Environment"	2, 3, 4, 5, 6	Path–goal theory does not support a positive relationship between leader and subordinate when tasks are unclear
Whittington (1992) Discussion paper, citation analysis	"The Structuring of Organisational Structure: A Note"	1, 4, 5, 6	Citation analysis of ST; uses institutionalist theory to discuss Giddens and the contradictions between social systems, especially with regard to leadership
Wittmer (1997) Empirical paper	"Communication and Recovery: Structuration as an Ontological Approach to Organisational Culture"	1, 4, 5, 6	Study of an Alcoholics Anonymous group where recursive actions of members are studied and evaluated with ST

Author/s	Title	Inclusion Criteria	Summary
Yates & Orlikowski (1992) Conceptual paper	"Genres of Organisational Communication: A Structurational Approach to Studying Communication and Media"	1, 4, 5, 6	Study of communication process in organisations as a socially embedded process
Yuen, Chen & Ng (2016) Empirical paper	"Distributed Leadership Through the Lens of Activity Theory"	1, 4, 5, 6	Study of leadership in schools using AT; looks at interrelated systems and how they impact leadership

Search

The articles identified in this review were discovered by using a systematic search of 10 databases. These databases were chosen in consultation with experts in the fields of OB and information systems (IS) as having a high standard of publication in the respective fields. The databases were located on the Victoria University library website and indicated the expertise and subject matter located within each. The search was divided into three phases. Phases 1 and 2 consisted of a global search and secondary search. Phase 1 (see Table 4) consisted of searching the nominated databases: A global search using the free-text terms "structuration theory, activity theory and distributed leadership theory" was first applied to appraise the extent of debate using these three particular theories.

Table 4. Literature search: Phase 1, primary search

Database	Primary Search (Search Terms ST, AT, LT)
Academic Search Premier	0
Business Collection	0
Business Source Complete	0
Computer Index Australasia	0
Directory of Open Access Journals	0
Emerald Online Library	206
SAGE Journals	543
Scopus	0
Oxford Journals Online	474
Wiley Online	538
Total number of articles found	1,761

The secondary search used these theories in the singular with the terms "communication and healthcare" (see Table 5). Several databases returned many articles, whereby Boolean operators were used to distinguish search terms such as "activity" and not "activities", "communication" and not "communities". Of the articles identified as a close fit to the inclusion criteria (satisfying most but not all the criteria), a hand search of reference lists of these articles was conducted. Figure 1 provides a summary of the Phase 1 search.

Table 5. Literature search: Phase 1, secondary search

Database	Secondary Search		
	ST and Communication in Healthcare	**AT and Communication in Healthcare**	**LT and Communication in Healthcare**
Academic Search Premier	6	233	1
Business Collection	0	0	0
Business Source Complete	1	52	1
Computer Index Australasia	0	0	0
Directory of Open Access Journals	0	6	1
Emerald Online Library	44	1304	453
SAGE Journals	160	0*	942
Scopus	3	72	0
Oxford Journals Online	0**	0*	600
Wiley Online	0	0	0
Total	313	1667	1,998
Total number of articles found			3,978

*Boolean operator NOT activities & NOT communities used. **Boolean operator NOT communities used.

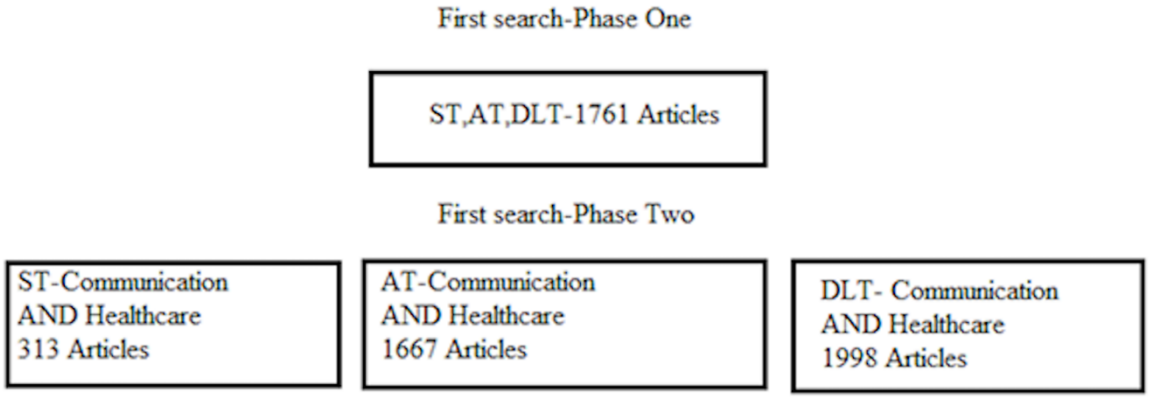

Figure 1. Summary of first search: Phases 1 and 2

Phase 2 (Table 6) consisted of the same search parameters; however, this search was also directed at a series of journals nominated by experts in the fields of OB and IS. Again, the global search was undertaken using the terms “structuration theory”, “activity theory”, and “distributed leadership theory”. The secondary search then used each theory in the singular with the free-text search terms “Communication and Healthcare”.

Table 6. Literature search: Phase 2, primary and secondary search

Management Journals	Impact Factor	SCImago Rating	ABDC Rating	Primary Search: ST, AT, LT	Secondary Search: Communication and Healthcare +			
					ST	AT	LT	Total
Academy of Management								
– Perspectives	3.94	Q1	A	0	0	21	21	42
– Review	7.228	Q1	A*	5	5	90	100	200
– Journal	6.233	Q1	A*	0	6	92	0	98
– Learning and education	2.458	Q1	A*	6	1	22	30	53
American Journal of Public Health	4.138	Q1	A*	0	0	0	0	0
Administrative Science Quarterly	5.316	Q1	A*	3	16	84	74	177
Decisions Sciences	1.1418	Q1	A*	0	0	0	0	0
European Journal of Operational Research	2.679	Q1	A*	0	0	0	0	0
Journal of Business Research	2.129	Q1	A	1	2	74	7	84
Journal of Occupational & Organisational Psychology	2.059	Q1	A*	0	0	22	17	39
The Leadership Quarterly	5.631	Q1	A*	0	0	0	0	0
Behaviour and Information Technology	0.839	Q1	A	0	0	0	0	0
Communications of the ACM	3.621	Q1	A	0	0	0	0	0

Management Journals	Impact Factor	SCImago Rating	ABDC Rating	Primary Search: ST, AT, LT	Secondary Search: Communication and Healthcare +			
					ST	AT	LT	Total
Group Decision and Negotiation	1.312	Q1	A	0	0	0	0	0
Information, Communication and Society	3.80	Q1	A	0	0	0	0	0
International Journal of Information Management	2.692	Q1	A	0	0	0	0	0
Information Systems Frontiers	1.077	Q2	A	0	0	0	0	0
Knowledge, Management Research & Practice	.0595	Q2	A	0	0	0	0	0
MIS Quarterly	4.901	Q1	A*	0	0	0	0	0
Total				15				693

Phase 3 consisted of more specific search parameters to identify the seminal writers and/or contributors to each theory (Table 7). Identifying seminal writers was important to categorise the development of each theory over time and to attempt to place these theories empirically in the realm of research practice. This tertiary phase was applied to the 10 databases described in Table 2. The search terms used included noted philosophers and authors of each theory in the singular combined with the terms "Communication and Healthcare".

Table 7. Tertiary search: Seminal authors—author AND theory AND Communication AND Healthcare

Authors	Theory	Search Extensions	Total
Giddens, A	ST	Communication and Healthcare	15
Engestrom, Y	AT	Communication and Healthcare	6
Bolden, R; Gibb, CA; Gronn P; Spillane, J	Distributed cognition/ AT: DL	Communication and Healthcare	7

Study selection

Titles and abstracts were examined with a purpose of identifying papers and satisfying as many of the set criteria as possible. The selected articles displayed the use of one or more of the nominated theories. Variations of theories such as ANT were included as having similar properties to ST and AT. Articles written as reviews, perspectives, or conceptual work were also included in the initial process of title and abstract assessment to make the search as inclusive as possible. One criterion, the setting, was set aside until final assessment to reduce the likelihood of rejecting articles that were not read in full. The works of the seminal writers discovered in Phase 3 were set aside for referencing and additional information to be used in Section 2.5 "Discussion" of this review.

2.3 Data Collection Process

A criteria template was developed to summarise the findings as each article was reviewed. Due to the initial large number of articles, this type of documentation was applied during the second search in each phase, with each paper requiring a minimum of

three criteria to be included in the final dataset. This established some commonality in the large number of papers discovered in the initial search. This type of screening was required as the search terms produced many articles for which the terms “activity” and “theory” yielded extraneous results such as “activities”.

Data items

The variables included in this search were defined by the inclusion criteria, participants (both clinical and nonclinical from hospital settings), interventions, or explanations of results using ST, AT, and DLT. Comparisons were made of how theory guided or explained the research inquiry. Outcomes of any description to be supported by the stated theories and study designs could incorporate quantitative, qualitative, or mixed methods approaches.

2.4 Results

The search process and categorisation of the data collection phase is illustrated in Figure 2.

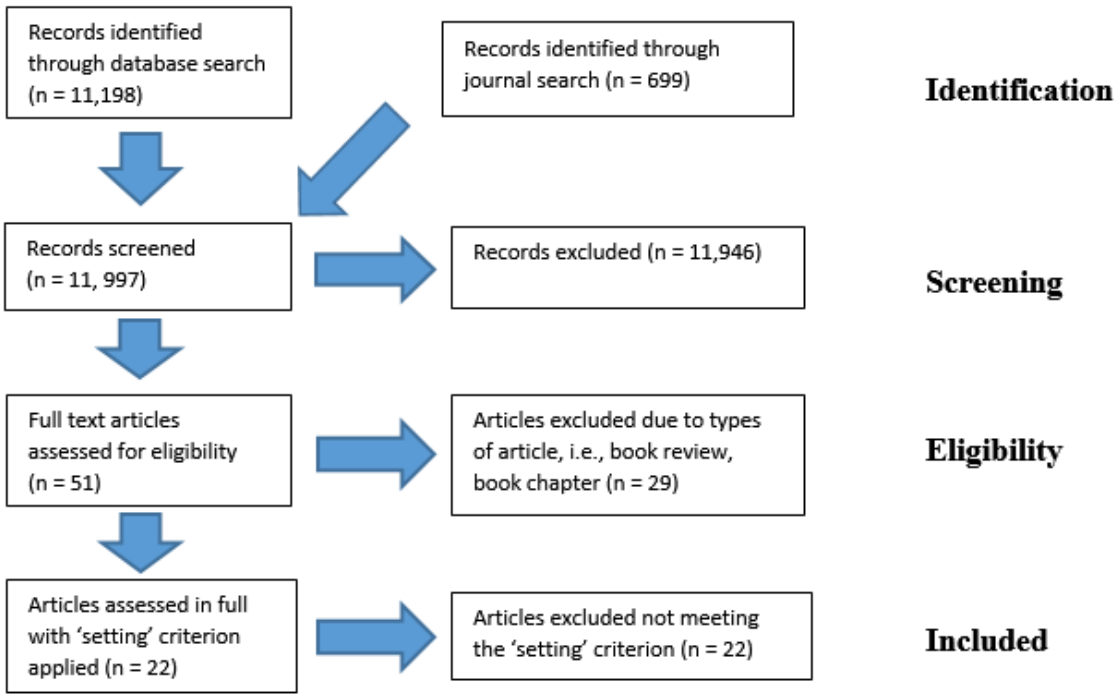

Figure 2. Data gathering through different phases of the systematic review

Source. Moher et al. (2009).

2.5 Discussion

The theory-led systematic review demonstrated some shortcomings in healthcare research with respect to multiple-theory-based inquiries. Understanding any individual in healthcare provides a significant challenge in conceptualising their role in influencing processes and outcomes within structure. The review sought to locate and synthesise the literature that supports or describes the role of the individual in organisations, individuals as team members and their shared or interrelated activities, and the interrelatedness of leaders with teams and individuals. Theories were compared with other OB theories, and found to be relevant to the point of interest describing individual, team, and leader behaviour. Of relevance was the scope of these three theories to provide a micro, meso, and macro level of inquiry into individuals, work groups (as teams of people), and organisational structures, respectively.

Structuration theory

The search for articles based on ST yielded 214 articles (1.4%) in the Phase 1 secondary search. In the Phase 2 secondary search, 30 articles (4.2%) were located and identified as being related to communication and healthcare. Of these articles, none met the final criterion of describing empirical research in the healthcare setting.

Employing OB theory in research can be traced back to the early 20th century. Miner (2003) distinguished between first- and second-generation theories, citing systems, abstractions, and bureaucracy-related concepts as first-order theories in which social, mechanistic, and process theory were developed. Giddens' (1984) theory of structuration is one of process. When mapped, the macro–micro links that occur because of everyday interaction contribute to understanding reciprocity between structure and action (Barley & Tolbert 1997, p. 111).

Properties of structuration theory

Giddens' (1984) ST is used to understand processes. The key constructs within the theory are agency and structure. Giddens elaborates that agentive human behaviour is expressed through practice and agency by monitoring the social and physical routines of self and others (p. 5). Agency refers to the capability of people to do things. The course of their behaviour would be conducted differently had they responded differently; their intervention changes the outcomes of activity flow (Giddens 1984). Agentive human behaviour encompasses agentive practice and agency. Signals of agentive behaviour in organisations may be found where institutionalised practice has changed or varied. Institutionalised practice must first be conceptualised if the variants are to be identified. Deciphering what is mandated and what has come from continued evolution of practice, sometimes over many years, is difficult as agentive practice often has the currency of purposeful and sanctioned legitimacy. Consistency in variant behaviour between managers is useful to understand when identifying causal agents for agentive behaviour. Consistency may indicate that purposive and habitual behaviour is a more common-sense approach to the task. Giddens' (1984) theory supports the singular approach to understanding behaviour at the individual level. The manager's strategic behaviour for personal or organisational gain is understood when the motives for that behaviour are revealed. Should this behaviour

vary from the mandated method or represent a variant to other accepted methods and be substantiated as a means of achieving outcomes, then this can be expressed as agentive behaviour. The decision becomes whether to accept this behaviour as a common-sense approach and the impetus for changing previously held views of work method, or to discount the method as disruptive and nonstrategic.

Conceptualising the problem with structuration theory

Giddens' theory is crucial for challenging the contributors to practice and conceptualising the influences of these practices in large organisations. When using ST to understand the individual behaviour phenomenon, the researcher is guided towards those behaviours established and used by the individual and discerning these behaviours from the mandated pathways. The behaviours can then be applied at group level to understand each member's contributions and the social processes that occur to reach consensus. Structuration of group communication can occur by conceptualising the constitution of groups and members of groups (Poole 2015) by focusing on the fundamental units of group communications such as group argumentation, decision development, and deliberation as well as group mechanisms such as rules of logic, acceptance of norms, and the exercise of power to influence argument outcomes. As members engage in the processes of decision-making, they consolidate as entities (Poole 2015, p. 610) and as groups become more influential in the socialisation of work practices. This socialisation has a further function to sustain and enhance linkages with other groups, substantiate restructuring of organisational norms, and buffer threats to the status quo established by the group (Poole 2015).

Integrating structuration theory with activity theory and distributed leadership theory

Giddens' theory can be articulated with two further theories that are presented to incorporate the micro, meso, and macro view of communication behaviours in the healthcare setting. AT and DLT describe human behaviour at different behavioural levels of analysis in the interactionist sense (Blackler, Crump & McDonald 2000; Gronn 2008). The former is applied to teams and individuals within teams (meso level); the latter is applied to the study of leaders or leadership (macro level) in healthcare or other settings. At the micro level, ST views individuals as agents and as products of structures and processes, whereas AT considers the entity and subsequent power expressed by individuals as groups.

As each group substantiates their work practices, they integrate with other groups that have undergone similar growth. As groups interact, perhaps where jurisdiction of tasks overlaps, the articulation points of the theories are revealed. The common elements such as power, agentive behaviour, and socialisation are illustrated at group or team level. The change of context (from individual to group level) then includes interrelated activity systems and the interaction of networked individuals (Yuen, Chen & Ng 2016). Further, the sociocultural influences are simultaneously shifted to incorporate a larger number of employees, implicating the tenuous nature of tools, rules, and norms within the social group. Group communications move to a higher, more intricate level where structure is directly affected by the interplay of individuals and groups. Agentive and recursive practice at a group level has the power to change rules and tools and therefore norms at the structural level, possibly faster than at the individual level. When leaders and leadership are added to the dynamic interaction between people, structure, and their agency, leaders' practice naturally engages with individuals and teams as well as their own strategies, self-interest, and needs.

Applying ST at the macro level of social interaction, relationship development between staff and leaders, including informal relationships, incorporates the aforementioned concepts and considers a leader's or leadership perspective. Leadership includes the consideration of not only individual leader needs, but also those of the team they lead (Anderson & Sun 2017). Agency then becomes two dimensional and may pivot on the type and nature of relationship shared by the leader and their team members. Teams of a distributed nature may be more democratic in practice and encourage team discussion and choice making (Currie & Lockett 2011). ST illustrates the influence of social interplay at the macro level (Jarzabkowski 2008) and considers overlapping teams and the influence that team choices and actions have on other teams (Igira 2012). Leadership style may facilitate the interaction between teams, incorporating individual and team agency, and organisational procedures and rules (Friedrich et al. 2009). ST at the macro level incorporates both the individual and the team leader as the knowledgeable actor and one who enables and constrains rules and resources (Pozzebon & Pinsonneault 2005). Both intended and unintended actions in the context of rules compliance and resource allocations contribute to the construction and reconstruction of the structure (Kramer et al. 2017). ST can be applied across three major levels of organisations; its interactive constructs

contribute towards the multilevel lens undertaken in the current project. Figure 3 outlines the constructs of ST applied in this study and begins the development of the theoretical framework. As each theory is discussed in this chapter, the major constructs are added to the framework. The completed framework is presented in full in Section 3.2 ("Theoretical Framework") where its application to the study is explained.

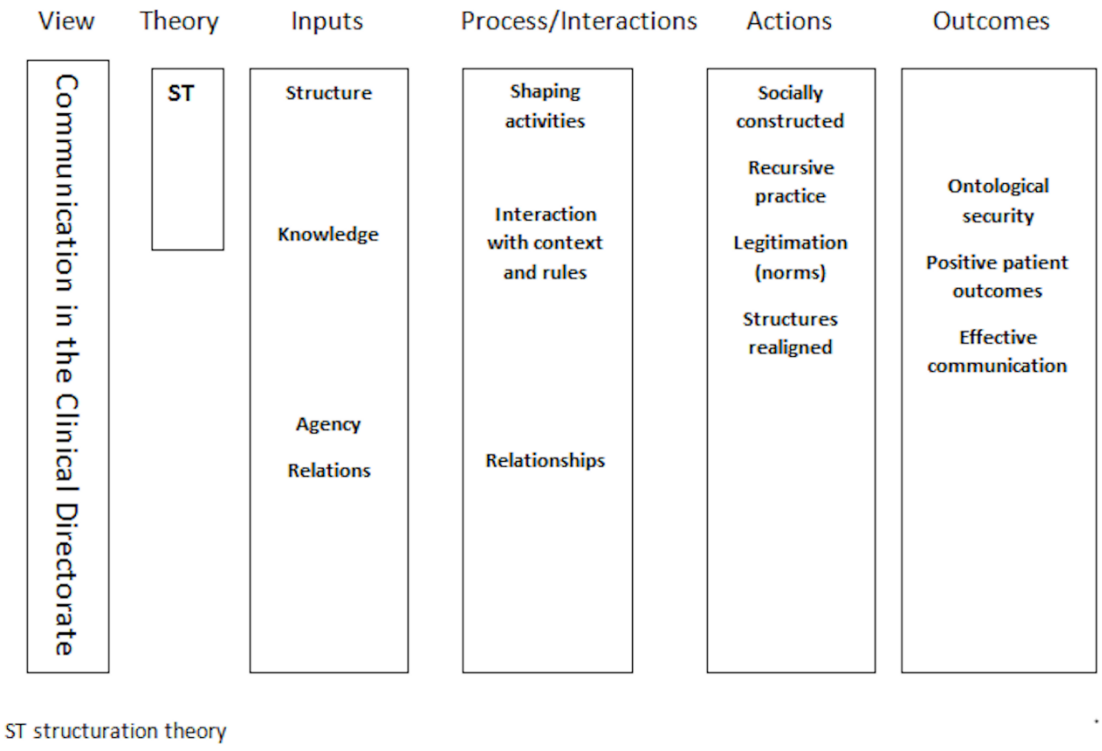

Figure 3. Theoretical framework inclusive of structuration theory constructs

Activity theory

The search for articles based on AT yielded 1,667 articles (14.8%) in the Phase 1 secondary search. In the Phase 2 secondary search, 405 articles (57.9%) were located and identified as related to communication and healthcare. Of these articles, none met the final criterion of describing empirical research in the healthcare setting but rather described AT in relation to healthcare issues (Epitropaki et al. 2017). However, while AT is not cited often in empirical work in healthcare, the theory features more commonly in IS research and the education context (Yuen, Chen & Ng 2016).

AT is also concerned with processes. Engestrom's (2000) third- generation AT emphasises the transformation of work practices over time (Avis 2009). Historically, AT has been influenced by Karl Marx and early Russian philosophy (Avis 2009). First-generation AT is attributed to Vygotsky (Roth & Lee 2007) whose construct was of mediating influences between subject and object based on stimulus–response behaviour. Vygotsky's student, Leontiev, extended his mentor's work (second generation) by distinguishing between action and activity (Bakhurst 2009), where division of labour and the recursive individual practices inform wider social activity. Third-generation AT is used to make sense of practice through shared cognition that incorporates understanding the relationships between activity, agents, and the community and can be applied to communication relationships (Blackler, Crump & McDonald 2000). Extension of the work of original theorists Vygotsky and Leontiev (Engestrom 2000) continues to evolve with successive attempts to understand the relationships between interrelated activity systems. Third- generation AT addresses behaviour by individuals, whereby individuals work together, temporarily take leadership roles when their expertise is required, or work across boundaries to include the work of other units in cooperation (Avis 2009, p. 154).

Avis (2009) posited the application of AT could potentially induce transformational change through changing the way a task is framed from one that is problematic or difficult to one that is more effective. AT constructs enable researchers to focus on the sociocultural context to analyse collective activity (Yuen, Chen & Ng 2016). In hospitals, this application translates to what individuals and/or groups do to achieve outcomes at both group and organisational levels. The social relationship is based on the subject and object. The subject may be a directorate team who undertakes activities to meet team targets (object) or outcomes. Third-generation AT considers more than one team where the activities overlap or are interrelated. Whereas this research approach has been applied in the education sector, the application to healthcare is appropriate as the work of teams often overlaps as teams strive to achieve outcomes such as excellent patient care, meeting a performance target, or applying policies (Yuen, Chen & Ng 2016). AT is useful for understanding communication practice within the complex team environment. Complex team environments are environments where staff work across boundaries and are guided by rules, norms, policies, and conventions that require interpretation. (Yuen, Chen & Ng 2106). In AT, the social

relationships are bound by rules, norms, policies, and conventions (Yuen, Chen & Ng 2016), which form the foundational elements of multilevel communication processes, the focus of the present study.

Properties of activity theory

AT describes the interaction between actors where their roles and responsibilities overlap, and collective behaviours that are mediated by tools and signs (Engestrom 1987; Kerosuo & Engestrom 2003). Tools are defined as templates or policies and procedures, which are implemented and interpreted differently across all disciplines (Kerosuo & Engestrom 2003). Signs can take different forms—for example, body language and gestures that indicate acceptance or rejection. Language and communication can also signal willingness to engage/disengage, be satisfied/dissatisfied, and the like. Human activity is defined by the subject and object, which are mediated by artefacts such as the community, division of labour, and rules.

The meaning of activity within the literature is equivocal; for example, Bakhurst (2009) suggested the immense number of activities undertaken by humans defies adequate explanation of the term. In this thesis, the meaning of activities aligns with the three underpinning theories. ST focuses on individual agentive practice. In DLT, the unit of analysis is leadership activity (Yuen, Chen & Ng 2016). *AT relates directly to the action of the subject on the object to produce an outcome and the subsequent influence this interaction has on other groups.* AT presents a network view of the organisation; where the system has distinct boundaries, well-defined objects, and desirable outcomes, AT is well placed to analyse these structures (Bakhurst 2009).

Due to complex organisational boundaries, work can become obscure and fragmented. Understanding the machinations of complicated, overlapping activities requires comprehension of each activity as an activity system through adopting different perspectives of the same system or community. The shared cognition includes understanding the extent to which members recognise where activities overlap and the consequences of their actions on other communities, as well as identifying priorities, particularly within multidisciplinary systems, and recognising authorities and influences. Three perspectives are identified as important in achieving understanding of complex

networks (Blackler, Crump & McDonald 2000). These perspectives include the contributions brought by different groups to the network, the relationships between those groups, and supporting innovation through understanding the context of the problems to be solved by the network. AT is applied to understand organising processes within systems where activities are complex and overlap, and where the common goal is the strategic advantage and success of the entity (Blackler, Crump & McDonald 2000).

The CD is both complex and multidisciplinary, where roles and responsibilities overlap and are shared. AT is a useful model to apply to certain problems within organisations (Bakhurst 2009; Igira 2012; Yuen, Chen & Ng 2016) and to understand communication in healthcare. The schema to apply the model was developed by Igira (2012) and is summarised as such. The subject (staff) and the object (communication pathways) are first identified, along with the artefacts connecting and interacting with the two (Engestrom 2000). The intervening artefacts could enable or facilitate the activity of communicating and arise from the purposeful behaviour (recursive and agentive) of staff, which in turn affects future interactions. These artefacts may also be attributed to rules and norms and be hampered by divisions of labour and the misalignment of reporting lines or structural arrangements, such as distributed teams and geographic dispersion of organisational units/teams. The application of AT illuminates overlapping activities as a multimodal network that can be mapped to reveal the interactions between them (Engestrom 2000). This schema is developed further in Section 3.3 and adapted to the study results in Section 7.1.

AT is a framework to understand the dichotomies of structure within large organisations. Dichotomies (macro- and micro-level structures) are conceptualised by addressing the six core elements suggested by Engestrom, specifically, the subject–object relationship, rules, communities, division of work, and mediating tools and artefacts. The contrast between macro- and micro-level structures are defined to understand the influence each element has on the functions of teams at each level (Avis 2009).To employ Engestrom's theory, a minimum of two activity systems is required because an activity in relation to another group cannot be described in total using only one group. Transformation of activity systems occurs where the opportunity to question existing standard practices exists. Such questioning is followed by analysing contradictions and the effect of existing

practice on existing outcomes. Further steps include the development of new practice methods with subsequent implementation and review (Engestrom 2000).

The method enables the analysis of activities in complex organisations being applied most often in education, particularly the examination of activities in schools (Avis 2009; Roth & Lee 2007; Yuen, Chen & Ng 2016). AT can also assist in analysing complex healthcare environments. Engestrom recognised the complex nature of the healthcare system regarding well-defined divisions of labour, such as doctor, nurse, and manager. He discussed the omnipresence of tools, rules, and norms where working spheres were guided by individual and collective expectations, some unique and others arbitrary (Engestrom 2008). He also highlighted the dichotomy and contradiction between profit making and the delivery of care (Engestrom & Glaveanu 2012). In his critique, Avis (2009) arguably simplified the considerable body of Engestrom's work into a series of management techniques. By contrast, Engestrom emphasised the learning that comes from analysing complex systems from the ground up, requiring thoroughness in conceptualising influential factors. He suggested Avis's version lacked reflection and consideration of the evolution of AT and as such offered only a basic management and psychologically based toolkit (Engestrom 2008, p. 258).

Integrating activity theory with structuration theory and distributed leadership theory

AT articulates within and around ST and DLT, incorporating constructs of these two theories. The basic tenets of AT are formed by human responses, response mechanisms, and the social world. Tools, rules, and norms are formulated through historical evolution of necessity and regulation. This process is mediated by the requirements discovered by the individual, over time, to complete the task, reach goals, and interact with others. Agency is the foundational mechanism by which individuals adapt their structural environment both temporally and socially. Individual needs and desires influence the way integration occurs with others (Giddens 1984). Contradictions occur at all organisational levels because of the interaction of individuals and teams. The intersection of groups holding similar interests, such as those found in healthcare, but differing divisions of labour touches on the concept of boundary crossing and distributed work. Engestrom and Glaveanu's (2012) theorising on how to improve work processes in the cross-boundary situation includes knotworking,

which he defined as using multiple sources of expertise that are employed according to the task (Engestrom and Glaveanu 2012). Knotworking bears similarity to DL constructs. Knotworking refers to the constantly changing yet orchestrated collaboration among professionals, as the situation requires (Engestrom 2000). DL embraces the changing of leaders as demand necessitates, utilising the skills of each team member appropriate to the current task (Currie & Lockett 2011). The model is highly innovative because it relies on group members understanding the outcomes of their actions on both the object and other subjects. It requires knowing when to "dissolve" the current knot in favour of the next required collaboration (or knot). It will be inherently mediated by the agency of group members and serves to distribute or divide labour to produce the best outcomes. The three theories are dependent and reflexive. Together they form an intricate bond as an iterative process that circles widely around many common elements and as a single entity to explain complex OB at varying levels.

These constructs are now included in the theoretical framework in Figure 4 (in italics), building on the constructs of ST.

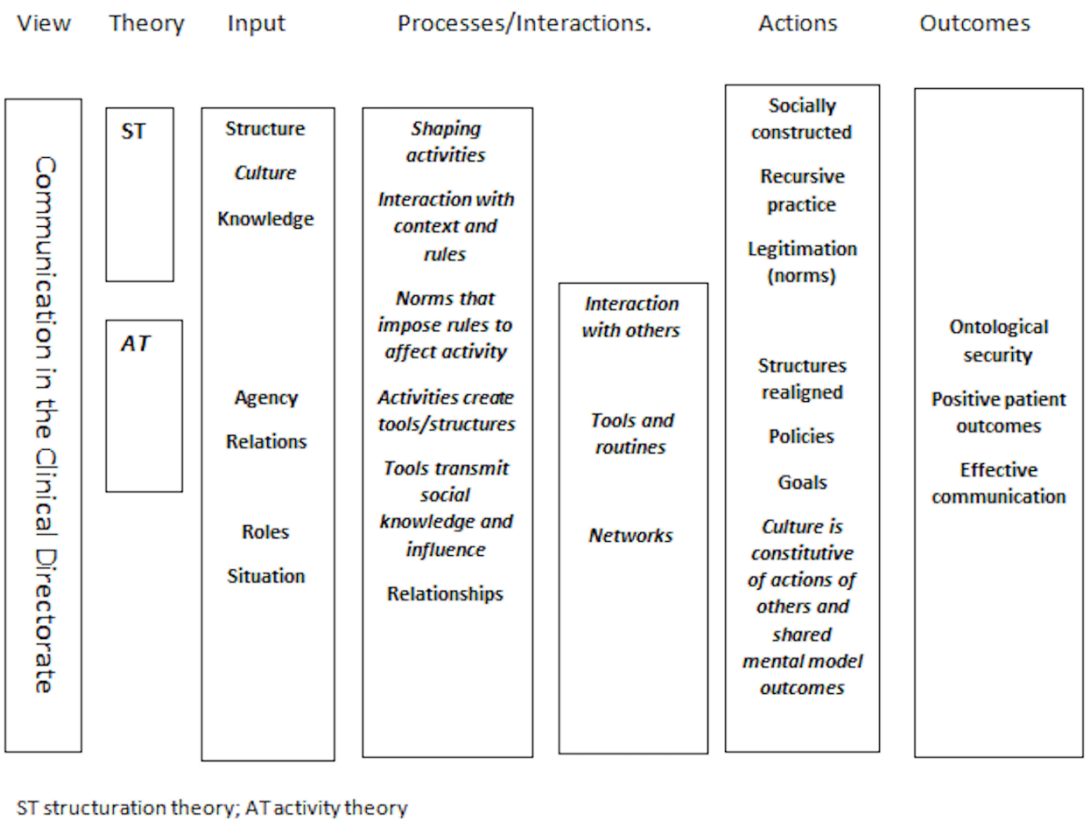

Figure 4. Theoretical framework inclusive of structuration theory and activity theory constructs

Distributed leadership theory

The search for articles based on DLT yielded 1,998 articles (17.8%) in the Phase 1 secondary search. In the Phase 2 secondary search, 249 articles (35.6%) were located and identified as related to communication and healthcare. Of these articles, none met the final criterion of describing empirical research in the healthcare setting.

DLT is the third theory examined in this series. Leadership theorising has captured the interest of scholars and practitioners exponentially over decades (Dinh et al. 2014). Advancements are seen in the recognition of the distributed or shared style of leadership, which contrasts with the previously popular hierarchical or "heroic" models of leadership (Thylefors & Persson 2014). Changes to organisational structures along with major systems-wide transformations are pivotal to the rise in interest of distributed forms of leadership (Fitzsimons, Turnbull James & Denyer 2011; Friedrich et al. 2009; Gronn 2000).

Applying DLT to illustrate patterns of communication within the context of the CD is an opportunity to incorporate both collective and relational components of leadership function. Doing so offers an alternative way of viewing the interactions typically seen as directions from senior to junior members and interactions between senior peers. A collective and relational perspective is alternate from the heroic leader style (Gronn 2002).

Properties of distributed leadership theory

The themes in recent leadership research have a distinct social, temporal, and relational orientation accounting for the micro processual aspects addressing a personal level of leadership rather than leadership function (Balkundi & Kilduff 2005; Bolden 2011; Currie & Lockett 2011; Friedrich et al. 2009). Equally, systems complexity such as cross-boundary interactions and manager–clinician roles provides significant challenges for the formally appointed manager. These roles require relationships outside work boundaries in cross-boundary interactions and new perspectives on established relationships within the clinician–manager role. Personal and interpersonal dynamics are a particularly challenging dimension of human interactions at work to unpack and address for both scholars and practitioners alike (Dinh et al. 2014; Fitzsimons, Turnbull James & Denyer 2011). DLT has evolved over time and earned distinction from similar theories such as shared leadership. Fitzsimons, Turnbull James, and Denyer (2011) provided an intellectual account of these distinctions in their review of studying shared leadership and DLT. The authors warned that the two approaches are foundationally distinct and the approach to studying this field requires careful consideration of the constructs of each. The scholarship concerning the differentiation between shared leadership and DLT is equivocal. The separation of the two involves ontological and epistemological challenges, such as whether leadership remains the specialised role of one or a shared process (Fitzsimons et al. 2011, p. 324). Gronn (2002) discussed DL in several forms, suggesting it is contextualised and interactive, diverging from the unidirectional and processual means of leadership (p. 444).

Gronn (2000) recognised individualism as a leadership method where success depends on the performance and skill of one as leader-centric and based on the attributes and behaviours of individuals (Bolden 2011). DLT, by contrast, is built on systemic properties and role structures, where leadership is conceptualised as a series of activities

(Gronn 2000). The theory continues to evolve and to be debated among experts so that its definition remains contentious (Bolden 2011; Currie & Lockett 2011; Thorpe, Gold & Lawler 2011). Nonetheless, authors consistently describe key constructs of DLT and contribute to understanding the operationalisation of DL. First, consensus exists that DLT is something that is done as an activity within a group (Balkundi & Kilduff 2005; Bolden 2011; Dinh et al. 2014). Second, DL occurs where leaders are not just distributed entities within a group or team; rather, dispersed expertise, knowledge sharing, joint decision-making, and collaboration occurs (Fitzsimons, Turnbull James & Denyer 2011; Friedrich et al. 2009; Ho & Ng 2017). A third and widely accepted prerequisite of DL is that it is contextually situated with structural and situational tensions that both enable and constrain actions in practice (Ho & Ng 2017; Jonsson et al. 2016). Critical analysis of the theory distinguishes it as boundary spanning (Ho & Ng 2017), as roles distributed within a network (Friedrich et al. 2009), and as a practice that is constitutive of the actions of multiple individuals. Ho and Ng (2017) described DLT in this manner because the theory describes how members can cross team boundaries to utilise their skills. This occurs as demands arise and is designed to make work processes more efficient by increasing outputs. These concepts are derived from consensus among scholars within the literature and are grounded in structures of communication between staff. In the CD, these key constructs pivot on communication, which can be effective over both formal and informal settings, including a wide variation of structural and contextual situations. System complexity and human action combine to challenge the notion of DLT and its applicability within contemporary healthcare.

In the final step of building the theoretical framework, the constructs of DLT are included (in italics) in Figure 5. The discussion concerning the articulation of all constructs is continued in Section 3.2.

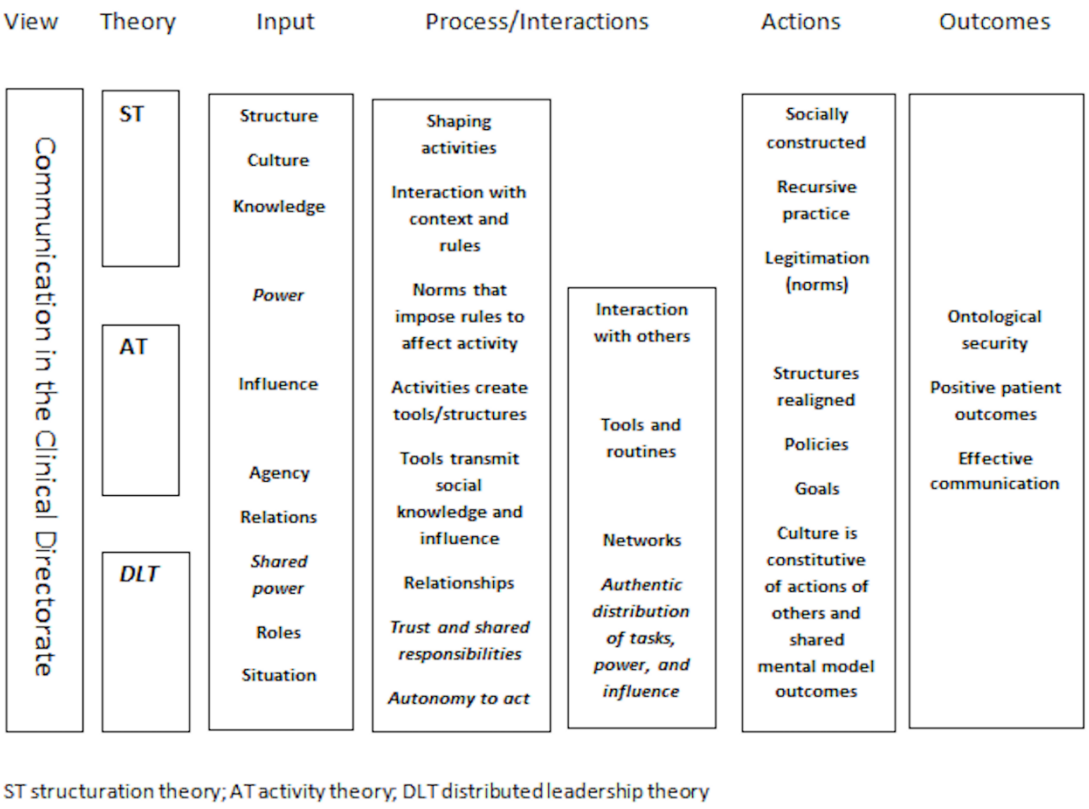

Figure 5. Theoretical framework inclusive of structuration theory, activity theory, and distributed leadership theory constructs

Leader–member relationships are an essential component of leadership and are considered here because of the relational element that intersects with DLT. Leader–member exchange (LMX) is a popular model for research examination (Day, Gronn & Salas 2006; Herdman, Yang & Arthur 2017; Sparrowe & Liden 1997; Tsai et al. 2017) and is defined as a relation-oriented style of leadership where trust is paramount between leader and follower. Trust is developed between leaders and followers when leaders afford their staff a level of autonomy in doing their work; in return, staff have the confidence to contribute spontaneously to innovation and problem-solving. LMX contributes towards organisational change success because of the relationships leaders develop with their staff (Carnevale et al. 2017; Sharifirad & Hajhoseiny 2018). LMX (Graen & Uhl-Bein 1995) is underpinned by role theory (Biddle 1986) and social exchange theory (Homan 1958) and shares a focus with DLT on relationships between staff and allocating resources. Sparrowe and Liden (1997) focused on the relational exchange between leader and follower and reciprocity

within this relationship. They account for the macro level, social structure of interaction, and informal relationships that develop between staff. As with Sparrowe and Liden's (1997) work, theoretical propositions have been formed through literature review (Hwang et al. 2016), and empirical work is less evident. Nonetheless, Sparrowe and Liden (1997) enabled the evolution of DLT. A review of publications since their 1997 article shows the development of the theory, incorporating social networks and performance (Sparrowe et al. 2001). Including a social network perspective is beneficial when considering the distributive elements of DLT and managers' reliance on networks and relationships in allocating resources (Cannatelli et al. 2017). Their work discusses not only the relationship between roles and social networks, but also the negative effects of hindrance activity at the group level. Hindrance activity is described as an activity that has the effect of denying another's access and includes staff who withhold valuable links to resources within networks or who act in a detrimental manner to cause disadvantage to others. Hindrance activity is difficult to quantify and therefore has not had a lot of empirical attention. Agentive behaviour can materialise as hindrance activity when associated with the motive of gaining advantage for individuals or groups (Sparrowe et al. 2001). Selective communications, which result in interference, threats, sabotage, or rejection, have the potential to impede progress of others and possibly have flow-on effects to staff relationships and the application of patient care. Hindrance activity, in the context of communication at the executive level where executives purposefully withhold or limit the amount, type, and context (background) of information to their own advantage, influences not only peer-to-peer relationships but also, through limiting access and denying resources and advantages, may cascade throughout the entire directorate.

Sparrowe and Liden (2005) extended their work to consider LMX relationships and the centrality of leaders within the work network. These authors reported that centrality is important in a network as this position in the network translates to influence. The authors suggested that influence is a valued attribute as the holder can share or limit its effects, and subsequent resource allocation may be allocated or denied.

Influence is a critical factor in communication networks where information is shared or not shared, given in full, in part, or not at all. Network positions clearly affect resource acquisition and communication with other leaders. Highlighting multilevel issues such as

network positions was central to the current project and integral in understanding the interplay between leadership behaviours, network activities, and individual agency.

The most critical factor in the LMX dyad is trust (Graen & Uhl-Bien 1995, p. 232). Sparrowe and Liden (2005) found that when trust (sponsorship) between manager and member is high, members obtain social legitimacy in the form of social capital from their managers, resulting in potential benefits from the network position. Trust is an important consideration for communications and information flow in and between groups, particularly where similar goals are the object and resources between groups are dissimilar for various reasons. Distinctions are made between DLT and LMX by scholars of leadership theory; however, the model advanced by Sparrowe and Liden align with most constructs of DLT when considering communication in healthcare and warrant further analysis. The contemplation of leader networks with other members and the potential for agentive behaviour in the allocation of resources are central to understanding the intersection between DLT, ST, and AT. The nature of resource requests and use, allocation, and the potential for hindrance activity to slow or obstruct the flow of resources provide an appropriate platform to apply a multiple-theory approach to understand and explain actions of individuals and groups. As Sparrowe and Liden (1997, 2005) and Sparrowe et al. (2001) illustrated, organisational relationships coalesce with OB to determine the ebb and flow of information in organisational networks.

Though much remains unknown about DLT, its definition, and experience, Fitzsimons, Turnbull James, and Denyer's (2011) perspective of the ontological views of leadership are helpful when applying DLT. The authors identified (p. 320) four approaches that may shape the way relationships are construed and how individual enactment of leadership is theorised:

- The relational–entity approach, where context is minimal in influence and decisions are made by knowing individuals;

- The relational–structural approach, where cognitive and structural influences are the focus of individuals and where context is important in shaping decisions;

- The relational–processual approach, where social processes constitute practice, and members of these social groups are strongly influenced by context;
- The relational–systemic approach, where conscious and unconscious processes are strongly determined by social context, and the ebb and flow of leadership roles is naturally occurring.

The work of Fitzsimons, Turnbull James, and Denyer (2011) is a valuable contribution to understanding DLT by provoking the researcher to think about the context of study. Identifying the need to think about how to approach DLT inquiries also acknowledges the many and varied concepts that can be measured or observed within this domain.

DLT continues to evolve as an application of leadership practice. Leader centrality, leader–member relationships, and social structure are concepts presented as issues to be addressed when considering the practice of DL in organisations. These constructs are important when leaders distribute responsibilities and roles, but they do not contribute to the full understanding of interaction, impetus, and intention of leaders and followers. To deal with the problem in total, the lens must be drawn wide to incorporate the overlapping activities and the individual behaviour from both a staff and leader perspective.

The concepts within DLT allow for a systematic picture of the integrated practices of professionals in healthcare through cross-boundary interactions (Cannatelli et al. 2017). Illuminating these concepts is crucial to understanding the methods for eliminating or mediating the practices that cause unnecessary deviation and confusion—for example, where teams overlap, have disparate aims yet common goals, or how and to what extent leaders distribute responsibilities. Communicating in healthcare requires clear and concise methods, including pathways of reporting and feedback. Most often, collective engagement, or where staff are attuned to the same goals, is also required to provide the right care at the right time. Where systems fail or are inadequate, researchers look to understand where communication is lost and perhaps where communication has become ambiguous due to overlapping responsibilities. Ambiguity may also occur where information is sourced incorrectly due to work and time constraints (Bolden 2011). Distributed teams may also

contribute to poor communication, where time lapses due to geographical constraints or feedback are influenced by inadequate methods of communicating. Poor communication occurs because of issues involving timing (particularly delays), problems with information content itself, and problems with information sourcing, transmission, reception, and interpretation. Poor communication also includes the influence of the organisational context on communication between teams and individuals, whereby inconsistencies of communication practices reduce the effectiveness of communication (West 1999). Professional resistances and disruptive environments interrupt the clarity and reduce the quality of communication (Rice et al. 2010). DLT can be applied to account for these structural and social influences and provide implications for how structure and situation can be constitutive of leadership practice (Bolden 2011).

Integrating distributed leadership theory with activity theory and structuration theory

To summarise the forgoing theoretical discussion in conceptualising and exploring the research problem of this thesis, the interplay of humans, structure, and social integration is integral to understanding how organisations work. Dynamics should be understood if control over complex environments is to be exerted. These dynamics are fluid, interchangeable, and at times unpredictable. Accordingly, ST proposes they are also dynamics that are controlled by the rational being and manipulated by other rational beings. Substantiated though normative or intentional acts and monitoring of outcomes (Giddens 1984), AT places these dynamics within the division of the work practice realm where professionals in healthcare are not only bounded by their scope of practice but also both enabled and restricted by professional boundaries. In a complex environment, it is difficult to contextualise the leader and teams without including the individual. It is also difficult to contextualise the individual in the complex health environment without thinking of the daily interplay with colleagues and the hospital structure. Accordingly, individuals, structures, teams, and contexts are interdependent, and each is constitutive of the other and dynamically interacts in real time. A way to unpack the complexity proposed by this thesis is to draw on the interplay of several theories to understand the constitutive nature of communication in the healthcare environment. The three theories contribute towards understanding the individual and their agency tendencies to communicate, achieve

resources, and form and maintain relationships. The theories also encompass the influence of structure and social temporal constraints (rules, norms) in enacting agency and leadership. Figure 6 summarises the forgoing discussion.

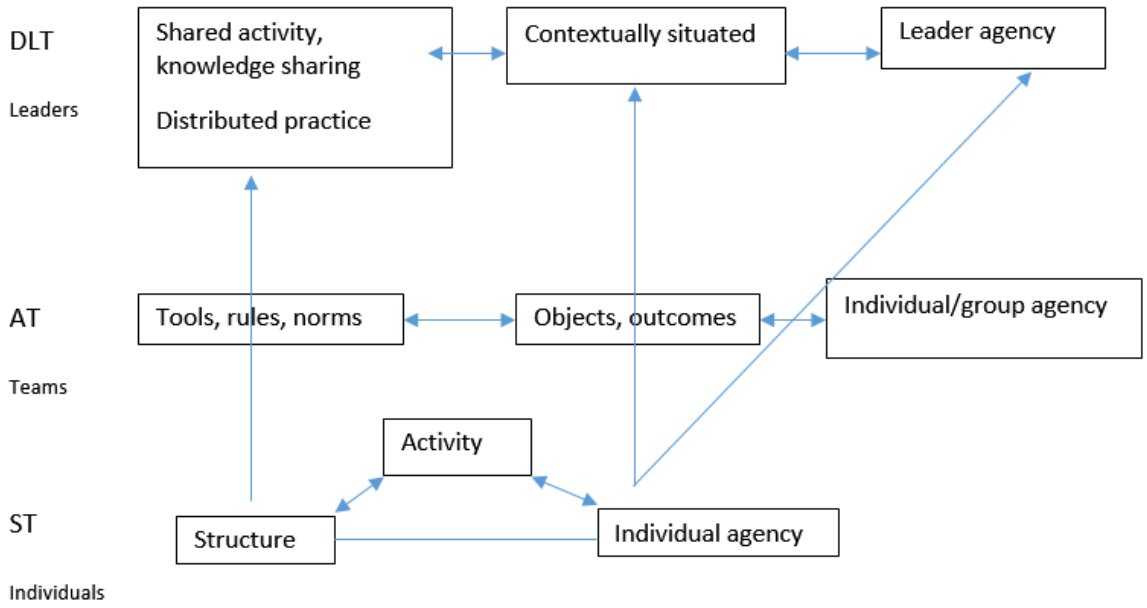

Figure 6. Relationships between structuration theory, activity theory, and distributed leadership theory

2.6 Limitations of the Theories

A wide theoretical lens was a requirement of the project as three levels of OB were studied to understand actions of staff in communicating with others. Each theory posed limitations to understand different levels of interactions. ST (Giddens 1984) was relevant to understand agency and structure; however, it did not reach to illuminating the issues within the leadership realm in terms of leader-specific responsibilities, and nor did it extend enough to explain organising of modalities of communication (Haslett 2013). AT (Engestrom 1987) was utilised to understand team dynamics and communication, and it bears similarities to Giddens' theory by aligning action with structure. However, AT is concerned with human activity and a broad interpretation of the activities within the activity system (Bakhurst 2009). AT relies on the integration of a nuanced theoretical lens such as ST to interpret and draw meaning from the microprocesses within activity systems. DLT concerns not only a method by which to lead but is situated in leader relations and

activities. Gronn (2000) acknowledged the agency–structure interplay as a key component of activities of leadership, illustrating the complementarity of the three theories: the focus of the current project. DL remains contested as a theory (Bolden 2011); it also is recognised as a relational property of leaders rather than an inherent contribution from individuals (Currie & Lockett 2011). A consideration such as this suggests much of the role of human agency may not be accountable to the actions of leaders who distribute responsibilities. In single consideration, each theory has been discussed extensively in the literature, and bringing them together in this context is a unique proposition.

2.7 Study Overview

The aim of the study was to uncover how structure affects communication at an individual, team, and leadership level in the CD through integrating three theories that explain different and aligned aspects of the dynamic context. Giddens' (1984) theory of structuration addresses the nuances of actions among staff (agents) because of structural and social arrangements within their lives. The agents' influences on structural arrangements over time are interpreted within the framework. Research participants' responses can be compared and understood as social phenomena, as suggested by Giddens and Sutton (2014).

AT focuses on how and where teams overlap in their responsibilities and therefore highlights areas of complexity that may arise through communication both within and between disciplines. DLT was incorporated to understand how teams and individuals identified and enacted leader roles, and whether this method of leading teams was congruent with the demands of the CD structure. DLT was applied in the project to understand whether the style of leadership was embraced in the organisation. The CD was introduced without regard to the long-established relationships that existed within hospitals (Braithwaite & Westbrook 2004). In conjunction with AT and DLT, Braithwaite and Westbrook's (2004) claims may be substantiated within this research by addressing the complex challenges of unifying and consolidating cross-discipline partnerships.

The processes within the CD are designed to ensure targets are met, such as achieving excellent patient care, ongoing quality services, stewardship with resources, and other

factors (Braithwaite et al. 2016). These processes contribute to successful implementation and outcomes of healthcare. In short, this functional unit (the study cohort) required a diverse group of people working together to achieve similar goals. The group included clinical and nonclinical staff, and members of diverse professions such as law, human resources, and accountancy. The interdependence of actions and institutions is underpinned by the three theories, each providing a different view of the same problem. The present research aimed to draw on aspects of the institution and the inherent framework of rules and processes and find the influences of the subjective and dynamic agents, teams, and leaders who recursively maintained the structures in which they worked.

The epistemological approach of this research is grounded in the constructivist paradigm. The approach aligns with the methods by which individuals make meaning of their subjective reality (Creswell 2014). The demands of the healthcare worker and their implicit sense of understanding within the broader context is part of a constructivist perspective (Garneau & Pepin 2015). Constructivism recognises the role of power relations and the influence on social relations in respect to the construction of realities (Giddens 1984). Giddens' theory supports the role agents and structure play in an organisation's social structure. The epistemological position distinguishes between inquiry paradigms (Cheu-Jay 2012). Constructivism espouses relativism, while positivism, post positivism, and critical theory advocate realism (Dasgupta 2015; Ryan 2017). Constructivists make sense of their reality differently to positivist; therefore, research questions should be framed in such a way as to encourage acknowledgement of the underlying meaning of events (Cheu-Jay 2012). Aligning this approach to the research question, the study asked how the participants viewed their world within the CD. The epistemological stance of constructivism is a relative perspective, and the research question guided the participant to construct their reality. The realities of the constructivist are multiple (Cheu-Jay 2012). The constructivist paradigm addresses the criteria of the qualitative research approach because it is situated, relational, and textual; there is no single truth but multiple interpretations. These criteria are consistent with case study methodology (Veal 2005). This view informed the interpretation of the study findings as there were likely multiple understandings of the same problem.

Communication studies are commonly part of OB research, which spans the realm of social, philosophical, and empirical inquiry. Evidence from prior research suggests communication has been included in studies of OB (Wienclaw 2015), organisational identity (Wagner & Peters 2011), establishment and maintenance of teams (Callan et al. 2007), interprofessional collaboration (Braithwaite & Westbrook 2004), and achieving organisational goals (Dedman, Nowak & Klass 2011). This focus of the study was the individual experience of communication in a hospital structure setting that had undergone change. Prior research suggests a qualitative approach, examining individuals' lived experiences using in-depth interviews, is appropriate (Veal 2005). In-depth interviews may reveal the individual's choice regarding how they communicate, how they understand the structure in which they work, and barriers to using communication pathways. The relationships between participants were unclear, and further understanding would likely be revealed and enriched using social network methodology.

Social network mapping is a quantitative approach to apply a visual and sociomathematical account of participants' relationships (Buch-Hansen 2013). Social network analysis (SNA) is a method to investigate the relational perspectives of staff in specific contexts, including formal and informal influences (Carter et al. 2015). A visual map allows comparison of the communication pathways in use with those predetermined through the CD structure. The efficiency of communication pathways, using the participants' verbal accounts and the mapped relationships, are then interpretable from the data. These data collection techniques inform a mixed methods case study design (Yin 2009). The single case study method is suitable given the situation, which calls for an exploratory investigation using established frameworks for inquiry into real-life settings (Yin 2009). Staff attitudes to communication in the CD vary widely and are complex (Braithwaite & Westbrook 2004). The case study method supports the eliciting of fine detail from many participants and enables a focused account of complex environments (Braithwaite & Westbrook 2004). The current research project sought to extend Braithwaite and Westbrook's (2004) work by narrowing the focus of CD research to that of communication within the CD at senior management level. Then, extending the work of Braithwaite and Westbrook through the application of social network mapping provided a

broader understanding of the CD's communication dimensions in line with the complex context of tertiary hospitals.

2.8 Chapter Summary

The elements that influence communication within organisations are both complex and diverse. Central to practice within organisations is communication between and behaviour of individuals, group members, and leaders. Influencing these elements are organisational structures and policies that guide the practice of staff. The preceding discussion outlined three theories relevant to understanding how individuals, groups, and leaders shape organisational design and performance through their influence on everyday practice. A step-by-step introduction to the theoretical framework demonstrated how the properties of each theory account for human behaviour alone and in combination. Employing the theories in combination enabled a triple-level view of individuals, of individuals in teams, and of individuals as leaders. Each theory was discussed in terms of demonstrating properties, how each was integrated, and how the problem under study was conceptualised using the theory. The backdrop of the project is now complete. The problem was identified, and the literature review revealed what is and is not known about the theoretical lens of the project. Chapter 3 introduces the methodology employed to investigate the problem of communication between executives in the CD. The research paradigm is discussed and justified, and the discussion emphasises the role of theory in this project.

Chapter 3. Methodology

This chapter explains the rationale for the methodology that informed the research paradigm and study design. The first section describes the constructivist/interpretivist worldview as a primary view of the researcher. Next, the application of theory applied to the project is explained. Each theory is discussed, followed by a proposed theoretical integration. The chapter concludes with a discussion of the epistemological and theoretical approach to the project that informed the study design.

3.1 Research Paradigm

To interpret and draw meaning from activities reflects a human tendency for categorisation, and the way we do so underpins our worldview. The methods used in this project sought to align with participants' worldviews and understand the meaning in their responses. Sandelowski (2000) posited that worldviews frame the paradigms of inquiry, which account for the ontological, epistemological, and axiological positions of the researcher and should also be considered for the participants of the study. Sandelowski (2000) suggested that, of the main paradigms of inquiry, the positivist, critical theorist, and interpretivist (constructivist) paradigms have differing perspectives and therefore interpretations. A person's paradigmatic view changes by virtue of their own stance. Suri (2013) suggested that the prevailing paradigm in research has a positivist orientation, citing the hegemony of positivism being problematic when considering differing methodologies. While Suri's (2013) work focused on research synthesis meta-analysis, he argued that the positivist worldview has some shortcomings when considering the richness of qualitative research and cannot capture those items measured with a common metric approach as in positivism.

Suri (2013) on positivism noted that the divide between the interpretivist and positivist paradigms is narrow, and though proponents of each are critical of the other, paradoxically, the two share commonalities. Ironically, there is diversity in how each paradigm is understood and followed by their proponents. Importantly, Suri argued,

individuals subjectively interpret their chosen paradigm, which leads to differing applications reflected in research designs.

Constructivism focuses exclusively on the meaning-making activity of the individual mind (Cheu-Jay 2012). This epistemological position distinguishes the inquiry paradigm employed. Constructivism is a relativist perspective; reality is interpreted through the lived experience and interactions with others (Cheu-Jay 2012). The ontological stance of constructivism is from a relativist perspective, and the research question guided the participants to think about their reality. Cheu-Jay (2012) suggested that the constructivist's realities are constructed individually from prior experiences, which are unique to the individual; the realities of many individuals may be diverse. Individual construction of reality is also consistent with the criteria of the qualitative research approach, suggesting it is situated, relational, and textual; there is no single truth but a multitude of interpretations.

Taking this position, the researcher asked participants to construct meaning from their experiences of communication within the clinical directorate (CD). The research findings were not expected to substantiate one truth in response to the research question but rather multiple understandings of the same problem. Such an approach contrasts with the positivist perspective, which tends to approach a research problem with a view to understanding what is happening in a context or situation in relation to established theory. The constructivist appraises the individual processes instrumental in creating a situation and the knowledge revealed as an outcome of human activity.

Healthcare workers account for the state of their reality as part of a constructivist perspective. Competence occurs through reflection and ongoing learning (Garneau & Pepin 2015). Constructivism recognises the role of power relations and the influence on social relations in respect to the construction of realities. The fundamentally divergent views of professionals within healthcare systems may cause some difficulty in bringing together the lived experiences of those individuals within the context of this research. Garman, Leach, and Spector (2006) suggested that these divergent perspectives create functional work patterns when guided by policy and procedure. Healthcare workers may also develop dysfunctional and confusing pathways of interaction through extant practice, inconsistencies in interpretation/use of structures, and the stoic defence of their assumed

rights as professionals (Garman, Leach & Spector 2006). The constructivist (Botella & Gallifa 1995) approach stimulates participants to express their lived experiences in a shared reality. Questions posed focused on providing wide criteria for constructing answers—that is, "Who do you prefer to communicate with?"—opening opportunities for the participant to find the most important person with whom they communicate based on history, experience, and social understanding (Creswell 2014). In contrast, the positivist may construct the question to rely on verifiability, such as "Who should you communicate with?" (Corry, Porter & McKenna 2018). To answer the research question, the researcher sought the commonalities of the shared reality and the inconsistency in each participant's view of that reality, as encouraged though the constructivist paradigm. The constructivist approach was employed to highlight the consistencies and inconsistencies of staff working in the same environment yet with differing expectations and approaches.

3.2 Theoretical Framework

The theoretical framework illustrates the application of theory to research (Veal 2005). Validity of the framework occurs when it accounts for clear definitions and implications in its application; it is applied as an explanatory account of the study and contributes towards the development of further research (Miner 2003). The framework (developed in Chapter 2) presented in Figure 7 maps the elements of the research where theory was applied to guide discussion of the research outcomes. Where one theory cannot be extended to explain outcomes, theories are applied together. Next, the framework is discussed to situate the research and explain inputs, processes, actions, and outcomes in terms of individuals, individuals as team members, and individuals as leaders. Importantly, the framework showcases the application of structuration theory (ST), activity theory (AT), and distributed leadership theory (DLT) to the study and explains their unique and integrated application.

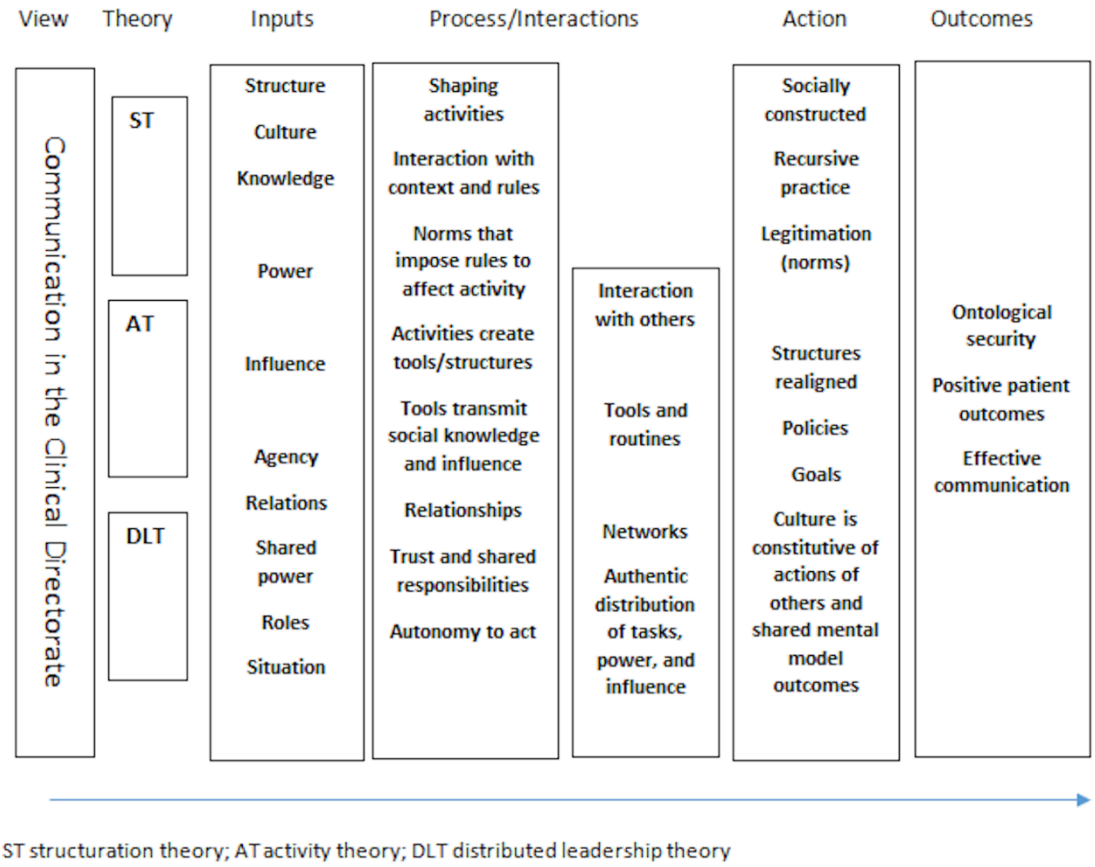

Figure 7. Theoretical framework

The research was designed to take a multilevel view of the CD to understand the interactions of staff and their use of communication pathways. The methods employed both qualitative (interviews) and quantitative (social network analysis; SNA) data collection tools and analyses, ensuring that the multilevel view was supported by multilevel analysis (Paruchuri et al. 2018). The information provided an understanding of which communication pathways were being used (mandated or personal choice) from three levels. The individual or micro perspective sought to understand problems associated with communicating within the hospital structure and the influence of social and cultural interactions and personal preferences in that interaction (the meso through to macro perspective). The study explored communication within the CD at individual, team, and leader levels.

Ensuring effective communication in hospitals is a crucial antecedent of good patient outcomes and successful staff relationships (Rice et al. 2010). While the researcher endeavoured to take a parsimonious approach (Pettigrew 1987) to the use of theory, ST, AT and DLT sustained multilevel interactions with each other, which fit well with the multilevel perspective of the research. These theories were appropriate because they had the scope to illustrate each level of the research when individually applied, and together, discovery of how communication intersected across levels became possible.

Theory and framework: Singular theoretical perspective

ST has historically been used to illustrate society and classes of society (Whittington 1992). Giddens (1984) addressed a finer level of structuration that included the actions of an individual and implications for the groups in which the individual is involved. Giddens defined the actions of an individual, whereby outcomes are self-serving or aimed at vested interests, as agentive behaviour. Agency is grounded in relationships with others and is a self-perpetuating phenomenon based on influence and power that can be at odds with the structure in which the agent works (Giddens 1984). Structure, at times, is the genesis of agentive behaviour because it is often not commensurate with individual wants or needs. The theoretical framework gathers these elements together as inputs that shape the individual's interactions and processes in attaining needs or in contributing within a group environment. Processes because of agency interacting with structure have the potential to guide group and social activity. Recursive behaviour on behalf of the agent, according to Giddens (1984), develops and sustains rules and normative activity. In kind, this process contributes to relationships between individuals, individuals in groups, and leaders through predictability in everyday processes. The behaviour occurs through actions such as the routinisation of work practice, authentic practice, and the use of power in distributing tasks and responsibilities. The outcomes of agency behaviour can be socially powerful. Recursive behaviour beyond the mandated organisational norms, but socially constructed as acceptable, can change the culture and structural alignment of company policy and procedure, and receive legitimation in the process. This occurs where staff continually act in habit, their actions not constitutive of organisational rules.

AT has developed in a similar fashion to ST. Initially proposed as a theory of society, AT is a mechanism to study the development and maintenance of complex interactions between individuals and individuals as groups. Third-generation AT (Avis 2009) developed from Russian psychology and deals specifically with complexities in work groups and interacting work groups. Consistent with ST, the inputs of AT are grounded in the power of individuals within the subcultures and structures of groups and are consistent with individual and group actions that have recourse to those of other groups. These inputs that are listed within the theoretical framework (structure, power, culture knowledge, agency, roles, and situation) also include the situation in which complex groups work (such as hospitals) and the complexities in roles (such as medicine, nursing, and management) that, though distinct, must work together (such as patient care and hospital administration). The processes and interactions of the project studied using AT are concerned with the intricacies of transmitting social knowledge using rules, tools, and context, and sustaining these rules and shaping activities through interaction using relationships based in authenticity (Ho & Ng 2017). These processes and interactions may be manifest in the traditions and expectations of the disciplines of hospital staff (such as medicine and nursing), and the shaping of activities may be aligned with the requirements of health governing bodies or regimes that have developed over time. The actions concerning AT are based on how staff accommodate the requirements of their disciplines when interacting with others and the authentic distribution of tasks using power and influence in the multidisciplinary setting. The outcomes studied using AT are viewed through the lens of constitutive actions between both disparate and homogenous groups. Complexity in work, and how dealing with complexity influences others within and outside of groups, is at the heart of the inquiry.

DLT shares many similarities with the preceding theories; however, it is comparatively new in terms of theory development. The literature is equivocal in the meaning and scope of the theory (Gronn 2008). DLT is applicable to contemporary hospital research as services and functions may be dispersed across many locations, requiring deputised on-site managers and requiring responsibilities to be shared. A greater sharing of managerial responsibilities fits within virtual and distributed organisational forms in contrast with the singular, *hero-type* leaders of past decades (Hargreaves & Fink 2008).

Whereas DLT theory is still developing conceptually, the inputs of DLT concern the actions of leaders to distribute responsibilities to others, which includes considering choosing to whom to distribute responsibilities, and the confidence in distributing responsibilities. Other factors such as the knowledge and influence of the person receiving the responsibilities are considered, together with the role of that person within the structure (Gronn 2002). Distributing responsibilities as a process is grounded in the relationship the manager has with the person to whom responsibility is given. The structure may deem the next in line to take responsibility; however, whom a manager trusts and their power in the structure may be just as influential in the choice of delegate. The manager may vary actions to overseeing activities, which in turn changes the organisational norms and interactions between staff (Ho & Ng 2017). The recursive nature of this process is to change the shaping of activities and create new norms within the organisation. This behaviour has flow-on effects to other relationships, the development and transmission of knowledge, and the use of tools and rules. The outcomes of DLT on communication are more socially constructed-type pathways used by staff (Bolden 2011). The allocation or distribution of work to some and not others may change the culture of the organisation, and the structures of communicating may be realigned in response to the actions, constituting distribution of responsibilities.

Unpacking the theoretical framework

The theoretical framework is designed to illustrate not only the elements of each theory in relation to the *inputs, processes/interactions, actions,* and *outcomes* of each theory, but also the areas of theoretical articulation in relation to inputs, processes/interactions, actions, and outcomes. Constructs that have similarity between theories draw each level of the organisation together to attempt to understand behaviour from individuals through to teams and leaders, which are intricately intertwined. Ho and Ng (2017) linked the concepts of DL with those of AT, suggesting both are grounded in the sociological and contextual arena of human interplay. However, the current study is the first to use all theories to understand communication in the CD.

Inputs have commonality between theories as these elements are all inclusive for the individual, the individual as a team member, and the individual as a leader. ST articulates

with AT and DLT at the individual level using elements of the knowledgeable agent such as power, agency, knowledge, and culture, which is the basis for the recursive practice that maintains and perpetuates socially constructed work practice. Each member within a team similarly shares the elements discussed as inputs common to the three theories using knowledge, relationships, roles, structure, and agency to achieve and manage work practices. In terms of leadership, the attributes of the three theories combined explain the actions of the individual as a leader of, and within, teams. For example, rather than relying on policy and procedure, a leader must have influence and knowledge to succeed. Ideally, leaders have a vision of what they want to attain for their own commendation and that of their group. With influence and knowledge comes agency in terms of setting the agenda for attaining goals.

ST, AT, and DLT are articulated within the *processes and interactions* of staff in healthcare organisations. Agency, rules, norms, cultures, and leadership practices are constructs shaped to fit the workload and attain goals; the context and rules of engagement between staff are dictated by disciplines and social interaction. These interactions in turn affect activity both positively and negatively, but they also are responsible for the transmission of knowledge and influence. For all levels of staff, there is an influence through all these elements to develop relationships, with communication being at the centre of this phenomenon. Participating in *actions* with others is crucial to supportive networks. These actions may establish a shared understanding of roles and tasks between team members to achieve common goals and targets within work groups and across work boundaries. This understanding constitutes a shared mental model (Boies & Fiset 2018). Such consensus is maintained through recursive practices and is legitimated through policy when broadly accepted, and structures are aligned to include such practices. ST, AT, and DLT highlight the importance of all individual and team interaction in developing these networks, which are the linking mechanisms in organisations. Actions developed between staff give authenticity to practice, build routines, and endorse tools with which to accomplish goals.

The *outcomes* described in the theoretical framework are constitutive of daily work practices. The iterative integration of the individual with teams and leaders contributes to organisational culture, which results in shared outcomes. Globally accepted outcomes

contribute to the ontological security of staff through routinisation of work practices (Giddens 1984). Ontological security may be understood as having a sense of stability in reality. This stability is reinforced by the presence of trust that the social world is derived of permanence and routinisation of daily activities (Miczo 2008). Satisfaction serves to control the integrity of the mind and body, particularly where anxiety may paralyse interaction with reality (Flockhart 2016, p. 803). Trust is the most important contributor to ontological security (Giddens 1984). Learning to protect the self in the social arena is dependent on trust in others. Learning is an ongoing phenomenon that is constantly adapted as new encounters arise, particularly when confronted by disruptive or less routinised events. Establishing trust in another person contributes towards ongoing ontological security (Giddens 1984). Widely accepted outcomes also contribute to patient well-being and effective communication relationships between staff and between patients and staff (Bodilica, Spraggon & Tofan 2016).

The application of theory through research is important not only to support data findings, but also to test and extend current theory. Rarely can one theory completely support the research inquiry; therefore, an integrated theoretical approach is warranted. The theories presented here fit within the healthcare context but are not exclusive to this setting. The theories have been previously applied in knowledge domains such as information technology (Hsaio & Chen 2016; Pozzebon & Pinsonneault 2005; Yuen, Chen & Ng 2015), where leadership activity is mediated by the role of norms in schools. Interrelated activity systems create barriers to introducing technology; the implication of mutually supportive leaders in times of innovation is yet to be fully understood. In education, distributed leadership (DL) has been applied to diverse education communities that work together as a DL form rather than being guided by structural form. The focus was whether lateral strategies may be used as motivational devices to achieve government targets or to induce a more democratic style leadership. The influence of nondemocratic directives to achieve targets is still unknown (Avis 2009; Hargreaves & Fink 2008). Government in times of change was the focus of Blackler, Crump, and McDonald's work (2000). They employed AT to understand core organising principles across networks where change was occurring and in the context of multiple competing objectives. Findings supported members' appreciation of the work of other groups, to place their own perspectives within the

perspectives of others, and to participate in forums and discussions to alleviate barriers and contradictions in work. Developments such as larger work communities and the processes of fluid or temporary group require further investigation (Kramer et al. 2017). Business studies have included ST within the discussion and analysis of problems. Heracleous and Barrett (2001) employed Giddens' theory to understand discourse within the structures of business communities. They found discourse to be deeply embedded within business and vulnerable to change over time. Change is incurred by business structures, as well; the two are linked. The implication of insidious change is growing fragmentation of complementary discourses and conflict arising from changes that make environments fragile. Key goals and aims are likely to become unaligned between staff and stakeholders. Further understanding is needed on the discourse between industry partners and the context where discourse is mutually reinforcing or contradictory (Heracleous & Barrett 2001, p. 774).

3.3 Theoretical Discussion

This section gives a brief outline of the theories and their application to the current study. The section begins with a discussion of the first critical perspective, the individual. How the singular person influences and adapts to the organisation's structure is explained using Giddens' (1984) theory of structuration. Following is an examination of the second critical perspective, the work environment as a team. AT is applied to understand the complexities that arise when work activities overlap. DL within the CD is then examined, as it relates to communication practices in the context of geographic challenges and the distribution of work.

Structuration theory and the agent

Institutionalists and neo-institutionalists regard agency as a product of the habitual and recursive action by staff within the organisation (Voronov & Weber 2016). Institutionalists are aligned to institutional norms; the structures of the institution provide opportunities to act and react (Voronov & Weber 2016). Granqvist and Gustafsson (2016) elaborated on the agent as a product of institutional processes: one who watches and anticipates the institutional logics and complexities to identify opportunities for change. Agents are those whose temporal approach to organisational activity is grounded in the

structurationist paradigm and results in a purposive and synchronised modification of work practice to meet organisational targets and improve collective activity (Voronov & Weber 2016). The establishment of the agent within organisations is therefore inherent in organisational norms. The institutionalist perspective focuses on the relationships between institutional norms and actor actions. The practices of people within organisations are guided by the rules and norms of that organisation; the two are closely linked (Granqvist & Gustafsson 2016). The agent, however, is envisioned as a temporal being, as a change merchant, and as a mediator of social engagement who is self-constructed through emotional and professional reflexivity. As agents carry out their roles, they come to be secure in their practice (Voronov & Weber 2016). Therefore, it is important to understand the method of the agent to understand their role in organisational change.

Applying structuration theory to the research

The method of the agent can be viewed globally to include interactions between organisations. In this larger social sphere, agents act on behalf of the company they represent, using their capacity for strategic gain and leverage for business activity. The agent's method is also viewed from the interorganisational perspective, where agents must contend with participants and organisational boundaries that have a common enterprise (Barley & Tolbert 1997). Distinct from the institutionalist perspective, the structurationist paradigm is governed by the actors who need to seek opportunities within the institution, which can be malleable to their own needs. At the interorganisational level, Barley and Tolbert (1997) identified the link between institutional theory and ST (Giddens 1984). They defined the bounded rationality of restricting opportunities that are determined by institutions as inducing certain types of behaviours. Choice of behaviour on behalf of the agent is tempered by norms, rules, and policy. Bounded rationality illuminates choice and actions, which can be modified by individuals. Herein lies the interplay of action and agents, which is the focus of Giddens (1984), whereby the agent's method illustrates how the actions of people can affect institutions and how, over time, the development of shared typification can embed as a norm or a factual, acceptable means of work, knowledge, or action (Barley & Tolbert 1997).

The current research focused on how staff within the organisation used communication channels. In the setting of major structural changes, many staff within the organisation had lived experiences of previous structural arrangements, and their work practices may be influenced by those experiences. The research focus was chosen to illustrate whether those practices still survived within the new structure, calling to the fore a staff member's use of agency. When considering the introduction of new staff who had the capacity to import communication practices developed through employment at other organisations, the potential to have many communication preferences was great. Barley and Tolbert (1997) suggested practices and behavioural patterns are not equally institutionalised. The influence of varied experiences of communicating within the CD was a key focus of the current research.

Giddens' (1984) theory of structuration has less useful applications when deriving autonomy to a level where agents can enact change within a system (Mouzelis 1989). Mouzelis (1989) questioned whether agents and actors have the power to leverage change within robust organisational forms. Mouzelis drew from a relational perspective with respect to the level of authority or the social position held by staff members. Whether it is an intimate conversation, a group discussion, or an oration to many, the effectiveness of the agent is probably more influential in determining change in the organisation.

Pozzebon and Pinsonneault (2005) argued that ST is process theory and discussed seven strategies for analysing process data. The most pertinent of these to the current research is the organising strategy. Organising strategy consists of narrative and visual mapping and is consistent with the methodology of this project. Pozzebon and Pinsonneault (2005) offered Orlikowski's (1996) work on genres of organisational communication as an exemplary illustration of using narrative alongside visual mapping within organising strategies. They reported a literature review of structurationist articles and found most adopted an interpretive epistemological approach, with case study being the major element. Such evidence informed the design of the current research project.

The difficulty in applying ST to research is part of the process of understanding Giddens' (1984) sociological stance. The theory helps explain agency, duality of structure, and the knowledgeable agent. Several authors (Hardcastle, Usher & Holmes 2005;

Pozzebon & Pinsonneault 2005; Whittington 1992) have acknowledged the limited understanding of Giddens' work, highlighting its lack of application to research as exacerbating its acceptance. In the context of this present study, Giddens' ST enabled understanding about how staff communicated under the current hospital structure. The organising strategy suggested by Pozzebon and Pinsonneault (2005) complemented the approach within the suggested epistemological assumptions. The notions of agency, duality of structure, and knowledge are emphasised within the boundaries of complex hospital social systems. Investigating these elements and understanding the communication pathways within the complex system may have the potential to improve communication practices to benefit both staff and patients. ST enables communication strategies to be studied within the context of organising systems to identify actions that both enable and disable effective communication.

Activity theory

The second critical perspective considered in this project is the team working environment. The CD structure is complex from the perspective that each directorate is a bounded functional unit. Each is involved in differing streams of healthcare and yet each must integrate and conform to general organisation policies and procedures. While each directorate is responsible for fiscal management, employees, and care provision, they must also work in tandem with other directorates. Inherent in this structure is the overlapping of activities. Complex organisations such as hospitals generate many kinds of activity systems. The interrelationships that occurred in pursuit of both team and organisational tasks were of interest in this project because communication at the crossing of boundaries represents the greatest barrier to effective working relationships (West 1999).

Applying activity theory to the research

Igira's (2012) schematic interpretation of AT is based on understanding the dynamics of healthcare work practices and describes the interaction between two systems common to healthcare. The schema formed the principle by which AT was employed in this project to understand the communication practices of executive staff. Igira's intention was to understand the micro actions of staff in interaction with the patient and the methods used to incorporate multidisciplinary care with the least impact for that patient. Igira illustrated

competing systems using schemas that showed how each system interacts. Each activity is represented, accounting for rules, community, and division of labour and mediating artefacts. At the centre of the activity system lies the subject/object continuum that intersects with the shared outcome of the two activity systems. At the point of overlap, the subjects of each system are the same, but the objects vary for each system and the outcome is the same for each activity system. Mapping in this way is a means of identifying areas where activities are influenced by other activities, resulting in contradictions (Igira 2012). Contradictions result in disturbances and potential for change within the activity (Engestrom 2000). Contradictions are a conduit for the individual to change rules, divide labour, and change the course of mandated work patterns. Changes instigated by individuals also occur as collaboration within groups (Avis 2009). The impact of these disturbances is realised in costly gaps, overlaps, and poor coordination of patient care and may lead to significant comorbidities (Engestrom 2000). Igira's framework is revisited in Section 7.1 as an adaptation in relation to the results of the study.

Engagement between individuals and groups is a recursive activity in large organisations (Haslett 2013). The repetitive nature of tasks and processes allows alternative work processes to develop. Engagement among individuals often, by nature, allows for the development of secondary paths of action or work practice. Examining the activities of organisations can identify those processes and engagements that frequently overlap between the directorates, identifying those activities likely to be difficult, time consuming, or inadequate for which workarounds or deviations from standard practices are likely to occur. AT links well with Giddens' (1984) ST in identifying agentive practice. In tandem, AT and ST assist in understanding the roles played by interrelated activities in the reorganising of organisational protocols, notwithstanding the contribution by individuals and their agentive practices. These two perspectives are complemented by the third critical perspective of leadership capacity and enacted tendencies of executive and senior staff to distribute responsibility and enable autonomy among followers. Together, the three theories offer an integrated conceptualisation of the interactions among individuals, teams, leaders, norms, actions, tools, and structures as elements of organisational activity.

Distributed leadership theory

DLT is the third critical perspective incorporated in the research question. Leadership has been a consideration of research scholarship for over a century; the current popularity of DLT is perhaps timely and indicative of a style that current leaders seek to manage their workloads. DLT was chosen for this project as the primary constructs interact and encompass ST and AT and complement the focus on the individual or agent and their responses to practices within the healthcare organisation. Bolden (2011) recognised the work of Engestrom and Vygotsky, citing the importance of situated activity that includes considerations such as objects, rules, community, and the division of labour (Bolden 2011). These elements are key concepts of DLT (Bolden 2011). Bolden (2011) cited three factors of DL derived from past research: power and influence, organisational boundaries and context, and ethics and diversity. These factors were integrated into the research methods guiding the research inquiry from the leadership perspective. These factors also guided discussions about findings, providing a further focus for the communicative behaviours of individuals to complete the multiperspective view demanded by the research question. DL suits the current governance structures of hospitals (Thorpe, Gold & Lawler 2011). Certain elements discussed within the literature suggest the CD may provide a setting conducive to this type of leadership. The literature suggests DL is practised in many fields, with the most cited literature found in education (Bolden 2011; Gronn 2008). Currie and Lockett (2011) stated that government agencies/ public sector embrace the concept but suggest it is difficult to enact. Mukherjee (2016) posits DL is appropriate for organisations where teams exist; his work focused on sporting teams, stating DL improves team performance.

The CD structure has inherent geographical challenges, with many hospitals having more than one site. Structures of this kind are also inclusive of overlapping activities and jurisdictions of responsibilities by more than one manager. The CD also lends itself to divisions of labour into small or inclusive groups or silos. These elements are mutually constitutive of distributed leadership measures. Co-leadership, shared leadership, and self-managed teams are considered forms of DL and provide an arena in which to observe the communication behaviours of senior and executive staff.

Applying distributed leadership theory to the research

The application of the distributed leadership model in this inquiry encompassed both the cognitive and structural or social perspectives. Balkundi and Kilduff (2005) made the connection between these two domains of OB by illustrating the link between how individual agency both develops and constricts network relationships, the importance of the formal and informal actions of the individual, and the effect on leadership networks. The theoretical framework highlights elements of leadership, networks, the cognitions of staff, and the links between these elements. These links include the influence and power the participants possessed in situations and in the culture of the organisation. These attributes directly align with the ability to impose rules that affect activities. The study also highlights the participants' interactions with others in discussion about implementing rules and routines. Information about the power and influence of participants gives some insight about the participants' effectiveness within the organisation. Balkundi and Kilduff (2005) distinguished the levels of staff influence, where the actions affect some and not others. In such a situation, professional affiliations vary, but the skills and knowledge of one individual need to be shared with others in overlapping activities. Both cross-professional affiliations and influence contribute to leadership role definition and effectiveness within organisations. Balkundi and Kilduff (2005) referred to the need for some leaders to build networks where links between staff with a varied skill base provide a multidisciplinary resource base for those leaders. Such cross-discipline affiliations are valuable to executive staff. Establishing links to individuals who are key resource holders and brokers contributes to building social capital. Monitoring the secondary relationships of these individuals identifies power relationships and contributes towards building a social presence (Fulop & Day 2010), increasing their social influence within the network (Buch-Hansen 2013).

The management of relationships between staff is linked to leadership (Balkundi & Kilduff 2005). DL is the collaborative and intuitive interplay between dependent team members (Gronn 2000). Key attributes of DL are boundary spanning, teamwork, influence, structure, and relationships. In the current study of the phenomenon of communication among the executive group, the majority held the functional role as the leader of a CD and communicated with both colleagues and reports. The study focused on communication within the organisation's executive.

On considering levels of analysis in quantitative research designs, Yammarino et al. (2005) highlighted the lack of studies within domain scholarship that have dependable levels of inferences derived from data analysis using a multilevel approach, meaning there are few examples of prior research using a multilevel approach. Yammarino et al. (2005) suggested the key levels of analysis are individuals, groups, and dyads such as those of the leader–follower kind. The current study responds to the call for continued inquiry into leadership influence through levels and networks, however not in a statistical modelling sense.

The methods used in this study are grounded in an epistemological stance, which led to a study design suited to answer the research question. The study employed the qualitative method of interviews to provide micro- and meso-level views of participants' views on their communication practices. SNA being a quantitative measure provided a macro view of extant relationships in the participants' professional networks. Balkundi and Kilduff (2005) suggested structural embeddedness and network relations constitute the study of individuals in networks. Structural embeddedness may be understood as relationships of exchange and the likelihood of future interactions occurring between like-minded individuals. Embeddedness can also be a strategic choice, where the relationship is of value by giving access to key personnel or resources (Balkundi & Kilduff 2005, p. 420). In the present study, the analysis focused on relationships with others rather than on individual attributes. The importance of an actor's embeddedness, according to Balkundi and Kilduff (2005), lies within people's perceptions of leaders and the tie types they may or may not have established with others, which are discussed in the following sections.

3.4 Study Approach

Case study

Case study methodology and methods within healthcare research has emerged as a practical approach to studying the intricate, context-dependent representations of complex healthcare practices (Miles 2015). Veal (2005) observed the reliance on a single context for study as a defining characteristic of case study methodology, acknowledging that while several cases can be considered within a study, each context remains distinct and

individual. Veal (2005) posited the case study method as particularly relevant in business research; using this approach, the researcher can observe and gather data from participants in their natural environment from often complex situations. Veal's (2005) observations support the requirements of the current study. In the health sector, this approach allows for the ongoing complexities experienced every day to be influential in the participants' responses, interactions, and assessments of their view of the world. The case study method is employed to understand what is happening in a context at any given time (Gerring 2007).

Selecting case study as an approach involves clarity around the epistemological position of the research (Dasgupta 2015). Here, constructivism has been justified. Yin (2009) posited that a single case study is appropriate for "where", "how" and "why" questions of complex situations are asked in context. Studying a phenomenon of individuals' actions to explore or explain is also consistent with case study design (Casey & Houghton 2010). Case study may involve small numbers of participants. Cronin (2014) examined learning in the workplace with a cohort of five students. Limitations to small numbers of participants are noted in Section 8.2. Accounting for the practice of individuals in their natural environment was a central tenet of this research, and therefore, case study was appropriate as the form of inquiry (Dasgupta 2015). Table 8 addresses the criteria of case study use.

Table 8. Criteria of case study design use.

Criteria of Case Study Use	How Criteria Met
Exploring the phenomenon in its natural context	Study undertaken in a focus hospital within the confines of the executive suite
Exploring events in the everyday context	Semistructured interviews and SNA questionnaire designed to explore everyday work
Explanatory approach: how, why, what	Research questions designed to probe in what ways communication was diffused by executives, how communication pathways were currently used, how the structure influenced pathways, and how staff overcame barriers to effective communication
Epistemological standpoint	Interpretivist: understanding individual and shared meanings
Predefined boundaries, scope	Study cohort defined as executive staff only; scope of the project was definitive at 9 months
Relevant social group	Study focused on executive communication in healthcare; executives of tertiary healthcare centre invited to join
Theory-driven approach	Study underpinned by OB theory
Access to site	Researchers requested to undertake study; organisation accepted and made access available
Burden and risk to participants	Considered and proposed within project outline and participant information and embedded in ethical approval process gained from both the hospital and university ethics committees
Multiple sources of evidence involving both quantitative and qualitative methods	Qualitative methods: interviews Quantitative methods: questionnaire for SNA
Use of theoretical framework	Theoretical framework developed to include OB theories through an integrated application

Note. Criteria of case study design (Creswell 2014, p. 14; Crowe et al. 2011).

Several authors have referred to case study methodology as having fundamental weaknesses or undemanding methodology (Anthony & Jack 2009; Cronin 2014; Harland 2014; Miles 2015). Anthony and Jack (2009) suggested that confusion exists when design, method, and research strategy are not clarified when planning research or disseminating results. Preparation for this study included examining the benefits of this approach and clarifying the terms and methods applied, and reporting these within this thesis. Further criticisms include the limitations of one context or paradigm (Harland 2014) and the generalisability of results. To counterbalance this criticism, the constructivist approach ensured context-based outcomes to assist others to learn specific conceptual and contextual phenomena related to the problem. Case studies are based on unique social context (Cronin 2014). Investigating problems at specific moments in time can provide outcomes that can be applied to further research work (Harland 2014). Disseminating results to participants provides an opportunity for participants to improve their communication experiences. Nonetheless, the case study method offers both the researcher and the reader an opportunity to understand and learn from the experiences of others. The case study offers little in the way of replicability but may pose propositions that suggest modification of existing theory, extend theory, or highlight the nexus of phenomena and context. The method is suited to research in both the historical and social contexts of people's experiences (Veal 2005). The benefit of this knowledge when applied to workplaces is the introduction or modification of practices to enhance work outputs. Further, new knowledge established through the case study can be applied in the research inquiry of others (Harland 2014). Case study methodology is now enjoying more positive appraisal from researchers and critics of research methodology. Yin (2009) argued that the case study method is powerful in its design and suited to real-life study of participants. Table 9 illustrates the use of case study in similar studies or topics related to the proposed research. The examples were chosen to illustrate the diverse designs that have been applied using case study methodology.

Table 9. Use of case study in similar research

Author/s	Method Approach	Study Focus
Button & Roberts (1997), "Communication, Clinical Directorates and the Corporate NHS"	Case study: phenomenological approach, semistructured interviews, nonparticipant observation, organisation documents	Evaluates a resource management initiative
Altunas, Altun & Akyil (2014), "The Nurse's Form of Organisational Communication: What Is the Role of Gossip?"	Case study: questionnaires	How nurses use gossip channels as informal communication links in the organisation
Rabol et al. (2012), "Promoters and Barriers in Hospital Team Communication: A Focus Group Study"	Case study: ethnographic approach focus groups	Identifies common characteristics of team communication at four university hospitals
Keyton et al. (2013), "Investigating Verbal Workplace Communication Behaviours"	Case study: grounded theory approach, modification of existing theory; the workplace communication behaviour inventory; review of communication publications, survey	Examines the communication behaviours of adults in the workplace, focusing on employee–employer and employee–client interactions
Bartels et al. (2008), "Horizontal and Vertical Communication As Determinants of Professional and Organisational Identification"	Case study: situational analysis, questionnaire	Investigates the relationship between horizontal and vertical communication and professional and organisational identification
Braithwaite (2006), "An Empirical Assessment of Social and Cultural Change in Clinical Directorates"	Case study: observational approach; semi-structured and open-ended interviews, nonparticipant observation	Understanding the effects that the CD has on behaviour of staff
Braithwaite & Westbrook (2004), "A Survey of Staff Attitudes and Comparative Managerial and Non-Managerial Views in the CD Directorate"	Case study: ethnographic approach; embedded design; questionnaire	Attends to two different subgroups: managerial and nonmanagerial in understanding the role of the CD in hospitals

3.5 Mixed Methods Design

The value of using a mixed methods design is in the opportunity to use the strengths of both qualitative and quantitative approaches. The research falls within the social sciences domain and is therefore comprised of abstractions that cannot be measured with perfection (Onwuegbuzie & Leech 2005). Qualitative methodology is the planned approach to social sciences research, which considers the research question, the cohort, and the kind of information required. Qualitative methodology influences the methods employed, the type of analysis performed, and results in nonstatistical, contextual data (Creswell 2014). The qualitative data were extracted from in-depth interviews held with the study cohort. In keeping with the demands of qualitative inquiry, and the epistemological approach of the project, these interviews were held in the natural domain of the cohort, favoured the constructed reality of the participants, and were reported in the form of a narrative that presented themes and consistencies elicited from the participants' responses. The quantitative study (social network mapping) demonstrated relationships and communication pathways through mathematical–sociological methods. The results were prepared in the form of matrices and maps with definitive information described (Hanneman & Riddle 2005). Presentation of results in this way is consistent with the demands of both qualitative and quantitative inquiry and illustrates the contextual, numeric, and illustrative data supporting how communication channels were used within the CD. Application of interview data is a qualitative approach (Creswell 2014). Application of the SNA is a quantitative approach (Buch-Hansen 2013). Integrating the two datasets constitutes a mixed method approach (Creswell 2014; Garner 2015). Together with the constructivist assumptions, mixed methods produced a more complete understanding of communication relationships in the CD.

Using a mixed methods design has the benefit of bringing together complementary qualitative and quantitative data sources. With an emphasis on understanding complex interactions in a dynamic setting, applying two methods surfaced information that otherwise would not have been captured with one approach. This is a key benefit of a mixed method approach (Garner 2015). Creswell (2014) defined qualitative data as open ended and quantitative data as closed ended, highlighting both as having limitations and strengths. Blending the benefits of each design enables a contextual understanding of statistical information and vice versa. A

mixed methods design can be defined as the collection of both qualitative and quantitative data, which are analysed according to the design of each method. Each dataset is then merged and connected or embedded within the design analysis (Creswell 2014). Data from the interviews and the SNA were collected concurrently. The mixed methods approach has been supported in similar studies (e.g., Braithwaite & Westbrook 2004; Terblanche 2015; White, Currie & Lockett 2016). The mixed methods design supported the research question by providing data on how and why communication pathways were structured. The design also facilitated a theoretical lens through which the constructs of each theory could be applied in a singular and blended manner.

Outcomes that showed consensus with the present hospital structure could indicate that communication was more effective than when communication channels of past and present structures were used in combination. The quantitative data were extracted through SNA questionnaire responses and subsequent mapping of the communication relationships between executive staff. The qualitative dataset was generated through interviews with executive staff. When considered together, the datasets provided a picture of the CD with insight into why the data suggested such outcomes. The purpose of this mixed methods design was to blend the qualitative and quantitative results to form a multidimensional view of the communication patterns within the CD as a structure within the target hospital.

3.6 Chapter Summary

This chapter described the research methodology. The constructivist paradigm is familiar to the ontological and epistemological view of the healthcare worker and supported the situated, relational, and textual criteria necessary in a mixed methods study design. OB theory underpinned the design as an important analytical tool to understand the data. The chapter also presented arguments for the inclusion of these theories in the current research with the aim of providing a vibrant and inclusive platform on which to discuss the research findings. The study design was addressed and substantiated in meeting the criteria as a case study design, and prior use of case study design was discussed. Chapter 4 extends the discussion of the study design in terms of the methods used.

Chapter 4. Methods

Chapter 4 describes the implementation of the study, the recruitment of participants, and the sample, procedures, and measures used to collect data to answer the research questions. The data analysis is also discussed in this chapter, which includes quantitative, qualitative, and theoretical aspects. Data integration and presentation of the results conclude the methods discussion, and finally, ethical considerations are explained.

4.1 Procedure

The study was introduced to the target hospital through initial meetings with senior members of staff and the presentation of a proposal for the study. A steering group was established to support the initiation of the project and provide guidance on conducting research in the healthcare setting. Through a member of this group, introductions were facilitated for the researchers to contact the executive and other relevant staff. The names of the executive staff were established by accessing the governance structure chart (Appendix A) on the organisation's website. Once the executive had agreed to support the study, the process of seeking ethical approval was established. Following approval from the Human Research Ethics Committee (HREC) of both the health facility (Appendix B) and the university (Appendix C), the study commenced.

Communication about the research occurred in the following way. A presentation at a general staff meeting (The Wall) introduced the project to the staff. The organisation declined the offer of a meeting and presentation to the executive cohort, preferring this general meeting as a forum in which to introduce the project. Executives may have been more engaged had the presentation been to a smaller group in a less open environment. Conversely, participants may have felt less exposed in the general meeting because there were so many staff present. Flyers that included the project outline and contact details for the researcher were placed on a public notice board in the general meeting area, and executive staff were informed during the presentation that these flyers would provide an outline of what was required and encouraged to contact the research team. Identifying the formal positions of participants was difficult due to the

out-of-date organisational chart on the website. The reason for the inaccurate organisational chart became clear when participants spoke of constant changes within the executive structures. The organisation did not supply email addresses of staff; therefore, contacting prospective participants to invite them to participate in the study was achieved through the standard email system using the constant format of someone@--.org.au. The organisational sponsor and HREC approved the researcher to send invitational emails (Appendix D) as well as follow-up reminder emails (Appendix E) after a period of 2 weeks.

An invitation to participate was emailed along with the social network analysis (SNA) questionnaire (Appendix F), and a hard copy was offered at the time of interview. A written version of how the interviews would proceed, how notes would be taken, the location of the interviews, and measures taken to ensure confidentiality were provided to participants before interview. With participants' permission, a small hand-held recording device was used to record the interviews. Where a participant did not consent to an audio recording, a prepared template was used to record the information in shorthand notes. These procedures formed the interview protocol located in Appendix G.

Consent documentation (Appendix H) was provided by the project hospital research governance unit. The project, timelines, and a request to undertake an interview and complete a questionnaire were explained. Participants were advised that each interview would be approximately 30 minutes in duration. Participants were encouraged to nominate a place for the interview and a suitable time. Confidentiality was carefully explained so participants understood how their data would be kept secure, handled, and finally destroyed. Participants were asked to sign a declaration saying they understood the terms asked by the researcher and were given a copy of the participant information along with contact numbers of the research governance committee and investigators overseeing the project. Participants were also advised they could withdraw at any time up to when the data were coded.

4.2 Participants

The study aimed to identify the communication behaviours of executive staff and the communication pathways within the respective clinical directorates (CDs) with reference to other

members of the group and their direct reports. The organisation consisted of eight CDs. The executive staff for this project comprised CD leaders of each directorate and two others: the chief executive officer (CEO) and the chief operating officer (COO). Those identified as executive staff (Appendix I) within each CD held positions of general manager or executive director. A total of 24 invitations to participate were sent. Of these, four automated emails were received, notifying the researcher that the incumbent had resigned. Further inquiries with the human resources manager revealed that these positions had been made redundant or the incumbent had not been replaced. During the data collection period, a further two positions were melded into one, and a further staff member resigned. In total, 10 staff consented to interview and questionnaire participation. At the end of the participant recruitment period, the final 10 participants represented a 62.5% response rate from the current executive cohort. Table 10 presents the demographic details of the study participants.

Table 10. Demographics of participants

Participant	Gender	Executive Type	Profession Type	Tenure/Years
p01	Female	Operational	Clinical	4
p02	Female	Operational	Clinical	1
p03	Female	Administrative	Clinical	4
p04	Female	Administrative	Clinical	2
p05	Female	Administrative	Clinical	4
p06	Female	Administrative	Nonclinical	4
p07	Male	Administrative	Nonclinical	4
p08	Male	Administrative	Nonclinical	4
p09	Female	Administrative	Nonclinical	2
p10	Male	Administrative	Nonclinical	6 weeks
Total/mean	7 Female 3 Male	2 Operational 8 Administrative	5 Clinical 5 Nonclinical	Mean tenure: 2.98 years

Note. Biographic details were not relevant to the study. Limited details about participants are presented here. Further details may compromise confidentiality and anonymity.

Including the whole network within the study satisfied the conventions of SNA, which is concerned with drawing information about a network and not generalising about a larger

population. SNA develops a more descriptive side of statistics to explain relations between people in networks and does not seek inferential or replicable outcomes (Hanneman & Riddle 2005). The inclusion of the whole network within the study cohort eliminated selection bias (White, Currie & Lockett 2016). Once recruited, participants were offered an explanatory statement (Appendix J) that outlined the course of the project, how their data would be applied, and measures of recourse available to them should they wish to withdraw from the study. Contact details of the research team and an independent person were also included in this document.

4.3 Measures

Interviews

Yin (1994) posited multiple data collection methods enhance study outcomes and provide greater accuracy of results. The two methods of data collection were chosen to understand how the CD structure influenced communication pathways. First, in-depth interviews with executive and senior members of staff were adopted to understand the challenges they encountered in communicating with other executive clinical and nonclinical staff. The aim of the interviews was to encourage participants to discuss their experiences from the constructivist perspective of the research. This was assured by constructing interview questions to prompt participants to think about their experiences and build meaning from them. Veal (2005) suggested in-depth interviews are relevant when there is a small cohort, where the information obtained is likely to vary considerably, and where available information on the subject is small. These three criteria fit the scenario in which the current research was situated. Audio recorded or hard copy interviews with the participants were fully transcribed following each interview, along with observational notes of the session. Several key intrinsic and extrinsic factors were used to guide the interview discussion. These factors were grounded in the concepts identified within the theoretical framework and reprised as everyday actions.

Intrinsic and extrinsic considerations relating to communications in the CD were as follows:

- Ease of communication;
- Opportunity to communicate;
- Barriers to communication;
- Distributed leadership;
- Challenges;
- Workarounds and variation to practice;
- Clinical directorate structure;
- Cross-discipline communication.

Social network mapping

The second data collection method involved SNA through communication relationships mapping. SNA is a mathematical–sociological approach that maps and analyses complex social relations (Buch-Hansen 2013). Sociograms, also called social network maps, are graphic representations of networks and are important when making sense of hierarchical features of networks, which was the focus of the current research inquiry. Data are presented in the form of matrices to understand and interpret these hierarchical features of organisational networks. The metrics of interest here were as follows:

- Network density;
- Network centralisation.

4.4 Data Analysis

The purpose of data analysis is to make sense of the data corpus (Creswell 2014). Capturing and giving meaning to participants' contributions is the responsibility of the researcher and requires careful consideration of the type/s of analysis employed. Throughout the analysis process, the researcher revisited the research questions to keep the focus of the study aligned

with decisions made in the coding process (Saldana 2018). While aberrant data, or data that may be tangential to the problem investigated, could offer insights, the aim of analysis was to answer the original research questions. This consideration guided the analysis methods.

The interview transcripts were read and re-read to become familiar with participants' contributions (Fereday & Muir-Cochrane 2006), and consistent appearance of particular words or phrases was noted (Braun & Clarke 2006) to assist with understanding the messages within the discussion. In the preliminary testing phase, these words or phrases were developed as codes and found to be too numerous. A priori codes were then established based on the intrinsic and extrinsic factors originally identified from the research question. Iteratively analysing and revisiting the purpose of the study and deliberating on the aim of the inquiry (Mason 2010) occurred throughout the analysis process. The coding process aimed to achieve an accurate representation of participants' narratives and sought to avoid confusion by pre-existing researcher perspectives. This was achieved by selecting the structural coding format, using the research questions as a guide, and the in-vivo coding process that focused on the words of the participants only.

Qualitative analysis

Following established models of analysis such as those elaborated by Richards and Hemphill (2018), the inductive process yielded themes emerging from the interviews. Saldana (2018) suggested facilitating this process by using structural coding techniques. Structural coding uses research questions to guide transcript analysis, encouraging researchers to identify statements that answer each research question or subquestion directly (Saldana 2018). This type of coding results in statements noted in transcript margins that call attention to specific research questions. The process allows early examination of the data corpus, highlighting both common and aberrant themes and their relationships (Saldana 2018). Whereas this method provided an overview of data and emerging themes, a further step was required to focus on a higher abstraction of participants' responses using in-vivo coding. Saldana (2018) suggested such coding is appropriate for studies designed to capture the meaning of people's experiences in their own words. In-vivo coding enabled the use of participants' words to describe situations and extend interpretations (Saldana 2018) of statements derived from structural coding. This coding

method was guided by the intrinsic and extrinsic factors nominated in the Code Book (Appendix K).

The value of the two coding datasets became apparent as the coding process deepened to include the writing of analytic memos. The analytic memos drew together the overview data of structural coding and the high level of abstraction produced through the in-vivo coding process. The procedure produced greater insight into the participants' responses by bringing together information that was tangential to the main issues alongside those responses that were interpreted as critical to answering the research questions. Saldana (2018) and Richards and Hemphill (2018) suggested that analytic memo writing should be concurrent with other coding methods. However, the steps occurred sequentially so the memos were written as a final stage of analysis for each participant. The purpose of the memo is to triangulate the two completed datasets (structural coded and in-vivo coded data). Triangulation occurs where the two datasets are compared and used to justify themes emerging from the datasets. Triangulation is also found where multiple data analysis techniques are used (Natow 2019) and both inductive and deductive analyses occur, such as within this project. This process adds to the validity of the findings through using more than one dataset to substantiate findings (Creswell 2014). These steps reduced the likelihood of data becoming obscured when the analyst was intensely absorbed in the construction of the datasets and provided clarity when aligning the two completed datasets. Clarity was assured as steps could be retraced back to original documentation of interviews.

The analytic memos provided a comprehensive understanding of the interview transcripts as a summary of the structural and in-vivo responses. The final step in the inductive process was to draw all data together as a metasynthesis based on these memos. The metasynthesis integrated the emergent themes and, in conjunction with the structural and in-vivo codes, made explicit the analysis pathway and ensured both rigour and transparency (Richards & Hemphill 2018). The metasynthesis provided an avenue to critically analyse what was found as the information had been drawn together into a manageable package. Ensuring the analysis was correct was supported by the opportunity to check backwards to original data and forwards to results, thereby making the process transparent and rigorous.

The coding analysis was designed to ensure participants' voices were captured. The researcher's challenge was to provide transparency within the data analysis using qualitative measures such as a collaborative approach, step-by-step development in the data analysis, and measures to ensure interpretation of data was consistent (Richards & Hemphill 2018). To address this challenge, a team of analysts engaged with coding the datasets. A collaborative approach opens the analysis to the possibility of more than one interpretation (Saldana 2018). The collaborative approach encouraged discussion with others engaged in the work and a more intense scrutiny of the data. Adherence to the process described was achieved using the Code Book. Saldana (2018) iterated the importance of establishing a code book as a guide when more than one author is undertaking the analysis to manage consistency within organising and reorganising codes (Creswell 2014). All analysts abided by guidelines set out in the Code Book. Guidelines presented in the Code Book were used to ensure each analyst had clarity in analysis and harmony in agreement. A code book illustrates the method of analysis from the project overview and timelines through to the development of the metasynthesis and describes the final stage of data analysis—that is, the theoretical thematic analysis.

The final stage of data analysis was a deductive process designed to substantiate the human behaviour observed, build new insights into established theory, and offer new theory that supported the empirical findings in the healthcare setting. Findings have the potential to contribute to the incremental modernisation of established theory (Kuhn 1970). Development of theory is a critical element in any research project as extant theory will lose its relevance over time should researchers not continually contribute to extending and refining theoretical constructs (Eisenhardt 1989). In line with Saldana's (2018) suggestion, this study was developed through applying established theories in a specific context. Doing so allowed for both modification and elaboration of existing theory.

Theoretical analysis

The Code Book guided the theoretical analysis; a priori codes were developed using constructs derived from the theoretical literature review reported in Chapter 2. To address consistency among the research team, each theory code guideline was supplemented with notes containing agreed interpretations of each construct. Construct frameworks were also employed to

visually illustrate the constructs; the bridging of constructs between each theory is illustrated in the theoretical framework. Findings from the inductive process of data analysis were layered onto the deductive findings of the theoretical analysis (Braun & Clarke 2018). Together, they provided a nuanced and detailed account of human behaviour framed in an overarching view. The challenges of analysis were to ensure the participants' meanings were transcribed truthfully and responded to the research questions. This was managed by the structural coding process that placed research questions at the fore. The in-vivo coding process ensured the dialogue from participants directly contributed to answering the research questions. Further challenges included agreement by analysts as to the interpretation of the transcripts, and this was managed by employing the standards set in the Code Book.

The theoretical thematic analysis informed the final write-up of results in conjunction with the metasynthesis. The alignment of the theoretical constructs and data outcomes provided a view by which to challenge or extend the OB theories. The completed data analysis and outcomes are in Chapters 5, 6, and 7.

Social network (quantitative) analysis

The aim of SNA is to measure both formal and informal networks. Network maps and matrices are used to illustrate where form and structure guide a practice and, importantly, where informal relationships have developed and are sustained within a network. These networks often vary widely from the mandated or formal networks as they are often built on friendships or past established relationships (DeLange, Agneessens & Waege 2004). The SNA undertaken in this project was a singular vision of the network of executive-level staff. While participants discussed interactions with subordinates, their interactions with other executives was of the most interest given this was the focus of the inquiry. Specifically, these interactions reflected the types of ties or connections each executive perceived they experienced with other executives. The SNA investigated both reported and actual social networks by highlighting mandated networks (e.g., between staff, directorates, and executives) and those formed through friendships and alliances. Each node within the analysis represented an executive; connections made between each node represented a communication relationship of some standing. These were reported and/or observed (Dunn & Westbrook 2011). Two metrics were studied within this current analysis.

Network density refers to the subjective assessment made by the network members regarding their various kinds of interactions with others (Sparrowe et al. 2001), and *network centralisation* illustrates the concentration of network ties between group members. Nongroup members may also be illustrated in this manner by way of team membership but do not belong to a group within the team (Sparrowe et al. 2001). Use of these metrics is supported by Dunn and Westbrook (2011) who suggested individual networks and their inherent relationships with others can be mapped using SNA. One or more metric is needed when assessing individual relational networks; relationships cannot be assessed without at least one standard of measurement (Dunn & Westbrook 2011).

The SNA data were obtained from a questionnaire completed by participants who had the choice of completing a hard copy questionnaire following the interview or completing an online version through the Qualtrics platform. In total, eight questions were asked. Questions that focused on network density comprised several concepts: advice, cooperation, friendship, and adversarial or superficial networks. These questions focused on eliciting information about the participant's network, the nature of their interactions with others, overlapping responsibilities, and structural (identical networks) or regular (similar networks) equivalence (Monge & Contractor 2003). Network density revealed information about the types of interactions between staff such as resource seeking, knowledge exchange, or social interaction. Network centralisation questions focused on staff who received the most communication or had the most interactions with others, implicating their importance within the network. Reciprocating communication channels reflected the position of others in relation to central nodes or persons in the network based on direction of communication flow and the incidence of reciprocal encounters. The participants were also asked to comment on communication in leadership and the use of workarounds where structure impeded knowledge transfer and/or obtaining resources.

Once analysed, the data were presented as network maps and sociograms. The maps provided an easy format by which to view the network. Sociometric tables were also used to demonstrate the current networks in keeping with established social network principles (Hanneman & Riddle 2004).

4.5 Mixed Methods Data Integration

The key question this research aimed to address was "In what ways do the communication pathways of the CD structure of hospitals support effective diffusion of information between executive and senior staff?"

Effective diffusion of information is defined as communication that overcomes the barriers of discipline, structure, and cultural influences (Hsiehchen, Espinoza & Hsieh 2018) successfully relaying information to intended recipients. Individual preferences of communication pathways were established through in-depth interviews with participants. Mapping relationships, including strength of relationships and identification of influential actors, with SNA provided a snapshot of the group communication pathways. Applying the constructs of each theory enabled understanding of the data elicited from the interviews and SNA. Analysis of these pathways and comparison with the CD's formal communication pathways illustrated whether staff relied on established relationships and habits to organise, evaluate, and maintain communication pathways or whether the CD structure supported these interactions and so facilitated communication between staff. The outcomes also illustrated whether the structures in the CD were used to contribute to effective communication between staff and whether the feedback mechanisms in place were direct and utilised consistently by participants to support work practices.

4.6 Presentation of Data

The data derived from the interviews are presented as a metasynthesis (Chapter 5) that identifies themes within responses, and where relevant, aberrant issues of interest to the study findings are included (Saldana 2016). These aberrant issues can be a source of future research and are not discounted simply because they do not represent consensus in the participant group. The themes were expanded using applied theory, and application of the theoretical constructs and findings suggested explanations for the way staff communicated within the directorate. The data obtained from the SNA are presented as matrices then illustrated as social network maps (Chapter 6) (Edwards 2014). The purpose of this visual image is to provide an illustrative account of the communication pathways at work (Dunn & Westbrook 2011). The final data corpus was then considered and propositions made about how each dataset supported findings of

the other and in turn contributed to answering the research question. Presentation of the data in this manner supports the project aims and objectives, and the use of applied theory and methods. The purpose of presenting the results in this way is to illustrate aspects of individual agency in the context of structural arrangements. Further, the approach demonstrates the complexity of individuals in and as teams in the context of communication practices and how individuals as leaders enact their roles through the lens of communication practice.

4.7 Limitations of Methodology and Methods

The project engaged a constructivist approach to developing methodology and methods. The aim was to encourage participants to make sense of meanings and relationships and reflect on the constructions of their chosen professions in relation to others (van Graan & Williams 2017). Epistemic assumptions may differ between healthcare professionals, influencing their understanding of interview questions and the methods employed by the researcher. Theory choice was integral to explaining linkages between individuals and their behaviour at individual, team, and leadership levels. Analysis of these behaviours may differ through the lenses of alternate theoretical assumptions. In terms of method, employing different approaches such as observation may have influenced the outcome of the project, with the researcher observing the dynamics between executives rather than relying on the account of the participant. Relational dynamics are interpreted widely in this perspective (Watson, Husband & Ireland 2020). Biases such as social desirability were addressed by encouraging participants to express their own views and not those they perceived as required by the interviewer. This was achieved by emphasising the privacy of participants and direct efforts to eliminate leading the participant to conclusions.

Self-selection bias represents a methodological problem, occurring first as a failure to recognise and account for observed differences in groups and second as an incentive for individuals to contribute towards the study (James 2006). Of the first issue, consideration of researcher self-selection bias is relevant to small group samples as small groups invariably belong to larger groups (Collier 1995), representing a majority subsample invited to participate in the study. The scope of the project determined the group choice along with access, interest, and availability. Limitations are acknowledged from this respect. Of the second issue, self-

selection by participants was possible, and several steps were taken to assess if bias was present. First, invitations were sent to 24 staff; in total, eight staff either declined or did not reply. It is acknowledged that these group members may have self-selected to not take part because of the nature of the study. Of the remaining 10 participants, opinions about organisational processes, structure and cultures varied in the group. Participants may have observed the project as an opportunity to voice anxieties and concerns about their workplace and workplace relationships but did not report such motivations. Acknowledging these differences mitigates but does not eliminate the possibility of self-selection bias (He, Huang Liu & Zhu 2018). The aim of the study was to understand individual perspectives of the CD in terms of communicating, with individual contributions serving to reach a greater understanding of the phenomenon. Limited bias may have presented as dissatisfaction within relationships and structural barriers to communicating between participants. Bias was not uncovered during interviews as no negative common view surfaced about a person, relationship, activity, or event. However, there was agreement on some communication issues as reported in the results section. Responses reflected a wide variety of views and experiences suggesting limited bias.

Processes of recruitment and subsequent size of the cohort limits the scope of the project. Recruitment began with addressing an organisation meeting where some participants may not have access or been absent. Email addresses were not supplied; recruitment relied on ascertaining contact details through a standardised email address system. The cohort represented 62.5% of the total executive group, equating to 10 participants. Smaller cohorts are less reliable when generalising outcomes; results are less likely to be representative of the population (Veal 2005). The social network mapping allowed the researcher to demonstrate the network of those involved in the project; however, due to the low numbers of participants, this produced an incomplete map of the entire executive cohort. The study focus comprised an intense internal examination of an executive team. This intrateam perspective is reported in the thesis rather than a study of the way the team communicated with others external to their group.

4.8 Ethical Considerations

The following discussion focuses on the relationships established with the participants. Beneficence as risk–benefit assessment forms the framework that guides the application of methods and methodology (National Health & Medical Research Council [NHMRC] 2018). The relationship between the researcher and participant is pivotal to the success of the project; therefore, consideration of establishing and maintaining that relationship is also of the utmost importance. The elements considered relate to values that protect identity, establish trust, maintain integrity, and contribute towards benefits to be realised from the research while minimising the risks to participants (Ignacio & Taylor 2013). Protecting identity was reassured by full disclosure of the method of identification of the data and how the data would be applied in text. Establishing trust was also approached using a full disclosure method. Participants were informed of why the study was being undertaken and the role and benefits attributed to the researcher and participants. Explanations were given as to how each participant's data would be kept safe and would not be accessible to peers (Bussu et al. 2020). Participants were also informed that the data would be destroyed at the end of the project and would not be available to other research teams. These guarantees contributed to the integrity of the research team with the undertaking to protect all aspects of the participants' participation and to act according to the NHMRC (2018) guidelines. The following points are raised in relation to the strategy of beneficence employing the standards of the *National Statement on Ethical Conduct in Human Research (2007)—Updated 2018* (NSECHR; NHMRC 2018).

- Risk management and safety-informed consent was the first consideration in minimising risk when recruiting participants. Understanding why and how the research would be undertaken gave participants an opportunity to make their own risk assessment about participating (NSECHR, Section 2.2.6).

- Consideration was given to questions that may compromise the participants' feelings of confidence in talking about their work and justifying why they undertook action that may not align to the organisation. Post-interview regret about divulging information may lead to feelings of anxiety, causing psychological harm for a period.

Participants were reassured about their rights to talk only about those areas in which they were comfortable (NSECHR, Section 2.2.6). Participants were provided with advice about interview questions prior to the interview.

- Confidentiality is linked to risk management and safety; reassurance about maintaining confidentiality by keeping the data identity free is important as any post-interview concerns may be lessened by knowing that the source of the information given cannot be identified (NSECHR, Section 2.2.6). Data were kept free of any connection to the participant by allocating numerical codes not associated with dates or job descriptions.

- Data handling and security completes the circle of the beneficence strategy by reassuring the participant that the data would be protected and, once applied to the research, disposed of appropriately (NSECHR, Section 3.1.73).

Ethical consideration was also given to the team of analysts considering conflict, collaboration, and problem-solving plus the integrity of the group. The researcher undertook the role of Code Book editor (Saldana 2016, p. 36); the Code Book included specific definitions and coding processes to guide the group. In conflict, interpretations were discussed in a collegial atmosphere to reach consensus. The analyst team had undertaken the online learning module Good Clinical Practice, which is specific for learning in all areas of ethical and practical human research (www.onlinegcp.com) and a requirement of the HREC.

4.9 Chapter Summary

This chapter described the methods used to implement the research project. The study sample chosen was congruent with the requirements for both data collection methods. The data analysis pathways included implementation of both interview and questionnaire methods, highlighting the benefits of their use and their applicability to the research project. The quantitative, qualitative, and theoretical analysis pathways were discussed and their integration and data presentation method explained. The chapter concluded with an outline of ethical

considerations applied to this project in compliance with the requirements for the ethical conduct of human research published by NHMRC (2018). Chapter 5 unpacks the data analysis, beginning with structural coding. The metasynthesis is presented as a summary of the coding process. The analysis includes a theoretical component where theory is applied to the first rounds of coding.

Chapter 5. Structural Coding and Metasynthesis

This chapter presents the results of the data collection explained in Chapter 4 and identifies the major findings and influential factors that surfaced from the integrated data analysis. The chapter begins with a discussion of the data analysis process and highlights verbatim the data emerging from the structural and in-vivo coding as a metasynthesis. The theoretical analysis of the qualitative component completes the chapter.

5.1 Data Analysis

The interview questions were based on a predetermined set of categories, which were linked to the research questions. The researcher used these sets to guide the discussion. Data analysis was then guided by the structural and in-vivo coding outlined in Section 4.4. Presentation of these statements frames the contributions of the study participants briefly and signals trends within their answers. Structural and in-vivo coding are first-cycle methods (Saldana 2018). The in-vivo coding plan is presented in the Code Book (Appendix K). Triangulating the data from these two methods was achieved using analytic memos and represents the second cycle of analysis. Analytic memos written from the results of first-cycle coding for all respondents is presented as a metasynthesis of the findings.

The structural coding aligned responses directly with the research questions. The aim was to draw together specific statements and conceptual phrases to elucidate the participants' views. Categories were drawn from each research question and responses allocated (Appendix L). "Effective communication pathways present" was the first category pertaining to the research question "In what ways do the pathways of the clinical directorate structure of hospitals support effective diffusion of information between executive and senior staff?" Participants nominated mobile phones, SMS (texting), face-to-face, electronic diaries, and proximity as the most effective ways to diffuse information. Mobile phones were the most popular choice for executives because they were least intrusive. Face-to-face discussion was most favoured, potentially because of the richness in conversation; however, executives found limited time to

have face-to-face discussions. Proximity was influenced by where the offices of individuals were located; some were geographically distanced from others.

The second research question was “How do various agents, stakeholders and actors in the directorate define effective diffusion of information between executive staff; that is, what does it look like when it is working well?” The structural code drawn from this question was “Important factors for communication”. Participants suggested communication was highly dependent on personalities; length of a relationship was important, as was workload. Participants also said openness to communicating was important. Participants agreed that established relationships improved communication; knowing someone well suggested that personalities were understood, and likes and dislikes were accommodated, thereby making communication easier and more likely to occur.

The third research question was “How are communication pathways for clinical directorate decision-making currently implemented in the clinical directorate?” The structural code drawn from this question was “Present use of communication pathways”. Participants chose the pathways they most preferred rather than using pathways mandated by organisational policy. Availability of others was considered a decisive factor in which way to communicate. Several staff mentioned arriving for work early to speak face-to-face with other executives. Most staff preferred to use mobile phones to text other executives but relied on emails and alerts to communicate with subordinate staff. Meetings were mentioned as necessary but often time consuming and the least favoured method of communicating.

Research question four considered structure: “In what ways does the clinical directorate structure impact effective operation of these systems from the perspective of staff using them?” Effective operation describes processes that proceed uninterrupted by outside forces. The structural code was “Structural influences on communication pathways”. Discussion about structure produced strong conceptual phrases such as time, reliability, complexity, barriers, and processes. Participants spoke of having no historical or substantial relationships with others and incompatibility of structure and communication processes as significant barriers. Participants suggested established silos made communication difficult; committees held no common relationship with other committees, and workload restricted available time to communicate.

Conversely, some staff spoke of structures as positive enablers of communication. The structure allowed for both horizontal and vertical communication pathways and initiatives that brought groups of people together to discuss common issues and problems. Most participants suggested that the structure compelled them to manage their time in terms of how and when they communicated.

The final question probed participants' responses in dealing with structural barriers to communication: "What aspects of structural arrangements specifically impact effective communication, and in what ways do staff overcome these barriers?" The structural code was "Overcoming structural barriers to communication". Responses to this question focused on structure and behaviours. Participants spoke of past structures and efforts to improve the current iteration. Phrases such as maturation, purpose built, and stability were related to the governance structures in place. Other phrases such as professionalism, agreed values, collaboration, and transparency related to behaviours within the structure. Participants demonstrated how structure and behaviours were connected in their work. Some understood the need for structure to be evolving; evolution would require their behaviours to change. Several participants demonstrated how structure was modified to fit with their work requirements. Examples include establishing committees inclusive of all staff, recruiting for capability, and educating staff on the journey ahead of the organisation. In this way, executives hoped to fashion a commitment from staff to endure incremental structural changes as the hospital evolved.

5.2 Metasynthesis

Metasynthesis is the culmination of the analytic memos written for each participant to summarise their responses. Each element was used to formulate the interview questions and then framed by the research questions to guide the discussion. Participants' contributions are referenced by their interview codes in parenthesis.

Communication pathways

The participants nominated several effective communication pathways. These pathways were considered effective because they achieved the desired goal. Mobile phones appeared to be the most effective tool, with texts preferred to calls when contacting other executives. The data

also support the benefits of face-to-face communication recognised by participants (p02, p05, p06, p08). Some participants identified the grouping of administrative executives within the corporate suite as important in facilitating effective communication. This notion was supported further by the operational executive who highlighted the divide between this team and the administrative executive (p01). The physical separation of the two executive teams is demonstrated by the floor plan (Appendix M). Communication pathway preferences appeared contingent on relationships with others (p01, p02, p07, p09). Another effective method of communication nominated by participants was the formal committees (p01, p03, p10). These committees were complex or simple in nature, depending on the portfolio allocated to the executive. For one participant, governance structures within these committees provided readily available communication channels and feedback mechanisms (p03). These processes assisted other directorates to provide communication channels and information when required. The least preferred method of communication appeared to be email. Reliance on email can create its own issues and barriers (p06), and participants suggested they did not have enough time to respond to emails (p02). The choices made by participants represent self-organising systems (Monge and Contractor 2003). Choices are a response to opportunities to communicate based on ease and success of those communication channels: Do they reach the intended recipient? Are they clear methods of communicating? Do they ensure an avenue of response is available to the recipient? The answers to these questions determined how participants communicated with their peers.

Successful communication

Factors that contributed to successful communication included how the communicator perceived the receiver's capability in their role and how receivers created meaning from requests and directives (p01). Participants' comments about their colleagues' capabilities appeared related to frequent executive staff turnover experienced by the organisation as leaders strove for stability and balance following the executive changes in 2015. Participants appeared concerned about balancing their own progress in their directorates with developing relationships with new staff (p01). The most important type of relationship expressed by participants was based on trust (p01, p02, p05, p06, p07, p08, p10). Most participants recognised these relationships as imperative to the organisation's success and infiltrated their own directorate's success. These comments

supported others who suggested communication was better when their relationship with the other person was longstanding and when they understood the preferences of the other person (p04, p01). Communication remains essential in everyday work (Waldeck et al. 2012); communication practices within organisations become learnable (Keyton et al. 2013) and result from behaviours observed by others. The cohort suggested behavioural barriers accounted for many of the issues they had in communicating with others (Karanika-Murray et al. 2015).

Current communication pathways

In discussing communication pathways with participants, there were contrasting perspectives about the use and effectiveness of current communication processes. All participants noted their reliance on mobile phones; however, there was variation among respondents in their evaluation of effectiveness. Some participants suggested that if the matter was urgent, they would call the staff member directly, which would produce the desired contact. Most participants suggested that calling mobile phones was reserved only for urgent matters and would instead text, or if they were confident in their relationship with the other staff, they would go to the person's location (p04, p08). Comments around spontaneous visiting included the distinct geographical demarcation between the operational executive group and the administrative executive group. Participants were more likely to visit unannounced if the other person worked in the same area and belonged to the same administrative group (p01, p04). Other processes included more formal routes such as meeting structures and email. Of the former, participants saw the value of including other executives in formal meetings on matters that concerned only their immediate directorate (p05, p09). Of the latter, emailing other staff rated poorly on the list of desired communication channels, mostly because of the high volume of emails received daily.

The cohort reported inconsistencies in choice of communication pathways. The lack of standardised communication methods could detract from the quality of communication across the group (Rabol et al. 2012). Information flow is directly related to response times and strategic success and aligning communication pathways may be a critical requirement to improving communications and overcoming the present communication issues (van Hove 2016).

Structural influences

Participants readily identified structural influences on their communication practices. The most outstanding theme was the perceived presence of silos in the workplace (p01, p02, p05, p07, p08), where staff communication worked well only within their own directorates. Establishing cross-boundary partnerships between executives is reliant on effective communication. The literature supports the notion that poor communication exchanges hinder the development of trust, achievement of aims, and objectives and knowledge transfers (de Waal et al. 2019; Johnson, Grove & Clarke 2018). Other themes included a lack of knowledge about a position's present incumbent, a lack of understanding of which role serviced which need, and role demands that induced a time-poor workforce. Both clinical and nonclinical backgrounds reported that the work structure of each was dissimilar, and as a result, preferred communication methods were not congruent, suggesting a causal relationship in communication methods. From this evidence, structure plays an important role in communication. Participants identified the nursing unit as structurally hierarchical as both a criticism but also enabler of effective communication. By contrast, in the medical division, staff worked a more flexible roster as senior medical leaders were not always on site. In the latter case, communication was more likely through electronic means, sometimes using more sophisticated pathways such as hospital alerts, pooled SMS alerts, and intranet sites (p03). The medical structure preferred communication methods that supported staff to work as independent practitioners, being a small group servicing many patients. Medical executives were clear they wanted their staff to provide medical care rather than "bombarding them with semi-urgent information" (p03). Each sector of the executive cohort responded to structural issues in communicating based on their own needs; organisational design factors were foremost in the method used to communicate (Kral & Kralova 2016).

To support the aim of formalised communication, the medical executives gave examples of complex portfolios under their direction that were supported by numerous committees and reporting lines. The medical executive felt the directorate had excellent communication within the group. Medical executives suggested communication lines reduced the imposition on the medical core individual workload. These measures were designed to enable communication

throughout this devolved and dispersed professional group. Regarding communicating beyond the medical workforce, little information came forth about how such communication was supported and encouraged.

Other perceived silos identified by participants concerned the geographical placement of teams. Physical and work-related separations influenced opportunity for face-to-face conversations. Paradoxically, face-to-face conversations were identified by most respondents as "an effective and more efficient" (p06) method of communicating. Executives discussed the challenge of meeting with others, suggesting that while formal meetings brought staff together, these often were not conducive to small, informal, private discussions. Several executives (p03, p05, p06) discussed regular meetings with others to enable the face-to-face conversations but acknowledged these were difficult to achieve in the presence of high workloads.

Geographical challenges included the division of administrative and operational executive teams and the location of the service's satellite centres in the wider catchment area: "Geography makes it hard in this organisation; it is around having people cohorting together and that's a part of the problem here" (p01).

Frequent executive team member changes were also highlighted in the conversation around staff knowing who held positions and which role serviced organisational strategies and processes. One participant identified the lack of an internal phone directory as influencing communication practices, suggesting they would often defer to the CEO when unsure. This participant (p09) stated it was easy to defer to the CEO because there had been a prior working relationship with the person. The participant suggested the CEO was supportive in negotiating on her behalf, however also suggested his support brought problems with working around other executives to reach a desired goal. These actions support the statements of others about the importance of established relationships in effective communication.

The turnover and movements of employees also contributed to barriers to information flow in relation to committee membership and the preparation and enactment of strategies. Many participants referred to "not having a seat at the table" (p06) as a challenge to communication flow. This omission was considered important as some participants said they could positively contribute to discussions in matters concerning other directorates (p06) as subject matter

specialists. One participant referred to less disruptive communication when cross-boundary discussion occurred because all groups developed an understanding of the present issues (p06). Conversely, the literature supports that frequent turnover of staff contributes to poor communication and unsupported relationships, and contributes to a high staff turnover exacerbating the problem (Zaheer et al. 2019). Other participants suggested their lack of established relationships with others due to their own limited tenure within the group contributed to a lack of credibility and influence when communicating with others. They were yet to establish those relationships (p04). Relationships predominantly accounted for structural influences on communication for the cohort. Cross-boundary communication involved differing rules and conventions that effectively impeded communication lines (Barrow et al. 2015).

Structural barriers

Most participants described a similar escalation process, such as mobile phones being the choice of communication when needing to overcome barriers in urgent situations. The process included a text using a non-urgent tag, then a text with an urgent tag, and finally a phone call. Most participants suggested that if their text had an urgent tag, they would be assured of a response within a short timeframe (p04, p05, p10). Other methods to overcome structural barriers included “drop in” (p03) or unannounced visits to the offices of colleagues. Further, most participants understood that the executive teams began work early in the morning, and one planned to “accost” (p02, p08) the staff member they wished to speak to, purportedly before the day became too busy.

Several participants referred to the lack of inclusion at meetings despite opining that their expertise would be valuable. These participants described strategies to overcome perceived exclusion with the main aim of reducing the need for further meetings when obstacles became apparent. Such meetings could involve the introduction of strategies, changes in workplace conditions, the realignment of the management team, or changes in less critical issues concerned with everyday processes. One participant suggested they purposefully encouraged the opening of opportunities among staff for inclusion in meetings, saying,

> We have moved into that space now. So, if you are going to have a conversation and to show the value of why you would have [a representative from a unit] at the table because it's less painful in the long run. (p06)

Inclusion strategies such as these were a consequence of the frequent structural changes gradually introduced by this executive, arguably to correct previous structural barriers. The desired outcomes for this participant were summarised: "So then it's purpose built and so then you don't have to go back and try to do some modifications once you've gone live" (p06).

Other measures implemented to overcome structural barriers were guided towards relational remedies. While many participants commented about being unfamiliar with other staff and their roles, there was evidence the organisation recognised this issue and sought to improve the situation. Several formal communication pathways had been introduced to bring staff together. The introduction of the Comprehensive Unit Safety Program (CUSP) initiative was in its infancy; however, there were indications that it was improving conversations between all levels and all disciplines of staff. This initiative was a multidisciplinary quality and safety project that had been introduced in one directorate only at the time of data collection. The program had been instrumental in bringing disciplines together to promote widespread reciprocal acknowledgement of skills, workload, and barriers, allowing staff to troubleshoot and improve the working relationships of all staff (p04). With dissemination across other directorates, the program had the potential to bring together not only staff within directorates, but also the leaders of those directorates. Evidence of the impact of this initiative came from the directorate executive who said, "Everyone's opinion is really valued, makes us feel like a team" and "This division is the best example of communication covering all levels of staff". The participant also stated that feedback from junior staff had supported her impression of the CUSP initiative.

A further initiative discussed concerned the introduction of a formal meeting agenda involving both sections of the executive. The participant described the initiative as a "tri-partied approach" (p05) with a purpose of bringing together both administrative and operational and medical executives on a weekly basis. The participant described the "silo" (p06) nature of the three groups, suggesting of the silos, "That has been the case here, and quite glaringly and I think that's where we're trying to close the gap and get people working together" (p06).

Other less formal initiatives to overcome structural barriers included executives setting aside time to meet with people face-to-face. Several participants referred to building trust as part of effective communication as the main purpose for this activity (p01, p02, p05, p06, p07, p08, p10). Other measures discussed to improve trust were related to building relationships. For some participants this had tactical benefits, suggesting the alliances formed often improved outcomes for major requests to the members of the board (p01). P01 suggested the CEO had significant accountability and influence in the organisation; however, there were others who also had influence over the direction and management of the organisation. Aligning or developing relationships with these people were most important to the success of directorates. Successful ventures led to better relationships and better communication practices (Zaheer et al. 2019). Others suggested strategies for better time use with the aim of improving their own performance to offer a better service to others: "I don't have an open-door policy; I would get nothing done" (p02). This participant conceded this action also created barriers for others but suggested time management was crucial for meeting targets and contributing to organisational processes.

Many participants commented on the importance of staff personal styles in communication practices. Most participants suggested people should be open to communicating with others (p02). Being personable meant being approachable (p02), having capabilities (p03, p06), sharing the vision (p09), being trustworthy (p05, p07, p09), being available (p05), and being accessible (p08). Of note, none of the participants suggested social gatherings as a way of improving relationships between staff. Less formal gatherings could improve relationships among the executive cohort.

The findings of the metasynthesis can be described to some extent as generic and anticipated in a highly complex change environment. However, there were surprising results in the context of the cohort comprising the most senior members of staff. The nursing (operational executive) group were most critical of the structure whereas the administrative group focused on adaptation. Interruption to the executive network occurred where social relationships were important to executives but mostly not established with others. Members of the cohort nominated the expertise and ability of peers to undertake their roles as a concern. This concern was raised in relation to impacting their own work and responsibilities. Cohesion of the group was undermined

through questioning trust in others despite holding shared beliefs, strategies, and goals. These key dynamics influence the effectiveness of communication of teams (Poole & Hollingshead 2005).

In summary, understanding communication between this group was one of the main aims of this study and is addressed in the discussion in Chapters 6 and 7. Findings illustrated how executives communicated with various preferences. Communication channels established by executives varied, with some demonstrating more than one method. Others relied solely on mobile phones. This was preferential, and the implications for subordinate staff were unclear. Most of the study cohort preferred not to use email, which meant executives spent excessive time on their phones. Relationships were identified as most important regardless of the mode of communication. Staff belonged to two distinct groups and were divided geographically and in terms of past relationships. These two factors were main contributors to whether staff reached out to one another and were instrumental in how each participant trusted others. Enablers of communication were the presence of established relationships with others, trust, formal meetings and committees, and geographical proximity. Hindrances of communication were inconsistencies in communication pathways, geographical displacement, work silos, and behavioural barriers.

5.3 Theoretical Analysis

The following discussion presents a deductive analysis of participants' responses. The aim of the analysis was to test the theories in the setting of communication in healthcare and to determine generally if a valid understanding of participants' actions could be reached (Kyngas et al. 2020). The analysis frames the responses of participants within the theoretical concepts of structuration theory (ST), activity theory (AT), and distributed leadership theory (DLT) identified in the systematic literature review. These concepts are presented as the theoretical framework, and the analysis follows this framework. To date, the analysis has been inductive, reducing data into groups and reaching generalisations from analysis and emphasising a practical insight of participant behaviour aligned with the research questions (Kyngas et al.2020). The theoretical analysis was applied to deepen understanding of why and how participants responded to structural and behavioural influences in communicating. The concepts discussed include ST

and agentive practice, AT and the influence of teamwork on individual communication behaviour, and DLT and behaviour that influences the delegation of tasks. Key examples are taken from participant transcripts to highlight consistencies between current literature, theoretical constructs, and participant implied behaviour.

In review, the framework consisted of seven pillars: view, theory, inputs, processes/interactions, actions, and outcomes. The *view* or focus was communication in the clinical directorate (CD). Constructs of each theory were included within the *inputs* pillar. The influence of inputs was demonstrated within the *process/interactions* pillar. Action because of processes and interactions were in the *action* pillar, *outcomes* from processes and interactions form the final pillar. The deductive analysis begins with the constructs of ST. These include agency, power, influence, and relations. Agentive behaviour guides the actions of executives when communicating with others through purposeful choice about when, what, and how to communicate (Giddens 1973). Examples from the project include the generation of policy and procedure formed within units, excluding input from subject specialists or members of other directorates (p01, p03, p04). Purposeful exclusion in this way reduced the likelihood of revision of work when aims and objectives were not shared by others and influenced and impeded the work of others (Braithwaite et al. 2017). Doing so also ensured objectives, aims, and outcomes desired by the executive had the best chance of success (p06) through limited intervention of others.

Further examples of structuration constructs were demonstrated in the formation of friendships and alliances and how executives approached one another. Formation of friendships in the absence of previously established relationships was commonly built on power and pursued because of the advantage afforded by power (p02, p09) (Giddens 1973). Establishing relationships with executives who could influence or ensure resource allocation was more favourable than friendships with less influential staff (p01, p02, p08). Less senior executives reported the construction of alliances when resource allocation occurred improved the amount of resources received (p01, p02, p04). These alliances were then deconstructed after the desired aims were achieved. Transience in relationships such as these contributed to poorer communication relationships as the relationship was not sustained, nor matured (p01, p02, p06,

p07). Past relationships produced more stable and enduring relationships within the executive cohort (p03, p04, p05, p08, p09, p10). Many administrative executives had previously worked together; their relationships were reported as strong, nonconfrontational, and trustworthy (p03, p04, p05, p06).

Returning to the framework, AT (Engestrom 2008) constructs are discussed in terms of behaviour exhibited by executives as team members. AT was applied to guide the analysis of individuals as team members. The constructs of ST are applicable here as individuals comprise teams, and team performance is influenced by not only individual behaviour but also collective behaviours (Friedrich et al. 2016). Structure, roles, rules, and influence are important moderators of behaviours in groups and comprise inputs within the theoretical framework. Examples of the influence of these constructs at team level were found across the participant cohort. The strong influence of discipline culture (medical, nursing, and allied health) was demonstrated in cross-team interactions. Participants were critical of members of other disciplines (p01, p02, p03, p04, p07, p08, p09, p10), noting structures, power and influence were often incommensurate with their own expectations. Imbalances such as these contributed to distrust between members of respective professions, which affected their ability to develop congruent language and forms of collaboration and hence trust each other as a group. Communication between teams was discussed by participants as ineffective because of these barriers.

Inconsistencies in interpretation of rules, norms, and routines because of embedded role differences contributed to barriers to communicating effectively (Yuen, Chen & Ng 2016). Mental models of how and why activities should be initiated and undertaken were different between disciplinary subgroups and were demonstrated in modes of communication, levels of trust, and the presence or absence of relationships. Communication between executives who shared the same discipline was frequent, trusting, and informal (p04, p05). Communication between the operational and administrative executive was often strained, secretive, or limited (p01, p02). Decisions, plans, and actions were made without consultation between the two groups (p01). The cohort identified good communication relationships with those with whom they had past relationships (p08, p07, p05), being of the same discipline (p01, p02), or being in proximity (offices) (p07, p10). Conversely, poor relationships that emerged as part of the

participant dialogue were attributed to absent past relationships, differing disciplines (p01, p02, p09), and separation, which reduced the likelihood of frequent informal conversations.

The final view of the framework is that of distributed leadership (DL). Leadership within the project was focused on envisioning DL as suitable to the CD structure (Fitzsimons et al. 2011). DL was incorporated to understand how communicating as a leader contributed to a willingness to distribute responsibilities to subordinates or peers and to understand peer-to peer leader relationships. Participants in the study attributed successful leadership to developing trust and interacting with context and rules (White, Currie & Lockett 2016) (p03, p05, p06, p08). One participant suggested power was the basis of his leadership approach (p07). P07 described difficulties with interacting with staff, invoking his relationship with the CEO to secure outcomes. Two participants acknowledged leadership difficulties in terms of having no established relationships with other executives (p09, p10), citing lack of trust and unfamiliarity as barriers to successfully communicating with other executives.

Trust, familiarity, context, and rules are noted within the theoretical framework as inputs and span the three theories (Bolden 2011; Engestrom 1987; Giddens 1973). Difficulties or success in communicating is derived from processes and interactions emerging from these inputs. Participants demonstrated both positive and negative processes and interaction as leaders. Two participants stated leadership success was discipline dependent (p01, p02); most processes favoured medical staff forming a hierarchy in terms of resource acquisition, authority, and opportunity. One staff (p09) cited lack of internal phone directories and frequent staff turnover as processes and interactions that detracted from enacting leadership well. Distributing leadership responsibilities was highly regarded as a positive leadership approach (p01, p02, p03, p04, p05, p06, p09) and commensurate with the CD structure. However, all participants who agreed with the premise of distributing leadership responsibilities stated the process was not appropriate for their directorate. Most commonly, participants stated recognition for the person receiving the responsibilities, as a legitimate representative was highly doubtful and expected others to defer to the leader rather than the subordinate (p01, p02, p04, p07). Other reasons for not employing a distributed style of leadership included a lack of staff to take on higher duties (p07), too busy to develop the model (p01, p02), the work was too complex (p03, p04, p05), inexact nature of the

role, and lack of role clarity (due to changing governance structure and frequent staff turnover) (p08).

The participants' views suggested that distributing leadership responsibilities represented a positive measure to reduce workload (p03), introduce succession planning (p06), and manage responsibilities (p09). The salient issue was that none of the participants was prepared to undertake the leadership approach. Executives cited that structural barriers would reduce the success of the leadership approach (Friedrich et al. 2016; Thorpe et al. 2011) and in practice rejected the adoption of DL.

The preceding discussion revealed a view of this organisation from micro, meso, and macro levels of behaviour. The analysis highlights the benefits of using the three OB theories to demonstrate interconnecting properties and enable a multifaceted lens through which to view the communication narrative of participants. Using ST, the analysis demonstrates agentive practice by staff on a personal level to achieve work targets, manage staff, and contribute to the organisation's progress. At this micro level, the influence of structure on staff behaviour reveals practices that occur because of barriers within the structure, which perpetuates the recursive nature of these practices in response to the barriers. Application of AT to the meso level of analysis provides evidence that some participants did not understand how their actions affected others where activities overlapped. There is evidence of agentive practices in and between groups through confining information input and management of alliances to achieve required outcomes. Agentive practice influences the flow of information and resources. There is also evidence that some had introduced policies and procedures to manage this phenomenon by encouraging staff to invite other disciplines to their discussion table. However, there remained significant work silos within the organisation that affected cross-boundary interactions, including communication.

From the macro level, the analysis highlights leaders' agentive practice. Relationships were treated with caution and were dependent on familiarity between members of the executive group. Trust was identified as critical in developing these relationships, and relationships were curtailed by the limited tenure of most staff. Leaders worked well within their silos, and there was little evidence of their encouraging staff to engage with others. AT suggests practices such as these

contribute to complexity in work and signal limited perspective taking of others' work. Integration between functional teams is difficult when leaders retain tight control of their staff and function, and therefore, DL is constrained.

5.4 Chapter Summary

In summary, the metasynthesis illustrated a time-poor workforce, typical of many executive groups across industry sectors. The participants were cognisant of the shortcomings of the communication approach of the previous executive team and were on a purposefully slow and steady journey to rebuild the reputation of the organisation's executive function. Communication with others appeared to be a day-to-day challenge; however, the most satisfying relationships appeared to be between those who had worked together in the past or who shared offices within proximity. Tenure as time in role with the executive also appeared to be important for the amount of confidence participants had in approaching others. This result aligns with comments on the depth of an established relationship (most importantly, trust) and was likely associated with professional discipline and the participant's clinical or nonclinical status. All staff were aware of the rebuilding journey and, while expressing frustration with communication channels at times, showed patience knowing the stability they sought would take time. So far, the structural coding has addressed the research questions, and the in-vivo coding has focused on the participants' statements about communicating. Together, these two data sources have been summarised as the metasynthesis. Theoretical analyses drew on the results of the metasynthesis to situate participants' responses within the theoretical framework. Behaviours in communicating were explained using the tested concepts of each theory, giving rise to a deeper understanding of why, how, and when communication issues occurred. Chapter 6 continues the analysis, providing an illustrative view of participants' accounts. Social network analysis of the cohort was derived from responses to questionnaires and aligned with the completed qualitative analysis, confirming participants' contributions.

Chapter 6. Social Network Analysis

Chapter 6 reports the quantitative analysis of the executives' social networks. The analysis begins with a view of weighted relationships between all participants. The relationships sociogram illustrates the divisions that were apparent from discussions with the cohort—for example, between clinical disciplines, between geographically distant cohorts, between newcomers, and between genders. Sociograms show self-reported relationships and those observed by others, thereby extending the research findings. Further mapping of relationships highlights the role of power among group members as brokers, gatekeepers, and membership in cliques. The social network analysis (SNA) demonstrates congruent observations with the qualitative data analysis, illustrating a divided executive team with complex communication interactions. A limitation of this SNA lies in the number of participants within this network. The literature supports large cohorts (organisations and groups) studied using SNA (Sabot et al. 2017); however, there are benefits to studying individual networks of small numbers (Isba, Woolf & Hanneman 2017). The illustrative account of the cohort highlights the social structure in day-to-day interactions. Accounting for social structures at this level contextualises the lived experiences of the cohort and gives meaning to the responses offered from the interview and questionnaires (Lazega & Snijders 2015). Understanding how individuals shape their organisation in daily interactions gives some indication of social interaction at the executive level within the organisation (Lazega et al. 2015). SNA explores patterns of individual actions or perceptions such as the data presented here to understand structures of networks. SNA has been applied to epidemiological studies and relationships among peer environments (Jorgensen et al. 2018).

The data for the SNA were obtained from a questionnaire (Appendix F) provided in both the invitation to meet and the interview. Participants had the choice of completing the questionnaire hosted on the Qualtrics platform accessed by an emailed electronic link. Otherwise, the questionnaire could be completed via hard copy, scanned, and returned via email. Most participants completed the questionnaire and returned their printed version at

the interview. All data were combined on the Qualtrics platform, resulting in a 100% response rate.

The analysis of the participants' networks was constrained by the small number of consenting participants in this study (n = 10). The small number of respondents also facilitated an SNA that provided a nuanced view of the multidisciplinary interactions of individuals. Executive relationships data are presented in the form of a matrix (Table 11) and a sociogram (Figure 8) to demonstrate value-rated connections between cohort members.

6.1 Communication Networks

A sociogram represents interactions within discreet relationships (Edwards 2010). Here, it represents communication networks. The values reference scale is included in the Code Book (Appendix K). The 10 respondents overwhelmingly nominated a central figure within the executive, who did not consent to be interviewed. This person is represented within the matrix as p11 and therefore has incoming relationships only, which were nominated by the study cohort in the interviews. The person was not required and did not give a reason to decline the opportunity to participate. The staff member held the most senior role of its type in the organisation and as such was very busy considering the major changes the facility was negotiating. Had this person agreed to participate, the study would have benefited from the opportunity to understand the other party in many relationships where he was nominated as the central figure. Missing data of this nature is not uncommon in qualitative studies. The literature cites privacy, political, and social considerations for senior staff as important to their decisions not to participate (Porter & Ecklund 2012).

Table 11. Sociogram of executive communication relationships (tie strength 1–5)

	p01	p02	p03	p04	p05	p06	p07	p08	p09	p10	p11
p01	0	5	3	0	5	1	0	2	0	0	1
p02	5	0	1	0	2	1	0	1	0	0	1
p03	4	3	0	1	4	1	1	1	1	1	4
p04	0	0	4	0	0	1	0	0	0	0	3
p05	4	3	4	1	0	3	3	3	2	1	5
p06	0	0	3	0	4	0	3	4	0	1	5
p07	0	0	3	1	4	3	0	3	0	1	5
p08	0	0	3	0	4	3	3	0	0	1	5
p09	0	0	1	0	2	2	0	0	0	0	5
p10	0	0	3	0	4	3	3	2	0	0	5
p11	0	0	0	0	0	0	0	0	0	0	0

The social network matrices and mapping were produced using the software package UCINET (Borgatti, Everett & Freeman 2002; UCINET 6) and NETDRAW (Borgatti 2002). The analysis of social networks can use a range of software packages much like R, Stata, or SPSS for statistics. Data were entered into Excel spreadsheets and applied using a choice of metrics. This approach is consistent with social network data entry and analysis (Edwards 2010). The resultant graphs were then colour-coded to distinguish between professional disciplines and, further, to distinguish the staff who worked at one end of the corridor (operational executive) from those who worked at the other end of the corridor (administrative executive). Figure 8 demonstrates the relationships between each of the consenting executive staff as well as the relationship of each of these staff with the nominated central figure. These maps illustrate much of what has already been discussed with respect to the participants and their relationship barriers and enablers within this organisation. The participants coded yellow were within the operational (nursing) executive. The blue line represents the geographic division of the corridor between operational and administrative executive. The administrative executive is coded green and the medical representatives within the executive are coded red. The central figure (p11) nominated by most participants is coded black.

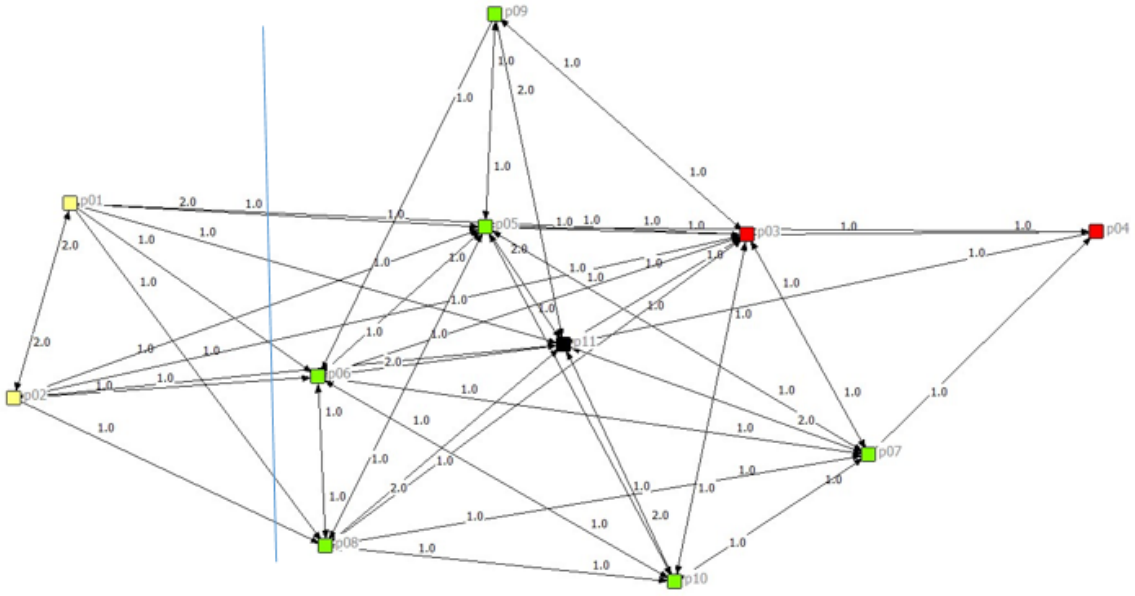

Figure 8. Social network map of executive participants' communication relationships

The network map illustrates a central core of executive members. Typically, in healthcare, these might be the chief executive officer (CEO), chief operating officer (COO), human resources executive, chief medical officer, and director of nursing. The four executives within the central rectangle of this diagram represent these positions. To protect the anonymity of the participants, these staff and positions are not nominated.

The operational team (p01 and p02) are located to the left of the blue line (Figure 8). These two participants nominated their work in the nursing discipline and discussed at length during their interviews the separation issues of the corridor. Not only did this team discuss the geographic division, but also mentioned that members within the central section of the map had worked with the CEO at their previous place of employment. Operational team participants suggested that the absence of established relationships with any administrative staff contributed towards trust and communication constraints between the two groups.

Other points to note are the relationships of p09 with others in the executive. The discussion about p09 (see Section 5.3) placed this staff member in the position of introducing to the organisation a major government-led initiative. P09 demonstrated weaker ties with others and had the strongest ties with a staff member with whom she had worked

at another organisation. P09 is located on the periphery of the executive communication network, which is consistent with her comments at interview.

P10 had been employed by the organisation for only 6 weeks prior to interview. The staff member, despite having a very short tenure, nominated a good communication network with the administrative executive. The participant suggested good communication was easy to achieve because his executive counterparts were in proximity. P10 did nominate that his office was near the remainder of the administrative executive. When asked about his relationship with the operational executive, p10 had only passing comments to make and did not report communication or relationships with these staff as illustrated in Figure 8. P10 had not yet established relationships with the operational executive due to his limited tenure.

The central figures of p03, p05, and p06 are discussed together. These three participants exercised power in their roles due to their unique positions featuring authority and responsibility for resources allocation. These staff not only possessed knowledge that other staff required, but also controlled the amount of knowledge released to staff. Their control also extended to how knowledge was applied. While their control was suggestive of one-way communication practices, importantly this implies the use of power in how knowledge was managed and disseminated. The trio controlled most aspects of business within the executive group, according to the interview data. They acted as a gateway to achieving work outcomes, securing resources and success within each participant's directorate given their control over resources. The SNA confirmed the findings as most of the sample nominated these three staff within their closest communication network.

Participants p07 and p08 provided specialised, nonclinical services for the whole organisation. Their specialised nature meant they could not be substituted for another service. Duties and responsibilities particular to each service could only be delegated to others with the same qualifications. Both staff members worked from the administrative executive suite and nominated the central figure p11 as their closest communication node, the person with whom they had the best communication relationship. Others nominated p07 and p08 as belonging to their communication network, however not as a core or central component. P07 and p08 provided specialist nonclinical services that were negotiated via

the CEO or COO rather than directly with directorates. P07 and p08 undertook roles like the COO.

The following discussion focuses on the metrics declared in Section 4.4, which defined the participants' positions and embeddedness within the organisation, specifically, network *centrality* and network *density*. These concepts explain features of *networks. Egos* represent central nodes (influential, powerful) in networks comprised of nodes (other actors). Many or few nodes may comprise a network, and nodes may be found in more than one network (Hanneman & Riddle 2005). The concept of centrality is directed at the attributes of egos within a network. Attributes of egos contribute directly to their location within networks because they reflect their position, power status, and similarity with other members of the network (Hanneman & Riddle 2005). Network density refers to the number of connections held by each ego in their network in proportion to the total number of possible ties. A dense network produces a higher number of communication and other types of opportunities as egos, and actors have a higher number of ties with others. Opportunities may include access to resources, establishing relationships with other powerful egos, and opportunities to influence others in a brokerage role (Hanneman & Riddle 2005). Network density examines the number of ties in use compared with the number of actual ties available. Network ties may be in use or not utilised depending on the relationship. Utilising ties enables more access to resources. SNA findings are presented through exploring these two metrics: network centrality is examined using *centrality, structural holes,* and *brokerage* metrics; network density is examined using *cliques* and *K-cores*. These quantitative findings are aligned with data interpreted from the theoretical framework and from the interviews.

Centrality

The centralisation metric responds to the research question and aims by illustrating information flow (communication pathways) and disparities in flow between nodes (Dunn & Westbrook 2011). Centralisation metrics include an actor's *out-degree* and *betweenness*. An actor's degree relates specifically to their position in the network in relation to the number of ties with others (Hanneman & Riddle 2005).

Table 12 presents a matrix illustrating the participants' positions within the network in relation to their ties with others. Position within the network can be measured using an out-degree statistic. The measure counts the number of connections belonging to an ego and can reflect the influence potential of that person. The analysis showed that actors p03 and p05 had the greatest out-degrees (10.0 and 10.0) and may be regarded as the most influential actors in the cohort given that they had the highest number of ties with others. Figure 9 represents these data in the form of a sociogram after applying the UCINET betweenness algorithm to the data, which illustrates the number of ties for participants. The greater tie count is demonstrated by the betweenness scores (20.50 and 12.50) within the matrix, which indicates the number of ties of each participant with other participants. These egos are important because they have a gatekeeper effect (Hanneman & Riddle 2005) between staff. In the theoretical and thematic analysis, these two staff held important positions in the administrative executive, where it was noted that p03 held a leading medical position and p05 was an influential executive recently elevated to one of the most senior executive positions in the organisation. By contrast, p04 and p09 were described as peripheral group members because p04 was a new staff member to the executive role, and p09, who did not have funding to progress a new initiative, scored quite low in the number of ties with others (2.0 and 4.0, respectively). They demonstrated no discernible betweenness as gatekeepers for other staff. These phenomena, specifically out-degree, are demonstrated in Figure 9.

Table 12. Out-degree and betweenness matrix

Input dataset: CommANDCEO4##h-cent (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h-cent)

	1 Outdeg	2 Indeg	3 OutARD	4 InARD	5 OutClo	6 InClos	7 Betweenness
p01	6.000	3.000	8.000	6.000	14.000	18.000	0.000
p02	6.000	3.000	8.000	6.000	14.000	18.000	0.000
p03	10.000	9.000	10.000	9.000	10.000	12.000	20.500
p04	2.000	3.000	6.000	6.000	18.000	18.000	0.000
p05	10.000	8.000	10.000	8.500	10.000	13.000	12.500
p06	6.000	8.000	8.000	8.500	14.000	13.000	2.000
p07	7.000	5.000	8.500	7.000	13.000	16.000	1.000
p08	6.000	7.000	8.000	8.000	14.000	14.000	1.000
p09	4.000	2.000	7.000	5.500	16.000	19.000	0.000
p10	6.000	5.000	8.000	7.000	14.000	16.000	0.000
p11	0.000	10.000	0.000	10.000	30.000	10.000	0.000

Source. Hanneman & Riddle (2005).

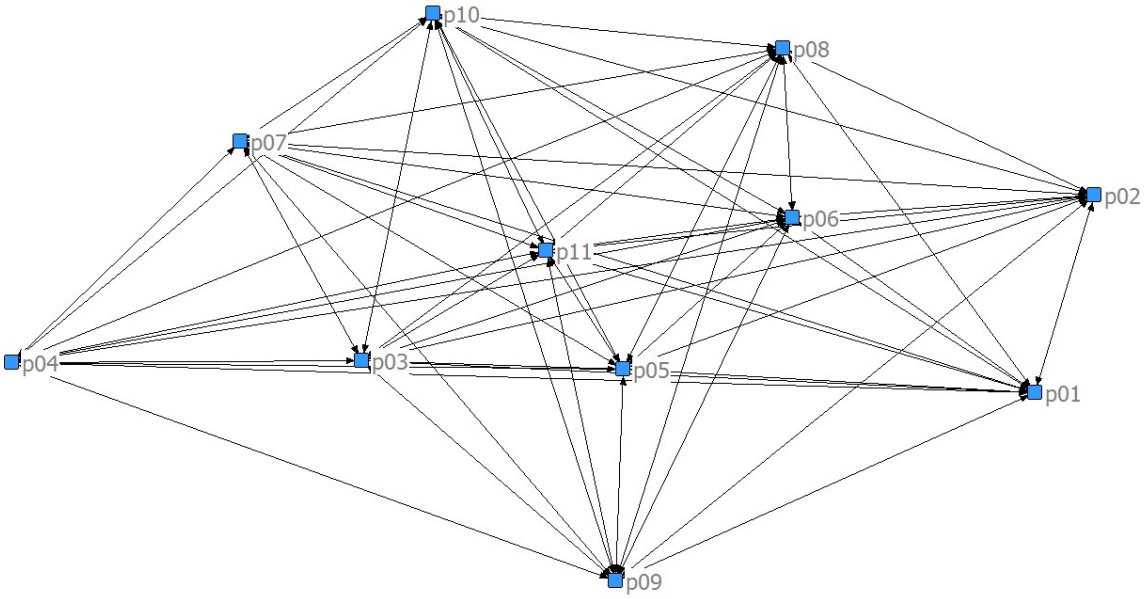

Figure 9. Centrality based on in- and out-degrees

Source. Hanneman & Riddle (2005, Chapter 9).

Structural holes

Structural holes play an important part in networks where an ego's network is influenced by immediate ties. Structural holes illustrate positions of advantage and disadvantage (Hanneman & Riddle 2005). Negotiation, interaction, and exchange activities can be advantageous or the opposite where ties are incomplete between certain actors and are present between others. Specifically, engagement with parties who hold allocative resource power, or who are gatekeepers to other mechanisms, can be helpful when not part of the ego tie network. Table 13 demonstrates several metrics reflecting participants' overall influence on the network. *Effsize* demonstrates the effective size of the network for a participant, noting that more effective networks have little or no structural holes (Hanneman & Riddle 2005). P03 and p05 scored the highest (least number of structural holes) within their network, endorsing their positions as gatekeepers. P11 scored the highest; this participant's scores did not include ties incoming and was not nominated by this person (declined interview). Declining the interview was at the discretion of the participant, incurring limitations for data analysis and a loss of a whole network view for the project.

Table 13. Structural holes measures

Input dataset: CommANDCEO4##h (C:\Users\Marina\Documents\USuCINET data\NH\CommANDCEO4##h)

Method: Ego Network -- connections 2 links beyond ego are ignored

Diagonal valid? NO

Output dataset CommANDCEO4##h-SH (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h-SH)

	1 Degree	2 EffSize	3 Efficienc	4 Constrain	5 Hierarchy	6 Ego Betwe	7 Ln (Constr	8 Indirects	9 Density
1	p01	6.000	2.958	0.493	0.602	0.188	0.000	-0.508	0.722	0.767
2	p02	6.000	2.677	0.446	0.695	0.247	0.000	-0.363	0.792	0.767
3	p03	10.000	5.995	0.599	0.376	0.115	20.500	-0.979	0.811	0.489
4	p04	4.000	1.725	0.431	0.877	0.087	0.000	-0.131	0.817	0.750
5	p05	10.000	6.178	0.618	0.362	0.087	12.500	-1.016	0.786	0.500
6	p06	9.000	4.471	0.497	0.459	0.140	2.000	-0.780	0.851	0.611
7	p07	7.000	2.791	0.399	0.537	0.086	1.000	-0.621	0.835	0.690
8	p08	8.000	3.625	0.453	0.487	0.107	1.000	-0.719	0.851	0.696
9	p09	4.000	1.639	0.410	0.846	0.041	0.000	-0.167	0.813	0.750
10	p10	6.000	1.945	0.324	0.587	0.012	0.000	-0.533	0.866	0.833
11	p11	10.000	6.161	0.616	0.394	0.122	0.000	-0.930	0.825	0.589

Structural hole measures saved as dataset CommANDCEO4##h-SH (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h-SH)

Note. Degree is the number of alters ego is connected to, and effsize is the size of the effective network—that is, the least number of structural holes (Hanneman & Riddle 2005, Chapter 9).

Efficienc (Table 13) refers to the effective size of the ego network forgoing any redundant ties. Hanneman and Riddle (2005) suggested that the measure relates directly to an ego's total influence within a network in terms of efficiency. Efficiency is not a determinant of effectiveness (Hanneman & Riddle 2005). Efficiency relates directly to the ease with which the ego can communicate with others and the ease with which others can communicate with the ego. The results of the analysis explain that not only did p03 and p05 have the most effective networks, their efficiency levels also rated highest. This information is supported by the findings of the interview data analysis. P03 demonstrated

efficient communication networks through committee structures and highly specialised electronic communication platforms. P03 also demonstrated how she communicated with her staff and other executives through judicious use of communication actions.

The data also support the finding for other participants. Both p04 and p09 reported difficulty in communicating with other executives. P04 reported that her recent appointment, being time poor, and having minimal influence on others contributed to difficulty in communicating with others. Together, these two staff members scored the lowest in effective network size (1.72 and 1.63, respectively), commensurate with the qualitative finding, and scored lowest in terms of efficiency (0.43 and 0.41, respectively). These observations visually illustrate the tenuous nature of p09's role given the limited progress on the government initiative due to funding and p04 being new to the executive position. Both participants had significant hurdles to overcome to develop their networks of communication; their communication difficulties are demonstrated in the structural holes (Table 13).

Brokerage

The concept of brokerage within networks considers five types of brokerage and serves to highlight the roles that egos play in connecting groups. A *broker* may be examined as *coordinator,* where they broker relationships between two people of the same group, as *consultant*, where the ego brokers relationships between two people but is not a member of that group, as *gatekeeper*, where ego belongs to the boundaries of a group and controls access to outsiders, as *representative,* where ego belongs to the same group as another and represents this group to another group, and as *liaison*, where ego brokers a relation between two groups and is not a part of either group (Hanneman & Riddle 2005). The Gould Fernandez algorithm (Hanneman & Riddle 2005) uses the ego position as an agent in relation to groups or individuals. Brokerage scores illustrate power, influence, and how others are dependent on the ego to communicate with others. The results of the analysis (Table 14 and Figure 10) are dominated by p03 and p05. Both have significant representative, consultant, and liaison roles, which are supported by the thematic analysis. Both participants held senior executive positions that influenced all disciplines and could undertake these roles.

Of note, p03, p06, and p08 can be observed in their roles as gatekeepers. Discussion around p03 (Section 5.3) establishes this person as an important member of the network. Her medical position was acknowledged by others as influential: “You will never be able to untarnish the brush that medicine is the most powerful person in the room” (p01). Therefore, her role as gatekeeper is expected. P06’s role as gatekeeper is also not surprising. The participant identified herself within the administrative executive and held a pivotal role. The participant had been responsible for fine-tuning the focus hospital’s governance structure, and much of her role concerned the relationships between staff and the organisation. The participant also scored as a coordinator and consultant, which are indicative of her role and the information relayed during the interviews. P08 also scored highly as a gatekeeper in these data. P08 discussed losing many of his responsibilities to the COO when that role was introduced. Discussion around this in the metasynthesis (Section 5.2) concerned agentive practices of the participant himself as he continued to undertake some work that had been reallocated (because he still retained the expertise), and that others still consulted with him because either they were unaware that the COO had taken over his duties or he was more accessible than the COO. While it is difficult to understand whether his new role included gatekeeping because he was not sure of the parameters of his new role, it is possible that because of his past responsibilities, he remained sought after by staff for his expertise.

Table 14. Brokerage analysis

GOULD & FERNANDEZ BROKERAGE MEASURES

Input dataset: CommANDCEO4##h (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h)

Partition vector: “CommANDCEO4##h” column 1

Method: * UNWEIGHTED

Raw Brokerage: CommANDCEO4##h-gf (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h-gf)

Expected values: expectedvalues (C:\Users\Marina\Documents\UCINET data\NH\expectedvalues)

Normalized Brokerage: CommANDCEO4##h-ngf (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h-ngf)

Warning: Attribute vector has been recoded.

Here is a translation table:

Old Code		New Code	Frequency	
0	=>	1	8	
4	=>	2	2	
5	=>	3	1	Number of classes: 3

Un-normalized Brokerage Scores

	1 Coordinat	2 Gatekeepe	3 Represent	4 Consultan	5 Liaison	6 Total
1 p01	0	0	0	0	0	0
7 p07	3	0	0	0	3	3
8 p08	2	2	0	0	4	4
4 p04	0	0	0	0	0	0
10 p10	0	0	0	0	0	0
6 p06	5	2	0	0	7	7
9 p09	0	0	0	0	0	0
11 p11	0	0	0	0	0	0
3 p03	0	1	26	10	37	37
5 p05	0	0	20	9	29	29
2 p02	0	0	0	0	0	0

Note. Legend: Given flow 1 → 2 → 3, where 2 is the broker; Coordinator: A → A → A (all nodes belong to same group); Gatekeeper: B → A → A (source belongs to different group); Representative: A → A → B (recipient belongs to different group); Consultant: B → A → B (broker belongs to different group); Liaison: B → A → C (all nodes belong to different groups).

*The unweighted method refers to the amount of credit the broker is awarded in this analysis. Where group dynamics are studied, if two people were acting as brokers in the same role, they would be awarded half the credit in the analysis; this is not the convention in SNA where a singular ego is under consideration (Hanneman & Riddle 2005).

Source. Hanneman & Riddle (2005, Chapter 9).

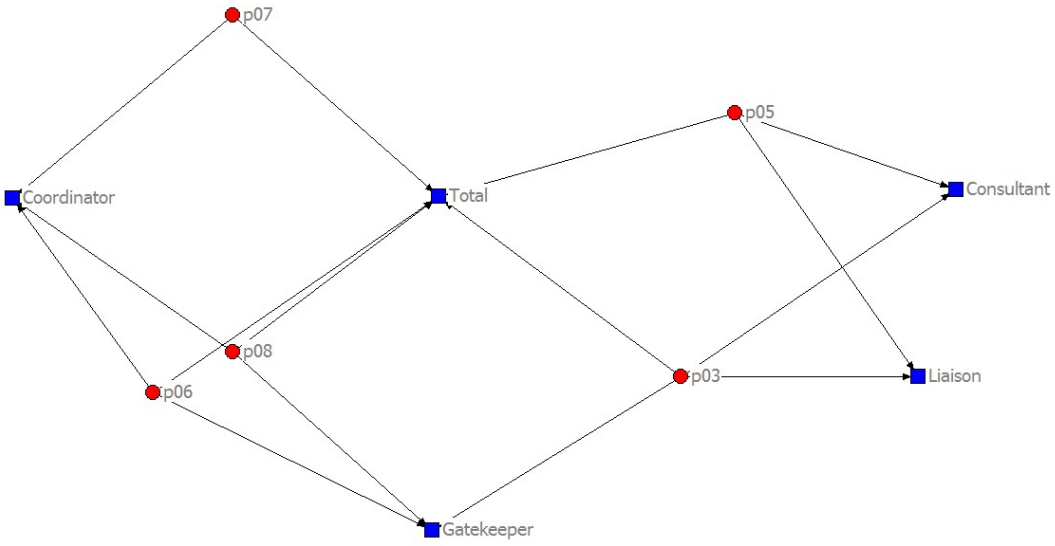

Figure 10. Group-to-group brokering for each node, red indicating executive staff, blue indicating role

Source. Hanneman & Riddle (2005).

Cliques

The analysis of *cliques* identified four cliques within the executive team, which supports the prior discussion on staff relationships in Section 6.1 (Hanneman & Riddle 2005). Specifically, the corridor separating the administrative and operational executive was identified as a specific structural issue that created cliques, as well as previously established relationships with the CEO. Clique 1 identified in Table 15 names p03, p05, p06, p07, p08, and p11 as belonging to a group. Each of these members is located within the administrative executive at one end of the corridor. Clique 2 consists of p01, p02, p03, p05, p06, p08, and p11. Clique 2 is the only group where p01 and p02 appear as clique members, a group they share with another nurse (p05). The COO and CEO belong to all four cliques. The cliques network map (Figure 11) clearly demonstrates the cliques established within the executive team. In this map, five participants are pendants. Pendants are described as members of a network who do not have an existing network beyond their initial connection with others; they are connected to a network by a single tie (p01, p02, p04, p09, and p10) (Hanneman & Riddle 2005). The remaining staff (p03, p05, p06, p07,

p08, and p11) are situated within the administrative executive at one end of the corridor and have relationship ties with others. The result supports the comments from some staff that those who held the greatest influence within the executive are those who were in proximity to the COO and CEO and who were situated together.

Table 15. Clique matrices

Minimum Set Size: 3

Input dataset: CommANDCEO4##h (C:\Users\Marina\Documents\UCINET data\NH\CommANDCEO4##h)

WARNING: Valued graph. All values > 0 treated as 1

4 cliques found.

1: p03 p05 p06 p07 p08 p10 p11

2: p01 p02 p03 p05 p06 p08 p11.

3: p03 p05 p06 p09 p11

4: p03 p04 p05 p07 p11

Cliques found

Clique participation scores

	1	2	3	4
1 p01	0.714	1.000	0.800	0.600
2 p02	0.714	1.000	0.800	0.600
3 p03	1.000	1.000	1.000	1.000
4 p04	0.571	0.429	0.600	1.000
5 p05	1.000	1.000	1.000	1.000
6 p06	1.000	1.000	1.000	0.800
7 p07	1.000	0.714	0.800	1.000
8 p08	1.000	1.000	0.800	0.800
9 p09	0.571	0.571	1.000	0.600
10 p10	1.000	0.714	0.800	0.800
11 p11	1.000	1.000	1.000	1.000

Actor-by-Actor Clique Co-Membership Matrix

	1 1 1 2 3 4 5 6 7 8 9 0 1
	p p p p p p p p p p p
1 p01	1 1 1 0 1 1 0 1 0 0 1
2 p02	1 1 1 0 1 1 0 1 0 0 1
3 p03	1 1 4 1 4 3 2 2 1 1 4
4 p04	0 0 1 1 1 0 1 0 0 0 1
5 p05	1 1 4 1 4 3 2 2 1 1 4
6 p06	1 1 3 0 3 3 1 2 1 1 3
7 p07	0 0 2 1 2 1 2 1 0 1 2
8 p08	1 1 2 0 2 2 1 2 0 1 2
9 p09	0 0 1 0 1 1 0 0 1 0 1
10 p10	0 0 1 0 1 1 1 1 0 1 1
11 p11	1 1 4 1 4 3 2 2 1 1 4

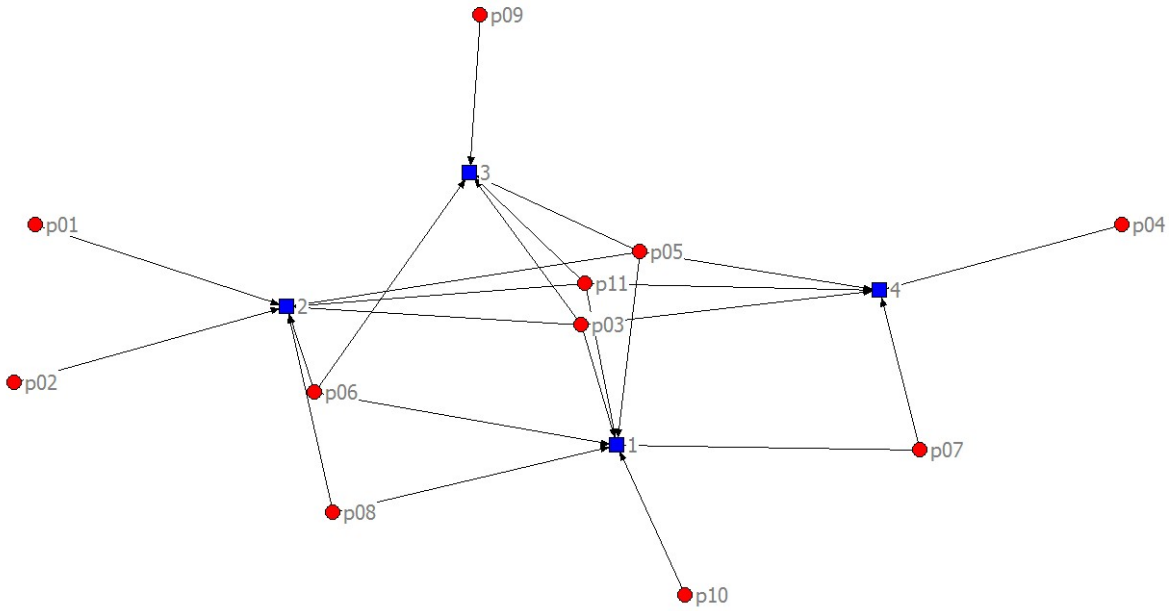

Figure 11. Clique map, blue indicating clique number, red indicating members

Source. Hanneman & Riddle (2005).

K-core analysis

A *K-core* is a maximal subgroup where each member is connected to at least k other members within the group (Hanneman & Riddle 2005). By contrast, the definition of a clique is used when all members are connected to each other. The benefit of a K-core analysis is that it illustrates the substructures in a group, highlighting where members form part of a group without participation in that group. Participation or nonparticipation is an important consideration in the context of role responsibilities and boundaries. Participants expressed concern about lack of inclusion in roundtable discussions or others not drawing on their expertise. The K-core analysis (Figure 12) reveals some staff, specifically p01 and p02, already having memberships in groups in which they did not contribute knowledge and expertise.

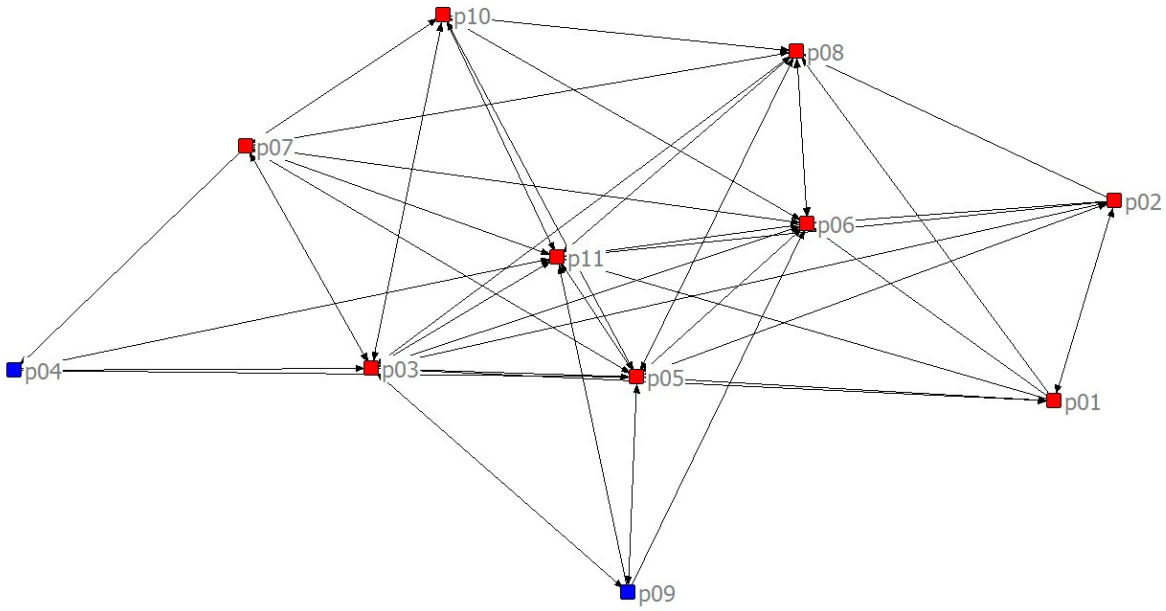

Figure 12. K-core analysis

Source. Hanneman & Riddle (2005).

Some executive members stated that the corridor and lack of past relationships with the CEO excluded them from relationships with the administrative executive; however, the analysis confirms their membership within this group. The analysis also confirms the exclusion of other staff in the group; p04 and p09 (blue) are excluded from membership. P04 stated she would not work around her immediate executive report and hence did not have communication ties with the senior executive; p09 remained on the periphery as she waited for funding for the government initiative.

6.2 Chapter Summary

Learning participants' communication preferences and leadership styles through the interview data assisted in becoming familiar with the participants. The results of the SNA supported the findings from the qualitative analysis. Statements made by participants in interviews could be demonstrated in the social network maps. First, the divide between the operational and administrative executive was illuminated within the relationships map. Second, the map highlighted peripheral members of the executive from the central core, which consisted of the CEO and the COO. Third, with respect to these two positions, the

centrality measures confirmed the influence of the most senior staff within the communication network. The findings are comparable to those discovered during the interview process. These findings contribute to the study by supporting the participants' statements and providing clarity to the reader, using illustrations of relationships. The findings of the SNA illustrate a unique environment consistent with participants' reports. The power of the central core (administrative executive) was also highlighted through the brokerage and structural holes metrics, which demonstrated the advantages these staff had in reaching all parts of the networks, including members who did not have direct ties with each other. Brokerage, gatekeeper, and liaison roles had advantages for resource allocation, communication, and work efficiency. Undertaking these roles centralised the person's place in the network; relationships with central figures were necessary for others to acquire resources and knowledge. Finally, the cliques demonstrated within the clique and K-core metrics supported the qualitative analysis, revealing friendships and relationships and the ease of inclusion within those relationships.

The maps and matrices depict histories of members that constitute cultural (job role) and historical information (Edwards 2010). The implication from Edwards (2010) is that, when combined with qualitative methodology, SNA maps illustrate life from both inside the network and outside. The narrative obtained from participants offered a view from inside their networks. Participants discussed their experiences and how they overcame barriers and used enablers to facilitate their communication. The maps produced through their stories provided the view from the outside and demonstrated the influence of structure on the executive's communication. This view confirms Giddens' (1984) theory that structure cannot be separated from action, and action contributes to structure.

Chapter 6 revealed the relationships between the executive cohort using social network methods. These relationships support the stories of the executives given through the interviews. Communication appeared more frequent, easier, and effective when executives had established relationships, worked in proximity to others, and were of the same discipline. Chapter 7 draws the analysis to a close by considering communication relationships and the contradictions and tensions that were discovered among the executive group. Igira's (2012) framework is applied to highlight the barriers and enablers of

communicating within the cohort. A brief discussion of the types of leadership encountered within the cohort is offered.

Chapter 7. Leadership Activity in the Clinical Directorate

This chapter completes the analysis of the communication networks and behaviours of staff, using the human activity framework from a leadership perspective. The framework was discussed in Section 3.3 to analyse communication interactions within the executive cohort. The analysis is now applied to the framework to include tensions and contradictions highlighted by participants. While Igira (2012) discussed the presence of tensions and contradictions in complex workplaces, he did not include such considerations within the original framework. The prevailing opportunity to extend Igira's framework is illustrated. After describing the framework, this chapter briefly posits the types of leadership practised by the executive cohort. The chapter concludes with a discussion on the relevance of communication and trust. Trust was described as a crucial factor in all aspects of the executive's relationships with peers. Findings that suggest trust are considered more important and deviate from Giddens' (1984) claims on the dominance of power in relationships between peers. Incremental findings such as this provide avenues for further study into organisational behaviour (OB) in healthcare.

7.1 Application of Activity Theory Framework

Igira's (2012) original work on activity theory (AT) highlighted interacting activity systems within healthcare and was applied in this thesis to explain staff interactions across activity systems. The framework is now adapted to illustrate the systems of communication within the study cohort with a focus on mitigating and mediating influences experienced by the participants (Figure 13). The framework conceptualises the processes and identifies the participants within the system (Igira 2012) to understand the participants' (subjects) activities towards communication barriers (contradictions and tensions) to facilitate improved workflow (shared objects). The adapted framework encompasses the foundational constructs of AT and acknowledges the barriers within the executive. The two activity systems illustrated in Figure 13 address the apparent divides between the administrative and operational executive members.

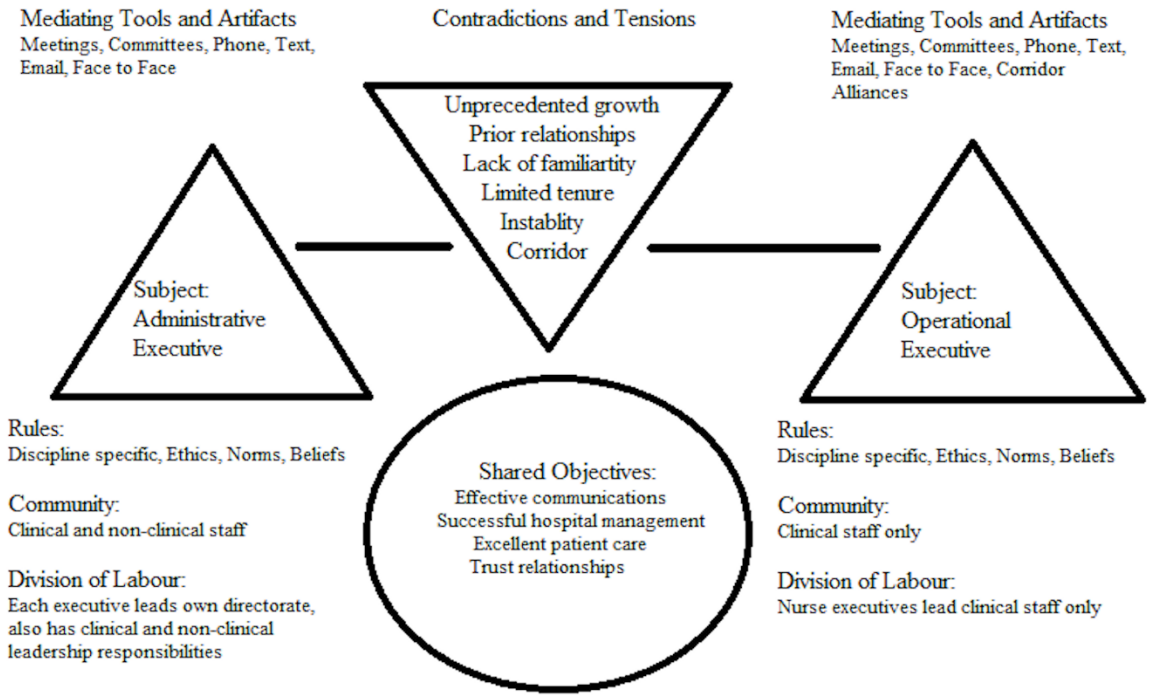

Figure 13. Human activity system adaptation

Source. From "Expansive Learning at Work: Toward an Activity Theoretical Reconceptualization", Engestrom, 2001, *Journal of Education and Work,* vol. 14, no. 1, p. 136. Copyright (2001), Routledge. Adapted with permission.

The conventions of AT conceptualise those influences that contribute to the transformation of an object, which constitutes the activity system (Igira 2012). The social context of the transformation is illustrated in Figure 13 as rules, division of labour, and communities; mediation occurs through tools and artefacts. Importantly, Igira (2012) acknowledged the contradictions that occur because of accumulating structural tensions within and between activity systems. These contradictions result from both environment and activities occurring elsewhere in the organisation (Igira 2012). Contradictions and tensions are not illustrated within Igira's conceptualisation of interlocking activity systems; however, their inclusion in the framework enhances understanding the executive team's activity system.

The triangle to the left of the diagram (Figure 13) identifies the administrative executive. The triangle to the right identifies the operational executive. Encircling each

subject group is the social context of the activity system. Mediating tools and artefacts include forms or pathways of communication used by each subject group. They are similar; however, the operational executive discussed corridor alliances at length during their interviews. The communication pathway deviates from that of the administrative executive. Further, there are some differences noted within the communities and division of labour for each subject group. The administrative executive led both clinical and nonclinical staff within their divisions. Leading nonclinical staff opened pathways to integrate with this group. As no nonclinical staff were found under the leadership of operational staff, this pathway was effectively closed to them. Relationships could eventuate if the operational staff reached out to the nonclinical group. The requirement to develop relationships with staff outside their own discipline as leaders may affect the extent of cross-boundary communication, opening pathways unavailable to the operational executive. The operational executive led by clinical staff comprised only nursing clinical staff.

Extrapolating further, the analysis suggests that the practice reduced opportunities for establishing communication pathways, notwithstanding the current constraints. The operational executive did not interact with the same activity systems as the administrative executive and therefore did not know how the activities of their own systems affected others. Evidence of this is reflected in the discussions with administrative staff and operational staff. For example, operational staff stated that, while the accountability for the operation of the organisation was the responsibility of the CEO, there were “other huge influencers that can strategically, with intent, forge the way the health service goes” (p01). Further conversation with this participant suggested that the medical staff held great power in influencing the CEO, resulting in some of the organisation’s directors finding alternate ways to influence others. These ways often included corridor alliances that were incongruent with standard methods of communicating. According to p01, having influence with the CEO increased the likelihood of acquiring resources and information. This observation is consistent with Engestrom’s (2000) argument where execution of day-to-day tasks in one activity system has implications for others. Cross-boundary considerations are also consistent with Giddens’ (1984) duality of structure theory where tensions within activity systems accumulate and staff adopt different methods of work to accommodate

those tensions. Structure and action co-exist and are self-perpetuating in response to the incrementally accumulating structural tensions.

Igira's (2012) framework was extended to include contradictions and tensions, illustrated in the central triangle (Figure 13). The data revealed these factors were significant when participants discussed their problems in communicating with others. These factors spanned boundaries and crossed disciplines to be present in some form for all participants. In adapting the framework to the current study, the results of the structural and in-vivo coding were useful to identify tools and artefacts, rules, community, and division of labour within the operational and administrative groups. Participants stated the contradictions and tensions became obvious within the framework, as it was adapted to the project through the participants' responses. The final part of the framework illustrates shared objectives. Tools and artefacts, rules and community and division of labour shaped trust relationships and contributed in varying degrees to the development of shared objectives described by the participants. The oval at the bottom of Figure 13 represents these elements.

The value of the framework lies in illustrating the interplay between two activity systems. The framework addresses the social context of each subject group, highlighting implicit and explicit differences. The framework usefully identifies communication relationships between the two subject groups. The framework is limited by including only two groups of staff. Each group will be influenced by connections with other groups who will inherently have unique tensions and contradictions impacting day-to-day activities. Attending to the barriers of communication could facilitate change in activity systems or improve social interactions. The framework can be applied to highlight contradictions and tensions. Teams can understand how their work influences the work of others. The aptitude for change comes from making sense of the inherent contradictions in workflows and opens the possibility of transformative development of activity systems (Engestrom 2008).

7.2 Leadership Practices

The evidence suggests leadership was situated within hierarchical boundaries and characterised by both charismatic and pragmatic leadership styles. The evidence of

leadership styles is limited; participants did not nominate their styles but rather discussed how they led teams in their directorate. The following was ascertained from these discussions. Charismatic leaders use their own vision to provoke a sense of community and a shared vision for the future (Bedell-Avers et al. 2009). For the operational executive, shared vision is demonstrated through the strategic plan, which will guide their collective practice for the next 12 months. Charismatic leaders often use emotional persuasion and engage with others through advocating for their social and personal needs through a shared vision. The leadership style of nursing leaders, however, is not typically found to be charismatic (Uhl-Bien & Marion 2009). Uhl-Bien and Marion (2009) asserted the complexity of leadership becomes entangled in an organisation's formal structures and adapts or realigns to achieve targets. The comments from some nurse leaders would suggest they had tight boundaries around their identities and experienced isolation (silos) as an outgroup (Hogg, Abrams & Brewer 2017).

The pragmatic leaders in the organisation could be identified as those belonging to the administrative executive. Rather than focus on a vision of the future, these leaders appeared committed to achieving the targets in the current day. Pragmatic leaders consider both people and context when deliberating solutions (Bedell-Avers et al. 2009). Many of the administrative executives referred to seeking stability within the organisation, and several discussed initiatives to address the problem of stabilising executive staff turnover and reaching operational goals. These measures were directed at achieving step-by-step progress, considering past issues experienced by the executive members. Whereas their aim was to deliver on strategic performance indicators, this practice focused on current-day issues.

Identifying mechanisms that contributed to effectiveness as executives highlighted critical relational factors. Trust, communicating a collective vision, and transparency were nominated by the cohort. Trust resonated with all participants as the mechanism by which staff communicated better with each other. Bligh (2017) summarised several relationship-oriented leadership theories where trust is integral. Leader–member exchange (LMX), authentic leadership, and transformational leadership are nominated as trust-based leadership styles. These leadership typologies are inclusive of alignment of group values (Anderson & Sun 2017), communicating a collective vision (Brown & Trevino 2009), and

transparency (Sparrowe et al. 2001). The study participants acted alone when developing their strategic plans. Evidence supporting this was found when the operational executive stated they did not consult outside their directorate when developing their strategic plans (p01, p02). Further, they tended to be secretive in developing and dismantling relationships to suit their own purposes. With respect to distributed leadership (DL), there was little evidence to suggest distribution of responsibilities or delegation of power had featured largely in their roles.

Communication and trust

The communication relationships of executive staff in this organisation can be described as homophilous, cautious, and constrained. Relationships had suffered in the past, and staff were attempting to make amends for a public upheaval of executives 3 years earlier. Alongside healing was the evidence of growth activities within the service corridor. This service growth was the most serious challenge they faced; however, conclusions from the analysis suggest stability and trust perhaps remained the highest mountain to climb. Participants suggested that by establishing stability, trust relationships would follow; trust relationships had their foundations in job expertise, and the most important element of job expertise was understanding and meeting the demands of the job. These relationships align with Giddens' (1984) contention on the duality of structure; one cannot occur without the other, and each sustains the other. Social systems are the medium for practices, and in turn, practices influence social systems (Giddens 1984). For participants, trust was based on need, therefore an agentive choice in whom to trust. Stability aligns with structural considerations. Therefore, with trust (agency) will come stability (structure), and the stability of the organisation will contribute to trust relationships between staff. Peters et al. (2012) suggested that the use of power from Giddens' perspective is a positive force, a means of getting things done. Power that is inherent in a role or because of hierarchical position can expedite work processes. The current study, however, challenges this notion and suggests trust relationships are the method through which stability and growth occur in the face of significant change. Trust was the most salient factor identified by participants to making decisions, progressing initiatives, and completing tasks in their respective strategic portfolios.

Whereas trust relationships between leader and follower are highlighted in the literature (Baker et al. 2016; Friedrich et al. 2009; Hogg, Abrams & Brewer 2017), the current study found that trust between equals is vital for leader effectiveness. Bligh's (2017) work highlighted two related constructs: the competence of staff and the character of staff. The former was expressed by participants as the most concerning issue within their communication relationships with others. These concerns emerged from the historical events of executive turnover in 2015. Participants expressed concerns about the abilities of others to undertake their roles and frequently referred to staff performance as the cause of executive team breakdown in 2015. These events had tentacles reaching to affect current-day relationships and behaviours.

While the tenure of some staff extended back to the time of the executive spill in 2015, the tenure of others was much shorter. The most time any of these executives had worked together was less than 4 years, and for some, as little as 6 weeks. The data highlighted not only a lack of time for participants to become familiar with the strengths and weaknesses of others, but also the lack of easy interaction, attributed to the long corridor that separated the operational and administrative staff. Appraising both the task and social performance of colleagues in such a situation was likely fraught with error as a result.

The initial premise suggesting DL would complement the current governance structures is supported from the findings. The hospital has several satellite centres and vertical reporting structures with opportunities for horizontal mechanisms of communication and delegation. These findings suggest there are initiatives (such as CUSP) in place that would encourage distributing leadership responsibilities. However, such a change would incur a paradigm shift in the executive's approach to leadership. The analysis suggests more is required to implement such a notion of leadership. Nascent leadership styles such as DL are yet to be fully understood in practice in healthcare environments (Currie et al. 2011). Currie et al. (2011) posited that DL is most suitable where healthcare has undergone or is undergoing significant change. Ongoing changes and the recent upheaval in the organisation have made executives more cautious when leading their directorates. DL represents a paradigm shift (Griffith 2016) in traditional methods of leadership, relying on collaboration, communication, and intuitive practice to be effective.

DL is also contingent on trust and respect for the delegated leader or leaders. The upheaval experienced by this organisation in 2015 manifests in a current executive group who tightly manage everyday aspects of their work to keep growth on track, achieve daily targets, and avoid a reoccurrence of past performance issues. Implementing DL is also compromised by the ongoing problem of discipline stoicism, whereby control over discipline-specific issues is not easily relinquished or shared with other professionals.

The results support the need for ongoing research into understanding why DL is not implemented when structures appear to be suitable. The effect of human agency is critical to both understanding the implementation problem and the context in which DL would flourish. A paradigm shift of this nature, in a multidimensional professional context, could be unobtainable no matter how conducive structural arrangements appear. Lack of familiarity with other executives, limited tenure of most executives, high workload commitments, and geographic segregation was discussed by the study cohort as further reasons for not implementing a DL style.

7.3 Chapter Summary

Chapter 7 drew together several practical issues that were identified in the individual and theoretical analyses of the proceeding chapters. The discussion continued to address the research questions regarding the influence of structure and behaviour on communication relationships. Igira's (2012) framework of activity systems was applied to highlight tensions and contradictions between the administrative and operational executive and the resulting communication problems between the two subgroups. In applying the framework, a second dimension of "contradictions and tensions" was added alongside "shared objectives", thus extending Igira's work on interacting activity systems. The results of plotting activities included structural and discipline-specific barriers to communication in the presence of shared objectives. Leadership preferences of the executives in the CD were noted to be different, and the initial premise of the suitability of DL was not substantiated. The challenge to move towards a DL style represents a paradigm shift for executives, one that is curtailed by lack of trust and unstable or underdeveloped relationships. Chapter 8 completes this thesis and summarises key findings to support recommendations and the study's contribution to what is known about communicating in the CD. Outcomes suggest

relationships, trust, structure, and human agency are critical to effective diffusion and exchange of information through communication. Suggestions for executive practice and further research are offered.

Chapter 8. Conclusions and Recommendations

Chapter 7 presented the results and discussion arising from the data analysis and situated the participants' responses within the theoretical frameworks applied to the current study. The mixed methods approach using social network analysis (SNA) and exploratory interviews was designed to answer the research questions specifically concerning the influence of networks and structures on effective diffusion of information and communication among the executive and senior staff group. The results demonstrate critical influences on this process and reveal considerations for researchers and healthcare management in relation to healthcare executives' relationships. This chapter summarises the major findings and formulates recommendations for future research and practice. First is a statement of four key messages. Next is a discussion of the academic and practical contributions, along with suggestions on ways the study results may be applied to improve communication practice. Finally, a set of recommendations are described that have arisen from both the design and results of the study.

8.1 Four Key Messages

Four important and related messages emerged from this study.

1. Prior relationships matter. Communication was not always effective in this group. Communication was better where staff had enjoyed previous relationships at other organisations or where staff were of the same discipline. Established communication networks were more likely when staff had offices in proximity, belonged to the same discipline, and/or had enjoyed previous working relationships.

2. Trust is crucial for effective working relationships. Where no trust was apparent, staff employed workarounds or alternative means to complete work or to attain goals and resources.

3. Structure and tenure affect communication. Structural hole issues that interrupted the flow of communication impeded the natural development of

relationships between staff. Limited tenure also influenced the development of trust relationships through unfamiliarity.

4. Agency in roles makes a difference. Executive behaviours were influenced by the barriers encountered in daily work. Agentive behaviours were demonstrated within the results and were regularly employed to overcome issues caused by structure and the behaviour of other executives.

Together, low trust, limited tenure, executive turnover, power inequities, historical organisational instability, and agency contributed to the individualised and clique-driven leadership approach witnessed in the study. This situation effectively negated the possibility of or opportunity for a distributed style of leadership. The analysis was mostly consistent with the content of the literature including trust in relationships, power inequities, and agency. Novel outcomes included participants deciding whether their peers were competent in their roles. Competency ideation in this project was linked to the past instability of the organisation. The study found limitations of distributing responsibilities, which is inconsistent with distributed leadership (DL) scholarship (Fitzsimons et al. 2011). DL is considered applicable in healthcare; however, the results suggest leadership duties and power were at times closely held by leaders.

8.2 Limitations

The study was a single site venture that limited access to lived experiences in other organisations. Conversely, data were obtained from participants who may have held similar worldviews due to their experiences in the same organisation; the study and hence the outcomes would have differed had more than one hospital been included in the design. The site was a tertiary hospital that had a recent disruptive executive turnover. Experiences of the executive may have been different had they not been in a rebuilding phase when the project was undertaken. The sample studied was small, which benefited data analysis by including a closer look at the self-reported behaviours of staff. The small sample, however, means that findings are not generalisable and are unlikely to lead to change within the organisation or theoretical advancement. The SNA was similarly limited by the small number of participants. Small numbers produced a clearer network map but helped to

understand only part of the network. Studies of social networks tend to be of large groups of people; nevertheless, this project demonstrated that small groups can contribute to understanding organisational behaviour (OB). Finally, scholarship on the clinical directorate (CD) has diminished over the last 20 years. The lack of contemporary insight contributes to the large knowledge gap about human behaviour and governance structures in the CD and limits contemporary references for this thesis.

8.3 Contribution to Theory

A theory-driven approach was substantiated within the results by illustrating levels of individual interaction. The choice of three theories to inform study design, analysis, and interpretation supports a trend in the management literature (Paruchuri et al. 2018) and contributes towards methodological debates in health services research. The idiosyncratic nature of the project's setting means outcomes are unlikely to reset any of the theories employed within the project. The focus hospital had a recent history of poor performance, ongoing frequent turnover of staff, and an ongoing expanding service population, making the organisation unique. However, incrementally adding to existing knowledge has been achieved. The project tested the existing theory of structuration through grounding analytic parameters within the accepted constructs of Giddens' (1984) theory. Giddens' contention of power as a means of achieving work output was contested in favour of trust as a means of establishing relationships that achieve results. This contention is not definitive; however, it does raise the potential to follow a new focus on the daily work of executives. Choosing structuration theory (ST) as a basis for studying communication behaviours highlighted the agency of staff when considering with whom and when to communicate. Participants in this study demonstrated behaviours to circumvent structures such as mandated communication pathways to contact others. Participants also overcame structural barriers by developing workable mechanisms to ensure their communications reached others. The effects of power and trust were highlighted as a key motivator for avoiding communication among some and for manipulating communications between others. Activity theory (AT) application using Igira's (2012) framework was a useful approach to demonstrate the effects of agentive behaviour. Based on the theoretical application of AT, the framework demonstrates how two groups of executives experienced communication difficulties. The effects of

geographic distancing, lack of prior relationships and therefore unfamiliarity, limited tenure, and organisational instability together contributed to a disconnection between executives of administration and operations. For DL, there were opportunities to distribute tasks, and the structure encouraged such practice through the presence of satellite centres and the appropriate reporting structures. Distribution of work appeared commensurate with the CD structure, and yet there was very little evidence of the distributing of responsibilities and accountabilities and shared decision-making among this group. Notwithstanding the range of promising benefits of DL in the healthcare setting, the implementation of such an approach seems to be constrained by structural designs, historical professional identities, and role accountabilities within the study cohort.

8.4 Practical Contributions

The results of the study can be translated into practical measures for healthcare organisations. The study highlights the incongruent nature of the CD structure with that of the existing relationships within the main disciplines. Such incongruency has been identified in previous studies and is substantiated further here. Focusing on measures that reduce the structural effects, for example, in the case of this project, the relocation of the executive suite into one area incorporating both the administrative and operational staff would be one way to improve communication between the two groups. The results show that proximity improves the likelihood of spontaneous conversations, thereby reducing unfamiliarity and improving the chance of developing trusting relationships. The implications could be improved relationships between executives because of the increase in contact frequency when in proximity. Other measures may include introducing time for executives to socialise together and fewer formal meetings where there is time to become familiar with others. Further, conveying the results of this study to executives may initiate change through introspection. Executives may benefit from taking time to reflect both collectively and individually on their behaviours and influence on others. Such approaches to leadership development are well grounded in evidence (West et al. 2003) and lead to improved communication between executives. Whether executives have the time to draw on or believe in research-substantiated evidence to guide their own behaviour is another question for study or practice development. Opportunities to reflect on practice may be

introduced at the organisational level as a response to research such as this project or may be initiated by self-reflection. Changing behaviours requires learning, support, and commitment over time. Change on this scale could challenge the stability of the organisation, which already sits in a precarious position of recovery.

Organisational leaders are advised to consider ways to integrate staff across disciplines to improve communications between all healthcare silos. Participants suggested that silos were a source of frustration, segregated staff, and detracted from daily work. Structuring committees where memberships are inclusive of representatives of departments outside the immediate directorate may facilitate integration. Integration may also be assisted by regular updates of phone directories, news bulletins, websites, and organisational charts providing current information about staff and their roles within the organisation. Strategies such as these would encourage staff to meet frequently and provide current information about events in the organisation. Up-to-date organisational charts facilitate communication by indicating leaders and contact numbers. Participants in this study indicated that the frequent turnover of staff and changing of governance systems often meant contacts were unclear.

Executives could benefit from time invested to become familiar with their work colleagues. The findings of the project suggest building trust is important to communication networks. The findings also suggest that familiarity contributes towards building trust. Tensions around communication, team interplay, and distributing leadership tasks will likely remain where trust is low; the CD structure appears suited to a distributed form of leadership rather than the traditional, individualised leadership type observed during the project. Executives could explore alternative styles of leadership that may not only better suit the structure of the service, but also relieve them of overwhelming workloads by distributing their own managerial responsibilities.

An organisation-wide approach, both structurally and developmentally, to the implementation of DL could reap significant interpersonal, career, and business benefits. Executives might experience improved collective effectiveness and grow the potential talent pool for succession planning were they to explore ways to portray themselves to others as collective and accountable leaders focused on the processes that drive

organisational outcomes. Business benefits include introducing new talent to the leadership pool by including distributed leaders, improving response times to work targets by distributing workloads, and espousing a collective mind-set to organisational challenges. DL was defined as sharing responsibilities with others (Section 3.2). Several participants suggested enacting DL would be difficult in terms of taking on responsibilities of another manager. Introducing DL to this organisation would entail commitment by leaders and a clear understanding of the benefits and implications of change over an extended term.

The stoicism of the disciplines was evident in many aspects of this study, whereby some executives voiced reluctance to recognise the role of the subordinate in carrying out their role. Executive members may improve this situation were they to reflect on their relationships with others and endeavour to nurture a greater tolerance and endorsement for other disciplines. Evidence supporting tolerance and endorsement came from one participant who suggested, “Communication is not a pure science; people need to be respectful and include others in decision making” (p06). And further, “People need to see each other as equal” (p05). As leaders, showing tolerance and acceptance of other disciplines is expected and may influence the wider hospital community.

8.5 Review of Research Questions

In what ways do the communication pathways of the clinical directorate structure of hospitals support diffusion of information between executive and senior staff?

The project hospital had in place contemporary measures for communicating. These included email, bulletins, regular meetings, intranet, paging systems, and mobile phones. Participants of this project unanimously chose mobile phones (texting) as the best means of communicating effectively. A hierarchy of use existed with mobile phones where participants said a text would suffice, but if the matter was urgent, then a phone call was the accepted method. Despite participants mentioning that many meetings were regularly held, this proved problematic for most. Timing and length of meetings was not always convenient or intruded on other work. Meetings did not articulate with other meetings therefore connection between groups of people might not happen. Not all participants used bulletins and paging systems; this appeared to be used by medical staff only. Emails were

the least preferred method of communicating because of the volume received and the time required to respond. In summary, while there were many ways to communicate, only a few methods were identified as supporting effective communication between executive staff.

How are communication pathways currently implemented in the clinical directorate of the case study hospital?

The implementation of communication pathways varied between disciplines. The medical discipline demonstrated a wider use of available pathways including bulletins, paging, emails, and meetings. The medical executive stated the onus was on subordinate staff to stay informed of any information that was distributed. Communication between the medical executive and other executives was by mobile phone and a series of committee structures set in place by the medical executive.

The operational executive relied on mobile phones and face-to-face encounters within their own directorate. Communication between operational and administrative staff appeared strained from the perspective of the operational staff. Relationships between these two subgroups were neither strong nor enduring. As a result, the operational executive often made corridor alliances that lasted only as required.

Cross-boundary communications were difficult in the absence of an up-to-date internal phone/email directory. Frequent changes to the executive meant the organisational chart was mostly out of date. Several executives said this turnover contributed to difficulty in identifying who should be included in discussions and communications.

How does the clinical directorate structure influence effective operation of these systems from the perspective of staff?

The CD comprises distinct lines of staff to make up each structure. These structures have a two-fold effect on communication systems. Division between disciplines is longstanding, and the relationships between doctors, nurses, and allied health has been influenced by historical and current professionalisation, industrial relations, and workforce reforms. Each directorate has responsibilities for delivering on care and financial obligations in a system that is arguably under resourced and overworked. These factors in combination with recent failures in meeting government targets of care have resulted in

structures and processes that impede collaboration and communication. Notwithstanding a structure that may not appear conducive to effective operation of communication systems, the interaction of staff and their willingness to focus on patient care enabled communication across structures.

What aspects of structural arrangements specifically affect effective communication, and how do staff overcome these barriers?

Structural arrangements included the grouping of similar services together, the presence of distinct disciplines, the geographic separation of operational and executive staff, the inarticulate nature of many committees and meetings, and the instability of the organisation as it responded to unprecedented growth. Each of these structural arrangements potentially creates silos and barriers to communicating with ease. They contribute to hindering relationships by reducing opportunities to become familiar with others and to understand the work undertaken by others. Unfamiliarity slows the growth of trust with others; all participants nominated trust as integral to building enduring relationships. Some constructive actions were demonstrated by staff in response to these barriers. Multidisciplinary meetings were encouraged, opening pathways of communication that demonstrated vertical contact (within silos) as well as horizontal contact (across silos), and initiatives that required an all-staff presence were positive actions in response to structural barriers. For some staff, however, communication across disciplines was difficult; building and disbanding alliances occurred to secure resources and knowledge. Others found that work tasks absorbed available time and closed their doors transiently, shutting down communication lines. More insidious efforts to overcome communication difficulties included approaching staff differently (manipulation) or using threats to achieve the desired effect.

8.6 Future Research Recommendations

The study achieved a unique insight into the daily tensions of the executive in healthcare from individual and group perspectives. The nuanced nature of interrelated issues that influence communication networks was apparent using this approach. While the study concentrated on the executive cohorts' communication networks, a multilevel view of

those levels of staff subordinate to the executive team would highlight the flow-on effects from the executive level and may contribute to opening communication networks on a much larger scale. A hospital-wide inquiry was beyond the scope of the current project; however, the communication networks of all staff, of all disciplines, are worthy of research in the era after the CD's introduction. Research that encompasses all levels of hierarchy within the organisation may contribute towards improving the communication and interaction between teams and disciplines, which this project highlighted as absent in many forums.

SNA of groups within the healthcare organisation has been shown to help streamline activities within departments by influencing workflows (Dunn & Westbrook 2011). Within the CD concept, more work is needed to understand the influence of differing disciplines on overlapping activities. Overlapping activities form the very structure of the CD. Further studies that account for the behaviour of teams where the jurisdictions of teams overlap could clarify the tensions between teams and for leaders. This case study was limited to one focus hospital; however, tensions demonstrated within the cohort may be shared by other executives in other organisations. Overlapping jurisdictions was highlighted as a nexus of agentive practices to further the success of teams. Team and discipline tensions accounted for some communication issues discovered in this project, finding ways to overcome these may improve team performance, communications, and relationships.

The study also contributes to current literature through questioning whether DL is practised within contemporary healthcare. Future research may contribute to refining the practice for hospitals or to understanding the antecedents of practice implementation at the practice level. Leadership in healthcare presents as preferential and because of organisational norms. Understanding leadership in healthcare is overdue and is an opportunity to improve cross-boundary relationships and work outputs. DL in this study was contingent on trust, structure, manageable workloads for collective planning, relationships, and the availability of capable, willing, and competent others with whom to share distributed responsibility.

The study outcomes contribute to understanding OB using three theories. ST, AT, and distributed leadership theory (DLT) applied singularly and together provided a

multilevel view. Study outcomes suggest trust is the most important attribute in relationships in this healthcare centre. While leadership theories such as DLT espouse a cohesive leadership style, outcomes suggest DLT is not appropriate in this acute healthcare setting. The outcomes of the project challenge theoretical thought of healthcare behaviour through a nuanced look into daily practices of executives. The small number of staff in the cohort was instrumental in moving away from generalisations about behaviour and moved to understand how discipline, gender, structure, financial constraints, and longevity of relationships contribute to complexity before we even consider the actual work that executives undertake.

The findings contribute to knowledge of the daily interactions and events that temper relationships and account for barriers to effective communication. New knowledge is limited by the single site setting of the project; however, it also provides alternative avenues for future research. The results may contribute to a different perspective for executives to consider their everyday communication actions and the ramifications these have on teamwork and leadership actions. The implications of structure and agency for the executives' communication pathways were demonstrated alongside the imposition of structure and agency in teams and for the process of distributing leadership responsibilities.

8.7 Thesis Summary

The project aims were to understand the pathways CD staff used to ensure their communication with others was effective, whether these pathways constituted mandated methods of communicating, and whether the pathways presented barriers or enablers to communicating. To do this, individual approaches to communicating were studied to understand the challenges executives experienced in communicating within the group. From here, the ramifications of individual behaviours on teams and as leaders were incorporated to give a triple-level view of communicating within the CD. The inclusion of three theories determined the interplay of levels of communicating between staff. These levels were noted as micro (individual), meso (team), and macro (leaders). ST facilitated an understanding of individual behaviour across all three levels. AT incorporated findings based in ST at the team level. DLT was included as this approach to leadership has been demonstrated as appropriate in the healthcare context (Fitzgerald et al. 2013) and is well

supported by the structure of the CD. ST and AT were applied at the macro level, implicating individual and team behaviour in influencing leadership practice.

"Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate" is the title of this report. The project has been successful in demonstrating a deeper understanding of behaviours and structures that mould the structures and networks of executive staff in the project hospital. Using a mixed methods approach, the study explored the nuanced behaviour of the executive team. The small number of participants reduced the likelihood of generalisations about executive communications but allowed a specific and insightful exploration of their everyday practices within that specific context. The research was undertaken three decades after the CD was introduced to Australian hospitals and came at a time of limited empirical evidence about the effectiveness of the structure. Communication practices assume an integral part of meeting the demands of all healthcare stakeholders and functions. Understanding how they occur will assist healthcare leaders to respond to and lead complex, contemporary healthcare systems.

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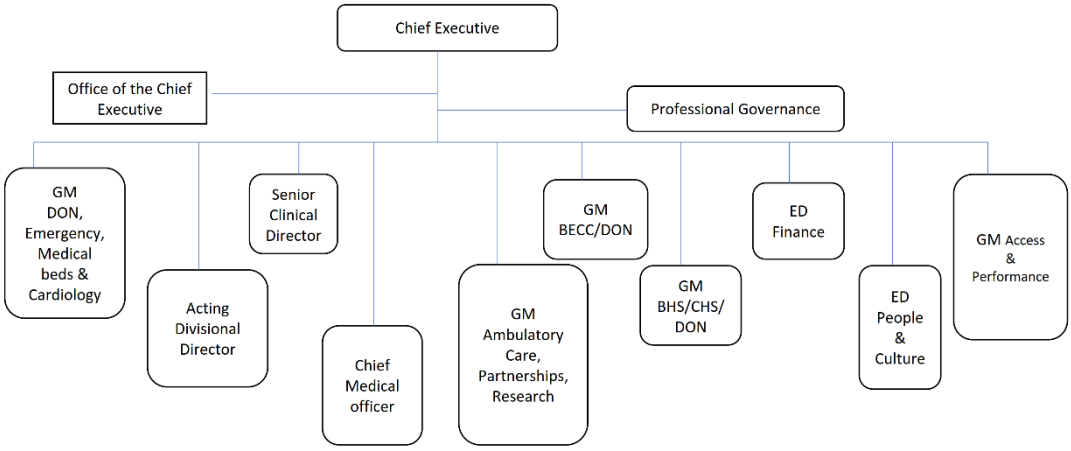
Appendices

Appendix A. Governance Structure



BECC, CHS, BHS represent satellite healthcare services (not identified further).
DON- Director of Nursing
ED-Executive Director
GM- General Manager

Appendix B. Human Research Ethics Committee Approval: Hospital

Austin Hospital

145 Studley Road
PO Box 5555 Heidelberg
Victoria Australia 3084
Telephone 03 9496 5000
Facsimile 03 9458 4779
www.austin.org.au

AUSTIN HEALTH HUMAN RESEARCH ETHICS COMMITTEE ETHICAL APPROVAL

Prof. Elisabeth Wilson-Evered Victorian University

15 March 2018 (Revised)

Dear Elisabeth,

HREC Reference Number: LNR/17/Austin/569

Austin Health SITE REFERENCE Number: LNR 17/569

P**roject Title:** Exploring the communication structures and networks of senior staff in a public hospital's clinical directorate

I am pleased to advise that the above project has **received ethical approval** from the Austin Health Human Research Ethics Committee (HREC). The HREC confirms that your proposal meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). This HREC is organised and operates in accordance with the National Health and Medical Research Council's (NHRMC) National Statement on Ethical Conduct in Human Research (2007), and all subsequent updates, and in accordance with the Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95), the Health Privacy Principles described in the Health Records Act 2001 (Vic) and Section 95A of the Privacy Act 1988 (and subsequent Guidelines).

HREC Approval Date: 15 March 2018 (Revised)
Ethical approval for this project applies at the following sites:

Approved Documents:

The following documents have been reviewed and approved:

Site [redacted]		
Document	**Version**	**Date**
LNR Vic (AU/13/7C12311)		14Nov17
Protocol	6	24Sep17
PICF	2	17Jan18

SNA Questionnaire and Survey link	2	22Dec17
Presentation to NH Staff	2	22Dec17
Follow up Recruitment letter	1	22Sep17
Interview Schedule	3	8Jan17

Governance Authorisation:

Governance Authorisation is required at each site participating in the study before the research project can commence at that site.

You are required to provide a copy of this HREC approval letter to the principal investigator for each site covered by this ethics approval for inclusion in the site-specific assessment application.

Conditions of Ethics Approval:

- • You are required to submit to the HREC:
  - • An Annual Progress Report (that covers all sites listed on approval) for the duration of the project. This report is due on the anniversary of HREC approval. Continuation of ethics approval is contingent on submission of an annual report, due within one month of the approval anniversary. Failure to comply with this requirement may result in suspension of the project by the HREC.
  - • A comprehensive Final Report upon completion of the project.
- • Submit to the reviewing HREC for approval any proposed amendments to the project including any proposed changes to the Protocol, Participant Information and Consent

  Form/s and the Investigator Brochure.

- • Notify the reviewing HREC of any adverse events that have a material impact on the

  conduct of the research in accordance with the NHMRC Position Statement: *Monitoring*

  and reporting of safety for clinical trials involving therapeutic products May 2009.

- • Notify the reviewing HREC of your inability to continue as Coordinating Principal

  Investigator.

- • Notify the reviewing HREC of the failure to commence the study within 12 months of the

  HREC approval date or if a decision is taken to end the study at any of the sites prior to

the expected date of completion.

- • Notify the reviewing HREC of any matters which may impact the conduct of the project.

  Please note: Template forms for reporting Amendments, Adverse events, Annual/Final reports, etc. can be accessed from: https://www2.health.vic.gov.au/about/clinical-trials-and- research/clinical-trial-research/how-to-make-an-hrec-application-for-clinical-trials.

  The HREC may conduct an audit of the project at any time. Yours sincerely,

  Priyanka Sathe Research Ethics Officer

Appendix C. Human Research Ethics Committee Approval: Victoria University

From: quest.noreply@vu.edu.au
Sent: Monday, July 31, 2017 3:34 PM
To: Elisabeth Wilson-Evered
Cc: Marina Keenan, Michael McGrath

Dear PROF ELISABETH WILSON-EVERED,

Your ethics application has been formally reviewed and finalised.

» Application ID: HRE17-126
» Chief Investigator: PROF ELISABETH WILSON-EVERED
» Other Investigators: MS Marina Grace Keenan, PROF MICHAEL MCGRATH
» Application Title: Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate
» Form Version: 13-07

The application has been accepted and deemed to meet the requirements of the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)' by the Victoria University Human Research Ethics Committee. Approval has been granted for two (2) years from the approval date; 31/07/2017.

Continued approval of this research project by the Victoria University Human Research Ethics Committee (VUHREC) is conditional upon the provision of a report within 12 months of the above approval date or upon the completion of the project (if earlier). A report proforma may be downloaded from the Office for Research website at: http://research.vu.edu.au/hrec.php.

Please note that the Human Research Ethics Committee must be informed of the following: any changes to the approved research protocol, project timelines, any serious events or adverse and/or unforeseen events that may affect continued ethical acceptability of the project. In these unlikely events, researchers must immediately cease all data collection until the Committee has approved the changes. Researchers are also reminded of the need to notify the approving HREC of changes to personnel in research projects via a request for a minor amendment. It should also be noted that it is the Chief Investigators' responsibility to ensure the research project is conducted in line with the recommendations outlined in the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007).'

On behalf of the Committee, I wish you all the best for the conduct of the project.

Secretary, Human Research Ethics Committee
Phone: 9919 4781 or 9919 4461
Email: researchethics@vu.edu.au

Appendix D. Recruitment Email

12/6/2018

Dear Mr. /Ms,

Research Project Title: Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate

We are writing to let you know about a new research project that is taking place at [redacted] which you may be interested in participating.

Why are you being asked?
We are sending you this information because your role within the clinical directorate is the focus group of the research.
What is the research about?

- We aim to understand the communication pathways used by senior staff and the role that the clinical directorate structure has in facilitating conversations between you and your colleagues.
- Should you agree to take part the researcher will ask for 30 minutes of your time for an interview and a further 10-15 minutes to complete an on-line or hard copy questionnaire.
- The researcher proposes the benefits of undertaking the research will be to identify barriers to communication which may exist currently and further, improve communication methods between senior staff.
- All information collected will be coded immediately and will not be identifiable, this data is for the sole use of this project and will be stored in a password locked data base. The data will be protected in accordance with the guidelines set out in the NHMRC, Universities Australia "Australian Code for the Responsible Conduct of Research 2007"

What do you need to do?

Please email us on the details below to let her know if you are interested in taking part or not. If we do not hear from you in the next 2 weeks, she will contact you to check you received this letter and tell you more about the project.

Kind regards,

Marina Keenan,
DBA candidate,
Victoria University

Researcher contact details: Ms. Marina Keenan, Victoria University, Melbourne.
Email: marina.keenan@live.vu.edu.au
Phone: 0439 147 174

Master Introductory Email V1

Appendix E. Follow-Up Recruitment Email

Date 26/6/2018

Dear Mr. /Ms

Research Project Title: Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate.

We have not heard back from you, so we are following up to inform you of a project being undertaken at [redacted]. The details are listed below.

Why are you being asked?
We are sending you this information because your role within the clinical directorate is the focus of the research.
What is the research about?

- We aim to understand the communication pathways used by senior staff and the role that the clinical directorate structure has in facilitating conversations between you and your colleagues.
- Should you agree to take part the researcher will ask for 30 minutes of your time for an interview and a further 10 minutes to complete an on-line or hard copy questionnaire?
- The researcher proposes the benefits of undertaking the research will be to identify barriers to communication which may exist currently and further, improve communication methods between senior staff.
- All information collected will be de-identified as soon as possible, this data is for the sole use of this project and will be stored in a password locked database. The data will be protected in accordance with the guidelines set out in the NHMRC, Universities Australia "Australian Code for the Responsible Conduct of Research 2007"

What do you need to do?

Please call or email the researcher on the details below to let us know if you are interested in taking part.
Kind regards,
Marina Keenan,
DBA candidate,
Victoria University

Researcher contact details: Ms. Marina Keenan
Email: marina.keenan@live.vu.edu.au
Phone: 0439 147 174

Follow up recruitment letter,V2 22_09_17

Appendix F. Social Network Analysis Questionnaire

Questionnaire

Communication in the clinical directorate

Focus hospital/Victoria University

Thank you for agreeing to take part in this questionnaire. This is the final stage of your contribution toward the 'Communication in the clinical directorate' project.

The questionnaire requires you to nominate staff in your communication circles. You may nominate staff by name or role. Acronyms such as CMO or DON are acceptable.

……

Question 1

Ranking from highest (1) to lowest (10) list those staff with whom you have the most contact as a result of your role.

1.-10

Question 2

When thinking about those you have nominated in question 1, who initiates contact?

- You mostly initiate
- The other mostly initiates
- Initiation is equal

Question 3

There may be staff that you PREFER to communicate with, rather than SHOULD communicate with. Please nominate these staff?

1.-7

Question 4

When thinking about those you have nominated in question 3, why do you prefer to communicate with these staff?

- They have the best skills to deal with the issues I have
- They can get things done
- I trust them
- We are like-minded

Question 5

Please suggest other reasons why you would prefer to communicate with these staff.

Question 6

To whom do you delegate your important tasks or responsibilities, for example when you take leave or take on other responsibilities. (These may be staff that does not hold formal leadership positions). Please nominate these staff.

Question 7

When thinking about these staff you have nominated in Question 6, why do you choose these staff?

- I trust them
- They have sound knowledge of my role
- We are like-minded
- They have skills but do not hold formal leadership positions
- They lead other directorates and have the skills to undertake my role

Question 8

Please suggest other reasons why you would nominate these staff to take on your important responsibilities?

On-line survey link
https://vuau.qualtrics.com/jfe/form/SV_6yVACIeAs4KI9CZ

Thank you for completing the survey

Appendix G. Interview Protocol

Interview protocol

Note: Informed consent is completed prior to interview. A brief reiteration of the project aims and confirmation of commitment to privacy of data and participant details is given. A short discussion on the meaning of the term clinical directorate and a comparison of elements of the current and previous structure will take place before the interview begins.

Thank you for participating in this interview. My name is Marina Keenan, this interview forms part of a research project I am undertaking for the award of Doctor of Business Administration (DBA) at Victoria University. The project is entitled 'Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate'.

This interview is structured so that you may talk about your experiences with communication within the clinical directorate. I have a set of questions to ask to guide the conversation; however, you may like to discuss some aspects in depth, or prefer not to comment at all on other questions. You have control of the interview and participation is always voluntary. This interview is being recorded to ensure I capture your responses correctly. Only my supervisors from Victoria University and I will have access to the recordings. The interview will be transcribed for analysis, and codes will be applied to group similar responses with others. In this manner I hope to identify common themes about communication in the clinical directorate. The data obtained will be used for my DBA thesis and possibly Journal articles. The results of the study will also be disseminated to participants who are interested. By signing the informed consent form, you are agreeing to participate in this interview and permit your responses to be used as advised. Are you happy to continue with this interview?

Dissemination of results

The participant will be asked if they would like the outcomes of the project disseminated to them and a contact email address requested for that purpose. Thanks, and reassurance regarding protection of their data and anonymity will close the interview.

Interview questions

Question	Primary question	Guiding questions
2.1	Tell me about the ease of communicating with your colleagues on matters of directorate management	Can you provide recent examples?
2.2	What is your experience of finding opportunities to communicate with other senior management?	Is there an example you can share?
2.3	(If barriers are identified), What are your thoughts on improving this situation?	Could you provide an example situation and the barrier and impact on communication, quality of care?
2.4	Distributed leadership occurs when others in your team take on leadership roles, on your behalf and where leadership occurs across geographically different sites. Can you tell me about your jurisdiction?	Can you describe any roles that you may share with other directors? Are there overlapping activities, or areas of responsibility that are conducive to communication difficulties?
2.5	Does this present challenges to communicating with staff in your directorate and those outside your directorate?	Can you discuss an example of when communication was difficult because of geographic or size of directorate issues?
2.6	In your experience, is there workarounds or variations to mandated work patterns that you use to manage your everyday workload?	What event would illustrate this point?
2.7	What are your views about the clinical directorate structure?	Can you give examples of the positive aspects of the structure and also negative aspects of the structure?
2.8	What is your experience with communicating with others outside your discipline?	Can you give me an example situation to illustrate the point?
2.9	Would you like to add anything that we have not already discussed?	

Self- appraisal of interview

Registration of interview

Interviewer

Date: Start time: Finish time:

Notes:

Office Use: Interview transcript		
Stored (File reference)	Created on(date):	By (initials)

Appendix H. Consent

FNH010610

RESEARCH PARTICIPANT INFORMATION CONSENT	AFFIX PATIENT IDENTIFICATION LABEL HERE U.R. NUMBER: _____ SURNAME: _____ GIVEN NAME: _____ DATE OF BIRTH: _____/_____/_____ SEX: _____

RESEARCH – PARTICIPANT INFORMATION CONSENT

PARTICIPANT INFORMATION SHEET/CONSENT FORM

Title	Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate
Short Title	Communication and the CD
HREC No.	
Protocol Number	*[Protocol Number]*
Project Sponsor	*[Project Sponsor in Australia]*
Coordinating Principal Investigator/ Principal Investigator	*Prof E Wilson-Evered* *Prof. E Wilson-Evered*
Associate Investigator(s) *(if required by institution)*	*Prof G. M McGrath/Ms. M Keenan*
Location *(where CPI/PI will recruit)*	/

Participant Involvement In Research Project: *(to be completed when enrolling participants)*

Start Date:01____/_12____/_2017____ Finish Date: ___01__/___08__/__2018___

Part 1 What does my participation involve?

This research involves senior and executive staff. The researcher will use two different methods of asking you about your experiences in communicating with others at work. This is done to establish information from different perspectives. Your participation will include an interview where you are encouraged to talk about your experiences. And a short questionnaire which will ask you about who you talk to, how often, and whether you have access to those staff that you need to talk to with regard to managing your department.

The interviews could take up to 30 minutes of your time. Interviews will take place at your convenience and can be cancelled or reconvened if required. It is the researchers intention to audio tape the interviews, however if you do not consent to this, shorthand notes will be taken during the interview. Following the interview you will be given an electronic link to a questionnaire to complete, or if preferred, a hard copy that can be returned to the researcher. The total duration of this project is approximately 18 months; your participation is required during the data collection phase only (9 months), this will consist of one meeting as explained.

There is no expense expected on your behalf, you will not be paid for your time.

Complaints contact person If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact:

Consent Form - *Adult providing own consent*

Title	Exploring the role of communication structures and networks of senior staff in a public hospitals clinical directorate
Short Title	*Communication in the clinical directorate*
Protocol Number	*V5*
Coordinating Principal Investigator/	Professor Elisabeth Wilson-Evered PhD
Associate Investigator(s	Prof. G Michael McGrath PhD, Ms. Marina Keenan

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the project.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the project without affecting my future care.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) _____

Signature _____ Date _____

Declaration by Researcher†

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of Researcher† (please print) _____

Signature _____ Date _____

† An appropriately qualified member of the research team must provide the explanation of, and information concerning, the research project.

Appendix I. Study Cohort

Office of Chief Executive, Chief Executive & Professional Governance

1. Chief information Officer
2. Chief Legal

Officer

3. Director, Corporate Governance
4. Director, Capital
5. Director, Engagement, communications & Fundraising
6. Director, Engineering
7. Director, Planning
8. Chief Strategy, business and development officer
9. Director, Electronic Record Project
10. Chief Executive
11. Chief Medical Officer
12. Chief Allied Health Officer
13. Chief Nursing & Midwifery Officer

Executive Team

14. Divisional director
15. Senior Clinical director
16. Chief Medical officer Quality & Safety
17. GM- (CNMO) Surgery, Women's & Children's, Operating Theatres & ICU
18. GM-(DON) Emergency, Medical beds & Cardiology
19. GM-(CAHO) Ambulatory care, Partnerships, Research & Education
20. GM- BECC/DON
21. GM-BHS/CHS/DON
22. ED-Finance
23. ED-People & Culture
24. GM- Access & Performance & CNIO

Appendix J. Participants' Explanatory Statement

Participants explanatory statement

Participant Information Sheet

Health/Social Science Research - *Adult providing own consent*

[redacted]

Title	Exploring the role of communication structures and networks of senior staff in a public hospital clinical directorate
Short Title	Communication and the CD
Protocol Number	TBA
Project Sponsor	Victoria University
Coordinating Principal Investigator/ Principal Investigator	Professor Elisabeth Wilson-Evered PhD
Associate Investigator(s)	Prof. G Michael McGrath PhD, Ms. Marina Keenan
Location	[redacted]

Part 1 What does my participation involve?

1 Introduction

You are invited to take part in this research project, which is called 'Exploring the role of communication structures and networks of senior staff in public hospitals' clinical directorate.

You have been invited because *your* role within the clinical directorate is integral to the communication pathways.

This Participant Information Sheet/Consent Form tells you about the research project. It explains the processes involved with taking part. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or local health worker.

Participation in this research is voluntary. If you don't wish to take part, you don't have to.

If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:

• Understand what you have read

• Consent to take part in the research project

• Consent to be involved in the research described

• Consent to the use of your personal information as described.

You will be given a copy of this Participant Information and Consent Form to keep.

2 What is the purpose of this research?

The aim of the research is to understand the communication channels in use within the hospital structure (clinical directorate). This is important because good communication between different groups of staff impacts positively on patient care.

The clinical directorate structure represents the formal reporting lines of your organisation. This includes communication channels, responsibilities, roles and policies and procedures.

When the clinical directorate structure was introduced, considerable attention was paid to the way the structure was to perform. Areas that were not explored in detail include the changes in professional relationships that occurred as a result of the change. This project aims to fill the knowledge gap about how staff now communicates in this structure where teamwork and interdisciplinary communication is essential.

The researcher is a professional doctorate student at Victoria University Melbourne. This undertaking and results of this project form part of the assessment for this award.

This research has been initiated by the researcher*, Ms. Marina Grace Keenan.*

3 What does participation in this research involve?

You will be contacted via email;

1. The contact will be initiated by yourself after a short presentation to the executive and senior staff group. You will be given my contact details and asked to contact me should you wish to take part in this study. .
2. Consenting to take part in this study will be by return confirmation directly to the researcher via email link or phone.
3. You will be given all details concerning the study prior to consenting.

This research involves senior and executive staff. The researcher will use two different methods of asking you about your experiences in communicating with others at work. This is done to establish information from different perspectives. Your participation will include an interview where you are encouraged to talk about your experiences. And a short questionnaire which will ask you about who you talk to, how often, and whether you have access to those staff that you need to talk to with regard to managing your department.

The interviews could take up to 30 minutes of your time. Interviews will take place at your convenience and can be cancelled or reconvened if required. It is the researcher's intention to audio tape the interviews, however if you do not consent to this, shorthand notes will be taken during the interview. Following the interview, you will be given an electronic link to a questionnaire to complete, or if preferred, a hard copy that can be returned to the researcher. The total duration of this project is approximately 18 months; your participation is required during the data collection phase only (9 months), this will consist of one meeting as explained.

There is no expense expected on your behalf, you will not be paid for your time.

No identifying information about you will be kept after the data has been collected. The information you give to the project will be kept in a password secure data base at Victoria University with the researcher only having access.

4 Other relevant information about the research project

The total number of people expected to take part in this project is approximately 24. These people will be members of your organisations senior staff and executive. The project is inclusive of your organisation. While this project builds on previous research by examining a further aspect of the clinical directorate, it is a unique approach to understanding communication within the clinical directorate.

5 Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

If you do decide to take part, you will be given this Participant Information and Consent Form to sign and you will be given a copy to keep.

6 What are the possible benefits of taking part?

We cannot guarantee or promise that you will receive any benefits from this research; however, possible benefits may include a better understanding of how you and your colleagues communicate within your hospital. It may also assist in changing those pathways which present barriers to your work.

7 What are the possible risks and disadvantages of taking part?

It is unlikely that the proposed questions will distress you. Counselling is available to you should you require it. There is no disadvantage to taking part in this project.

8 What if I withdraw from this research project?

If you do consent to participate, you may withdraw at any time. If you decide to withdraw from the project, please notify a member of the research team before you withdraw.

If you decide to leave the research project, the researchers will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected from the time of the interview will form part of the research project results. This cannot be retrieved as no identifying marks are attached to the information you give to the researcher.

9 Could this research project be stopped unexpectedly?

This research project may be stopped unexpectedly for a variety of reasons. These may include reasons such as the researcher does not make satisfactory progress within the university guidelines, or the researcher becomes unwell.

10 What happens when the research project ends?

When the project is completed the results can be made available to you if required. You will need to consent to leaving contact details with the researcher for this purpose.

Part 2 How is the research project being conducted?

11 What will happen to information about me?

All information obtained through the processes described earlier will be de-identified. The data will be processed immediately and entered into the data base. It is of no value to the researcher to retain any identifying marks with the data. The data is kept exclusively with the researcher on a password secure data base at Victoria University. Once the data is analysed the researcher is required to keep this for a period of seven years. The data will be stored in the repository at Victoria University at Footscray Park campus.

The data collected for this project will be used for this project and possible future publications. It will not be retained for the purpose of future research.

By signing the consent form you consent to the research team collecting and using the information you offer for the research project. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law.

The personal information that the research team collect, and use is information from the interviews and responses to the questionnaires.

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified. De-identification of the data will occur as soon as practicable after the interview.

. In accordance with relevant Australian and/or Victorian privacy and other relevant laws, you have the right to request access to the information about you that is collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please inform the research team member named at the end of this document if

you would like to access your information. You should be aware that should you wish to retrieve your data it will need to be identifiable. Any information obtained from you is not identifiable once the interview and questionnaire is completed.

12 Complaints and compensation

A contact name and number are provided on this form should you wish to lodge a complaint about the study. There are processes in place for you to pursue a complaint should the need arise. All complaints will be handled with sensitivity and confidentiality.

13 Who is organising and funding the research?

This research project is being conducted by Marina Grace Keenan.

[redacted] and Victoria University may benefit financially from this research project if, for example, the project assists [redacted] and Victoria University in any commercial enterprise.

You will not benefit financially from your involvement in this research project even if, for example, knowledge acquired from your information proves to be of commercial value to [redacted] and Victoria University.

In addition, if knowledge acquired through this research leads to discoveries that are of commercial value to [redacted] and Victoria University the researchers or their institutions, there will be no financial benefit to you or your family from these discoveries.

No member of the research team will receive a personal financial benefit from your involvement in this research project (other than their ordinary wages).

14 Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC).

The ethical aspects of this research project have been approved by the HREC of Austin Health.

This project will be carried out according to the *National Statement on Ethical Conduct in Human Research (2007)*. This statement has been developed to protect the interests of people who agree to participate in human research studies.

15 Further information and who to contact

The person you may need to contact will depend on the nature of your query. If you want any further information concerning this project or if you have any problems which may be related to your involvement in the project, you can contact the researcher on *0439 147 174.*

Research contact person

Name	*Marina Grace Keenan*
Position	*Researcher*
Telephone	*0439147174*
Email	*marina.keenan@live.vu.edu.au*

For matters relating to research at the site at which you are participating, the details of the local site complaints person are:

Complaints contact person

Name	[redacted]
Position	Ethics and Research governance officer
Telephone	[redacted]
Email	ethics@[redacted].org.au

Clinical contact person

Name	
Position	
Telephone	
Email	

Reviewing HREC name	*Austin Health Human Research Ethics Committee*
HREC Executive Officer	*Ms. Chelsea Webster*
Telephone	*9496 4090*
Email	*ethics@austin.org.au*

Local HREC Office contact

Name	*Details removed*
Position	
Telephone	
Email	

Appendix K. The Code Book

The Code Book

Thematic analysis plan

For

Exploring the communication structures and networks of senior staff in a public hospitals clinical directorate project.

Contents

1. Project overview and data analysis timelines

Much of the literature on best practice in qualitative analysis is focused on the benefits of multi-authored analysis (Fereday & Muir-Cochrane 2006, Saldana 2018). The benefits of collaboration and integration of perspectives between analysts are realised in the trustworthiness of the results, the ability to manage large data sets and counteracting individual bias (Richards & Hemphill 2018). Collaboration in data analysis requires a shared interpretation of the phenomena under study and is facilitated with the code book. Richards and Hemphill suggest one of the most important steps in the data analysis process is the preliminary organisation and planning (2008). This planning phase includes team discussions and is complemented with the Project Overview and Data Analysis Timeline as presented here in Part One of the code book.

2. Codes developed from Research Questions (Structural Coding)

"Structural coding applies a content based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question" (Mc Queen & Guest 2008, p.124 In Saldana 2018). This type of coding "acts as a labeling and indexing device" (Saldana p.98) and is appropriate for larger data sets such as those generated through interview transcripts. Structural codes are generated directly from the research questions using key words, phrases or ideas from the research questions (Braun & Clarke 2006). The transcripts are then scanned to find participant responses which address these particular key words and phrases. Structural coding represents a first cycle analysis; the process from here is inductive.

3. Codes developed from Transcript (In Vivo Coding)

In Vivo coding is an important part of the data analysis as it relies solely on participant responses. Codes are drawn from the actual language used by the participants. In Vivo coding can tangentially be used in a quantitative manner when the analyst looks for the number of times a phrase of key word is used. The main use of In Vivo coding in this project will be to code the participant's responses in such a way as to understand inherent meanings and capture the participants lived experience of communicating in the clinical directorate. In Vivo coding is also considered a first cycle method (Saldana 2018) and will complement the structural coding.

4. Identifying themes from codes- Analytic Memo's and Metasynthesis

This cycle of coding allows the data extracted from the first cycle methods to be brought together as a comprehensive analysis of the interview transcript. An analytic memo will be written for each participant's interview and will contain key words and phrases from the participants. An analysis by the researcher will also be included. Together these analytic memos will form a metasynthesis of the total data gathered and will be applied to the theoretical coding which represents the second cycle of coding

5. Theoretical thematic analysis

This cycle signals the beginning of the deductive process of analysing the data. The purpose of applying a theoretical thematic analysis is to ground the actions of participants in a theoretical perspective. Three theories are applied to this research to distinguish patterns of communication behaviour on a multi-level perspective. This is important to the research because the inquiry is based on human communication behaviour at an individual level, how that individual communicates in a team environment and how that individual communicates in a leadership role. Braun and Clarke (2006) suggest the theoretical outcomes can be mapped onto the inductively produced data to provide a large amount of detail to specific theoretical questions. Braun and Clarke suggest this layering of data can "speak to, or expand" on original themes (2006, p. 84). The inductive data is layered with broader perspectives and the deductive layer in turn can provide a more detailed analysis.

6. Flow chart for data analysis

The flow illustrates the steps for data analysis. These steps are referenced to works of others to incorporate various skills to be applied to data analysis. The flow chart nominates both the inductive and deductive processes undertaken

7. Coding for SNA ties,

These codes are derived from questionnaire data and relate specifically to communication relationships from both a service perspective and also a connectivity perspective (how connected this person feels to the other). Weighting these relationships contributes towards the social network analysis in the form of matrices and maps.

1. Project Overview and data analysis timeline

Project Overview: To understand how staff communicate within the clinical directorate structure of a major Victorian hospital. Specifically, communication between the most senior staff where there is a mixed discipline presence. Through a multi-theoretical approach, the study will also investigate the influence of agentive behaviour, complexity in teams and overlapping responsibilities and the influence of communication channels in enacting leadership. The data has been sourced from semi-structured interviews which took place at the focus hospital between March and June of 2018

1. **Theoretical framework:** ST Structuration Theory, AT- Activity Theory, DLT- Distributed Leadership Theory

2. **Data sources:** 10 Individual interviews, 10 Questionnaires

3. **Research Questions:**

1. In what ways do the communication pathways of the clinical directorate structure of hospitals support effective diffusion of information between executive and senior staff?
   a) How do various agents, stakeholders and actors in the directorate define effective, diffusion of information between executive and senior staff i.e. what does it look like when it is working well?
   b) How are communication pathways for clinical directorate decision making currently implemented in the clinical directorate of the case study hospital?
   c) In what ways does the clinical directorate structure impact on effective operation of these systems from the perspective of staff using them?
   d) What aspects of structural arrangements specifically impact effective communication and in what ways does staff overcome these barriers?

4. Researcher 1- Prof. Elisabeth Wilson-Evered
   Researcher 2- Marina Keenan

5. Weekly plan for data analysis

Week	Coding phase	Coding assignment	Notes
July 2nd 2018	Initial meeting		Discuss analysis plans Prepare for Structural & In Vivo coding
July 9th	Structural/In Vivo coding	Researcher 1: 030518_001 030518_002 Researcher 2: 030518_003 080518_001	Review/Compare Analytic memo's
July 16th	Structural/In Vivo coding	Researcher 1: 080518_002 160518_001 Researcher 2: 170418_001 170518_001	Code transcripts into categories Identify themes Take notes-Review Analytic memo's
July 23rd	Structural/In Vivo coding	Researcher 1: 040618_001 Researcher 2 260618_001	Code transcripts into categories Identify themes Take notes-Analytic memo's
Onwards	Theoretical coding	Researcher 2	Draw Analytic memo's together in Metasynthesis

(Richards & Hemphill 2018)

6. **Development of preliminary code book -**Generative themes from open coding, patterns formed, connections between themes- all framed as preliminary code book.

7. **Pilot testing the code book**- Researchers to review the same transcripts- then discuss and amend

8. **Final coding process-** (Data driven, theory driven)

2. Codes developed from Research Questions- Structural Coding

Research Question	Structural Code	Transcript example
1. In what ways do the communication pathways of the clinical directorate structure of hospitals support effective diffusion of information between executive and senior staff?	Effective communication pathways present	
a) How do various agents, stakeholders and actors in the directorate define effective, diffusion of information between executive and senior staff i.e. what does it look like when it is working well?	Important factors for successful communication	
b) How are communication pathways for clinical directorate decision making currently implemented in the clinical directorate of the case study hospital?	Present use of communication pathways	
c) In what ways does the clinical directorate structure impact on effective operation of these systems from the perspective of staff using them?	Structural influences on communication pathways	
d) What aspects of structural arrangements specifically impact effective communication and in what ways does staff overcome these barriers?	Overcoming structural barriers to communication	

(Braun & Clarke 2006, Saldana 2018)

3. Codes developed from transcript (In Vivo coding)

Primary code	Code 2	Code 3	Code 4	Code 5
Ease of Communication				
Opportunities to communicate				
Barriers to communicate				
Distributed Leadership				
Challenges in Communication				
Workarounds /Variations to practice				
Clinical Directorate structure				
Cross Discipline Communication				

(Richards & Hemphill 2018, Saldana 2018)

4. Identifying the themes from the codes -Analytic memo's and Metasynthesis

Analytic memos are written for each participant. These memos are the result of the structural and in Vivo (first cycle) process outlined earlier. The purpose of producing the memo is to summarise the interview data using themes and categories and secondly, to contribute towards an overarching document or metasynthesis of the interview data. The metasynthesis gives meaning to the coded data and will form the final log of outcomes of the inductive coding process. The metasynthesis is used in the deductive process (second cycle) of data analysis where the participant's responses are grounded in a theoretical lens.

5. Theoretical thematic analysis

Coding for Structuration theory (Giddens, 1984)

Primary code	Code 2	Code 3
a. Structural properties of the social system	-Rules	- normative elements (tacit use)
	-Resources	-Codes of signification
		-Authoritative use of resources
		-Allocative use of resources
b. Power contexts	-Intrinsic to individual(displayed)	-Dialectic (Action)
	-Accepted by individual	-Authoritative use of resources
	-Routine	-Allocative use of resources
	-Rules	-position based (Structure)
	-Resources	-Influence
		- Historical
		-Shifting contexts (over time)
c. Knowledgeability/Social conduct	-Unconscious (unacknowledged)	-Implicitly understood
		-Explicitly stated

	-Conscious (bounded acknowledgement) -Routine -Consequences of actions	-Practical consciousness (what agents already know) -Intended/unintended
d. Context of interaction	-Boundaries around interactions (Disciplines) -Co-presence of others -Routine -Consequences of actions	-Signals of interactions (Facial expressions, Bodily gestures, Linguistics) -awareness and use of these to control the flow of interaction (I.e. closed-door policy) -Intended/unintended -Ontological security-predictability
e. Social Identities/Position-practice relations	-Normative rights -Obligations -Sanctions -Roles -Medical -Allied Health -Nursing -Non-clinical -Hybrid	-Friendships -Hierarchy -Co-presence/accessibility - Large discipline base - Singular representative

Notes for codes:

a. <u>Structural properties of the social system-</u> In ST, structure is regarded as rules and resources recursively implicated in social reproduction

Rules have two aspects:

- Normative elements- routines of social life, imply methodological procedures, contribute towards the constitution of meanings and sanctioning of modes of social conduct
- -Codes of signification- 'the medium and outcome of communicative processes in interaction' (Giddens, 1984, p. 31)

Resources

- -Allocative resources refers to capabilities- 'generating command over objects, goods or material phenomena' (Giddens 1984, p. 33)
- -Authoritative resources- 'Generating command over persons or actors' (Giddens 1984, p.33)

"One of the main propositions of ST is that the rules and resources drawn upon in the production and reproduction of social action are at the same time the means of system reproduction (the duality of structure)" (Giddens 1984, p. 19).

b. Power contexts- "Power is the means of getting things done and, as such, directly implied in human action" (Giddens 1984, p. 283).

The capability of some actors or groups to influence others (Intrinsic to individuals)

Differing social contexts means subordinates have varying use for power (accepted by individual)

Routines and rules are directly supportive of power displays

Resources- See above

c. Knowledgeability/Social conduct- Capacity of agents to undertake social activities based on conscious or unconscious knowledge of the consequences of their actions. Actors know a great deal about the conditions and consequences of their day-to-day lives, this is bounded by routine and not always directly motivated.
d. Context of interaction- Interactions have symbolic markers, (disciplines) (bodily expression), Are based in routine and predictability, provide and contribute to ontological security (comfort and expectancy in normal routines)
e. Social Identities/Position-practice relations- Based in the collective population, accounts for differences in discipline. Relationships with others and the inclusion of others based on those relationships. Can be influenced by positively by the presence of others (safety in numbers) such as nursing or be as a stand- alone (such as legal officer) where as a singular representative lacks support. Is integral in the use of power where normative rights, obligations and sanctions are used.

Coding for Activity theory (Engestrom 1987)

Primary code	Code 2	Code 3
a. Boundaries of work	-defined	Clear demarcation of work

	-cross over	-Complexity in some work
	-integration with other disciplines	-Relies on other disciplines for some work decisions
b. Responsibilities	-Defined	
	-Combined with like discipline	
	-combined with other disciplines	
c. Daily activities	-Overlapping systems	-Acknowledges needs of others
	-Processes	
		-Reorganisation of praxis, innovation to work with others
d. Multi-disciplinary team	-Collective relationships	-Perspective taking
		-Perspective making
		-Perspective shaping

Notes for codes:

a. Boundaries of work- Work boundaries can be defined clearly, be incorporated with the boundaries of other teams and/or require an integration of different disciplines in order to complete tasks. Boundaries may differ for each task or may be transient in nature.
Complexity in work refers to work where there is boundary cross over, not to activities where the task is wholly owned and managed by the participant.

b. Responsibilities- Responsibilities may be clearly defined but may include the cooperation of a different discipline.
-Challenges in communicating and enacting own responsibilities through negotiation with other disciplines
-Challenges in communicating and enacting own responsibilities through negotiating with like disciplines.

c. Daily activities- Daily activities overlap with other teams. Daily activities have/lack processes

- Acknowledgement of impact of own activities on others

- Has reorganised work to accommodate others, - has innovated to facilitate work with others.

d. Multi-disciplinary teams- Relationships established with the collective.

- Has thought about perspectives of own work on others

- Has reorganised to accommodate impact from own work and consequence for others

- Shapes work to suit multi team environment

Coding for Distributed Leadership Theory (Gronn 2000)

Primary code	Code 2	Code 3
a. Constructs of Distributed leadership	-Relations	-Trust
		-Empowerment
		-Commitment
	-Structure	-Authoritative
		-Values
		-Interest
		-Networks
	-Behaviour	-Self concept
		-Influence
		-Power
		-Democratic Collaboration
	-Skills	
		- Working jointly
		-Works in silo
		-Task expertise
		-Communication

		-Cross boundary exchange
b. Processes	-Distribution of tasks	-Hierarchy specific (mandated)
		-Trust basis
		-Succession planning
		-Friendship
c. Outcomes	-Cross boundary collaboration	-Multi-discipline alliances
	-Absent leader groups	-Multi-discipline communication
		-Multi-Geographic capabilities

Notes for codes:

a. <u>Constructs of Distributed leadership</u>

- Relations
  - Talks of trust with staff
  - Empowers staff through distributing responsibility
  - Describes commitment to developing staff (Succession planning, skill development, providing opportunities for experience)

-Structure
- Authority perspective, willingness to distribute responsibilities
- Values as leader
- Interests of maintaining role security, credibility
- Networks developed to distribute responsibilities

-Behaviour

- Self- concept, how do they describe their leadership style?
- Influence within role and outside of role boundaries
- Understanding of the power of the role and how this influences others
- Collaborates democratically within role boundaries, Outside of role boundaries?

-Skills

- Personal skills to meet job requirements
- Looks to work jointly or solo

- Identifies task expertise

- Communicates –advisory/directive within role boundaries

- Confidence in cross boundary exchanges

b. Processes-
   - Distribution of tasks
     - Hierarchy specific
     - Based on trust
     - Succession planning
     - Based on close relationships like friendship

c. Outcomes-

- Cross boundary collaboration

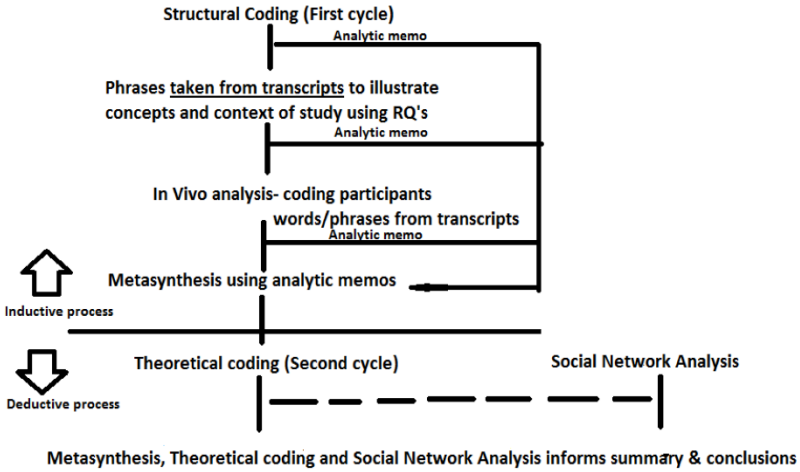
- Has developed multi-disciplinary alliances

- Undertakes multi-disciplinary communication

- Absent leader groups

- Has multi-geographic capabilities

6. Flow chart for the Coding process



7. Social Network Analysis

Coding for SNA ties:

1= Mentioned once in interview, no further data

2= Several mentions in interview, did not express high connection

3=Referred to often in interview by way of getting work done/not done

4=Referred to often in interview, comfortable relationship, of value

5= Expresses close relationship, comfortable ties, complements each other's work

Appendix L. Structural Coding Responses

RQ: In what ways do the communication pathways of the clinical directorate structure of hospitals support effective diffusion of information between executive and senior staff? **Structural code:** Effective communication pathways present	**Conceptual Phrases Noted**
"Now got a mobile phone number that I can confidently ring at executive level or drop in".	Mobile phones
"We have a pooled SMS alerts, we have a distribution list of junior doctor emails and senior doctor emails and we've also got newsletters and intranet sites".	SMS: texts
"Having a face to face is incredibly rich because you can meander around five little dot points that you're trying to cover whereas in the email you're just seeking one".	Face-to-face communication
"I could just put a meeting in his diary".	Electronic diary entry
"I'll just give them a call on their mobile phone, or I'll text so my phone first". (is this right MK? E) "Well it's quite easy because the other executives are right with me, I'm located with them and interact in the tea room and I can request a meeting at any time so yes it's very easy".	Proximity: chance encounters

RQ: How do various agents, stakeholders and actors in the directorate define effective diffusion of information between executive and senior staff; i.e., what does it look like when it's working well? **Structural code**: Important factors for successful communication	**Conceptual Phrases Noted**
"Communication is very highly dependent on personalities". "I'm more of a face-to-face person".	Communication is dependent on personalities
"We have all known each other for a long time. So, the inter unit communication is quite good".	Length of relationship
"But I don't want to bother them with things that aren't urgent".	Workload
"So, it's all about people".	Openness to communicating
"I think if communication is civil, if communication is respectful and if communication has a purpose of what's in it for all of us".	Standards in communicating

RQ: How do various agents, stakeholders and actors in the directorate define effective diffusion of information between executive and senior staff; i.e., what does it look like when it's working well? **Structural code**: Important factors for successful communication	**Conceptual Phrases Noted**
"I trust her, she understands the direction we're going, she understands the vision and we're pretty aligned".	Trust
"So, its trust in the belief that the person you're talking to knows their business and their role".	
"I don't micromanage him, I trust him".	
"It's also learning individuals, how they respond to certain directions".	Skills
"It's about them feeling worthy, it is trust, as well".	Worthiness
"I think that communication always comes down to the relationships, quite often your relationships are built around familiarity".	Understanding people Familiarity
"Trust and loyalty, trust and loyalty".	Loyalty
"You want to supply them with clear concise information, so the message is right all the way down".	Clear messages

RQ: How are communication pathways for clinical directorate decision-making currently implemented in the clinical directorate of the case study hospital? **Structural code:** Present use of communication pathways	**Conceptual Phrases Noted**
"Phone, or text, sometimes I text".	Phone, text
"If I've got a message that I've got to give out to the wards I'll go face to face".	Face-to-face
"I find our executive very accessible, so usually I will just accost her at 7 o'clock in the morning, otherwise I just make an appointment to see her".	Opportunity
"Mobile phone or drop in".	
"Got the relationships".	Relationships
"Email or a phone call or a meeting structure".	Meeting structures
"They're also invited to an array of meetings with senior people because they are the specialists tailoring the comms to them so be prepared about what you're wanting to say".	Specialist skills

RQ: How are communication pathways for clinical directorate decision-making currently implemented in the clinical directorate of the case study hospital? **Structural code:** Present use of communication pathways	**Conceptual Phrases Noted**
"I start off being nice and if I can't get hold of them, if I feel that I need to speak to them urgently and to do it over the phone, I'll leave them a polite voice mail message".	Respect
"By email or personally".	Visibility
"I'll just give them a call on their mobile phone, or I'll text so my phone first".	
"I think it's important to around communication and leadership is making sure you visit those sites as well, so you are a bit visible".	
"She's always here, so it's always just a matter of catching her when you want to talk to her about an issue".	Availability
"A lot of them start very early in the morning, I get here at 6:20 and a lot of the others are here, it's a good time to interact and bounce around ideas".	
"I wouldn't rely on a text".	Choosing communication path
"There's a bi-monthly manager meeting".	Structure

RQ: In what ways does the clinical directorate structure impact effective operation of these systems from the perspective of the staff using them? **Structural code:** Structural influences on communication pathways	**Conceptual Phrases Noted**
"It's not easy, it's difficult to find the time to get the executive because everyone is exceptionally busy so no it is not easy to find the time to talk to executives".	Time
"Email isn't a reliable form of communication any more in this day and age".	Reliability
"Our time, healthcare these days, our jobs are huge and there's huge demands, huge accountability, we're all extremely time poor".	
"It's about having influence, they might listen to me, but I've got no influence over them, so it's about whether you've got influence".	Influence
"I like to follow the system, but if it was an urgent thing I could just escalate".	Processes
"We are really just under resourced in allied health, we always have been".	Resources

RQ: In what ways does the clinical directorate structure impact effective operation of these systems from the perspective of the staff using them? **Structural code:** Structural influences on communication pathways	**Conceptual Phrases Noted**
"So, a lack of knowing who to call in another directorate might be perceived as a barrier".	Information
"It's around the complexity of the structures within healthcare".	Complexity
"So, it's a devolved professional structure so therefore if I need to communicate to that devolved professional structure, I can't go out to 500 different sites and have one-on-one conversations".	Structure
"I think there are some challenges in the sense of not everybody knowing what everybody does and understanding across the continuum".	Understanding
"Maybe we should start with the fact that there's no phone directory, at all, no staff directory".	Barriers
"I think it works in silos. I think there are a lot of silos".	
"You've got all these committees and one doesn't report to the other and the other doesn't know what the right hand's doing, what the left hand is doing, I just think it's quite fragmented".	Structure
"Some of them make it a personal habit to show how busy they are, never to answer their phone".	
"I suppose what is hard for me is all the operational is down the other end".	
"We need to make sure we have the process in place so that's probably a little bit of a challenge now".	Innovation
"And I'm still trying to work out exactly 'ok, where do I start and stop?'"	
"Geography makes it hard in this organisation".	Geography
"I think it's more time and that people are involved in so many meetings".	Clarity
"I think having that divide between medicine and nursing is just not on, it's ridiculous".	Cross-discipline collaboration

RQ: What aspects of structural arrangement specifically impact effective communication, and in what ways do staff overcome these barriers? **Structural code:** Overcoming structural barriers to communication	**Conceptual Phrases Noted**
"But if I need an urgent answer from X or Y, if I text them, they will answer, because everybody can, if I say 'urgent, please ring me now' they'll ring me".	Conventions

RQ: What aspects of structural arrangement specifically impact effective communication, and in what ways do staff overcome these barriers? **Structural code:** Overcoming structural barriers to communication	**Conceptual Phrases Noted**
"I occasionally have to shut my door and say I can't because the only time I get work done is when I get home at night at 8, 9 o'clock at night".	Management
"So, if we are not having any success horizontally, we would escalate vertically".	Enablers
"But that was my fault because I wasn't delegated reasonably sufficiently. So now I am really clear".	Reflection
"So, the plan is to develop a, it's called a CUSP. A Comprehensive Unit Safety Program".	Options
"Everyone has got their own portfolio".	Self –awareness
"I've put in committee structures".	
"And if you're already feeding information through a good governance committee structure then you can pull on that information anyway".	Communication pathways
"So, I think we just need to embed it, we need some stability".	Stability
"Once we've been able to show the worth or the value at, to say have us in the room because we actually can contribute".	
"So, then its purpose built".	Purpose built
"I think the structure now has gone through, its coming up to its fourth iteration, third iteration in the last three years, and the reason being is that we needed to not make a drastic change because there needed to be a whole lot of stability going on to get some of the foundation basics humming, then it moved into a bit more of a mature state".	Revision
"It's getting the right people around the table".	Maturation
"We've still got a long way to educate people about what that journey does actually look like".	Education
"I think we need to stop hiring 'just because', start hiring because we need a certain capability".	Recruitment
"In itself around transparency which we don't currently have today".	Transparency
"But I think sometimes if everyone sat down around the table and dealt with the problem until it was exhausted".	Collaboration
"And dealing with people generally, I think you've just got to be yourself".	

RQ: What aspects of structural arrangement specifically impact effective communication, and in what ways do staff overcome these barriers? **Structural code:** Overcoming structural barriers to communication	**Conceptual Phrases Noted**
"A couple of people have left so for me it's about how once you've formed your team; it's about getting the trust and how each other work".	Respect
"Yes, you can have a process but it's about adherence to that and again, it's about trust".	
"We're going to create a new division but have a team approach so we're going to have a tri-partied approach".	Distribution of tasks
"They'll all work as a team, but the thing is you can have again, the guidelines, but it's the fit. Having the right people in those roles".	
"You've got to be able to build relationships, so I've got to build mine, they've got to trust me but it's also about trusting each other".	Engagement
"They want to feel like there's some satisfaction and reward in their role, so I am conscious of trying to give them space".	Reward
"It's trust and engagement and how you influence to create that in the organisation".	Connecting
"I'm just going to communicate and behave the most respectful way that I can".	Professionalism
"Have a set of values that we all agree on".	Agreed values
But I think we need to bring the management group into the performance, to understand where they fit in and how they could help performance".	Global awareness
"Just for the first 12 months I am going to manage them, all of them, directly".	

Appendix M. Floor Plan