Regional Victorian Community Mental Health Nurses' Understandings and Experiences of E-Mental Health Interventions: A Multiple Case Study

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List of Abbreviations

AOD: Alcohol and Other Drug

ARIA: Accessibility Remoteness Index of Australia

CINAHL: Cumulative Index of Nursing and Allied Health Literature

GP: General Practitioner

GPS: Global Positioning Systems

MHPOD: Mental Health Podcast

SMS: Short Message Service

SSL: Secure Sockets Layer

USA: United States of America

WHO: World Health Organisation

Abstract

Background and Problem

Internationally, there is an increasing prevalence of mental ill-health across populations. To address the increasing demand for access to therapeutic interventions, e-mental health applications (which include online therapeutic applications, teleconferencing and videoconferencing) have been developed, implemented and proven to be as effective as face-to-face treatment for high prevalence mental health disorders such as depression and anxiety.

As the largest group of the mental health workforce in Australia, mental health nurses have the capacity to improve access to services through employment of e-mental health to effect positive outcomes. To realise the potential of e-mental health however, requires the workforce to have access to, and be skilled in using, available technologies as part of practice as usual.

Aim

The overall aim of this study was to understand regional community mental health nurses' experiences and understandings of e-mental health.

Methods

Multiple case study was the methodological approach adopted. Five diverse mental health services (cases) that employed mental health nurses located in regional Victoria, Australia, were included in the study. Data were collected using non-participant observation, key stakeholder semi-structured interviews and document review. Data were analysed separately and then collated from which the overall findings were extrapolated.

Findings

The findings highlighted that while participants were aware that e-mental health resources were available, utilisation of these resources was minimal. Influencing factors that impacted on mental health nurses incorporating e-mental health in their usual practice were clinical governance and leadership within the employing agencies and poor local support. The assumption that mental health nurses were familiar with, and able to use e-mental health available resources also influenced mental health nurses'

willingness and their capacity to engage with the technologies. Reported ad hoc performance of localised technology was also a disincentive for the uptake of e-mental health.

Implications and Recommendations

The use of e-mental health in mental health service provision must be seen as an integral, not an adjunct, therapy. The adoption of e-mental health as usual practice has the potential to improve access to services. However, investment in the training of staff, infrastructure and development of appropriate models of care is necessary to ensure success.

Statement of Authorship

This thesis involved coursework as a requirement of a Professional Doctorate. Except where reference is made in the texts of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award or any other degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the thesis.

The thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

All research procedures reported in the thesis were approved by the La Trobe University Ethics Committee.

Date: Candidate's Signature:

26 February 2020

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Chapter One: Introduction

The prevalence of mental illness in society is increasing, with approximately 46% of the Australian population expected to experience a mental health disorder at some stage in their lifetime (Slade et al., 2009) and this trend extends internationally. In the United States of America (USA), the Substance Abuse and Mental Health Services Administration (2013) estimated that over 21% of Americans had a mental illness in 2012. With a resulting large potential demand on mental health services (World Health Organisation, 2011), evidence suggests that traditional clinic-based service provision needs expansion to include new models of care and modes of service delivery. The increasing spread of mobile technologies is being endorsed as being an opportunity to address health priorities and being able to assist with complementing and strengthening health systems. E-mental health provides a platform with e-mental health tools and resources, including phone counselling, crisis care and web-based information. This may reduce unmet service demand by providing necessary mental health service provision and complement face-to-face service delivery to a larger percentage of individuals with psychological issues than compared to only face-to-face service provision (Aggarwal, 2012; Slade et al., 2009; World Health Organisation, 2011). Such expanded service offerings provide an opportunity to reach a larger percentage of individuals and address unmet needs.

An international report regarding mobile technologies in healthcare and the use of technologies endorses the use of e-mental health in changing landscape of society (World Health Organisation, 2011). The powerful combination of rapid advancements with technology and applications, alongside most of society having access to, and knowing how to use, technology provides the optimum time to embrace e-mental health in mental health service provision (World Health Organisation, 2011). Endorsement to use e-mental health for clients with mental health problems is supported by the Australian National Policy. The use of e-mental health interventions is seen as a legitimate mental health intervention modality (Australian Government, 2012).

The use of technology within Australian e-mental health services has been established and proven to achieve high levels of clinical effectiveness in numerous domains within e-mental health service provision. These domains include health promotion, wellness and psychoeducation, prevention and early intervention, crisis intervention and suicide prevention, treatment and mutual support with recovery services (Christensen et al., 2014). This is a significant step forward for mental health, with various initiatives which support the use of e-mental health (Australian Government, 2015; Commonwealth of

Australia, 2009), and the Australian Government initiatives outline the need for the above areas to be addressed. The possibility of enhancing equity of access to services for people with mental health problems and mental illness, reducing stigma and discrimination may also occur with the adoption of these initiatives in Australia.

E-mental health provides privacy and wide reach of service provision, which has been identified as a shortfall if traditional face-to-face service delivery was to continue to be the only modality of service provision in mental health (May et al., 2001). The Australian Department of Health and Ageing (2008) developed an initiative to overcome barriers pertaining to stigma relating to mental illness. The initiative provides evidence-based service provision through the promotion and endorsement of telephone and Internet-based services.

Furthermore, the Australian Government (2015) has demonstrated commitment to providing greater support in service provision for those with mental health problems. This can be achieved by entrenching e-mental health in future service delivery development within future strategies to ensure an integrated mental health service delivery that caters for every individual's needs rather than applying a 'one size fits all approach' (2015, p.5).

1.1 Scope of E-mental health

E-mental health constitutes a range of electronic means for providing care, and includes the use of digital platforms, digital technologies, teleconference, videoconference, webinar, smartphone, landline telephone, email, short messaging (SMS), text messaging, internet, computer, laptop, tablet, photocopier and printer.

1.2 Background to Research

The unprecedented expansion in use of technology in society has allowed increased accessibility with the possibility of personalisation in healthcare (World Health Organisation, 2011). E-mental health services provide treatment and assistance, and incorporates mobile devices such as mobile telephones and wireless devices including the use of voice, mobile telecommunications and global positioning systems (GPS), computer and online applications through real time interaction with trained clinicians (Australian Government, 2012; World Health Organisation, 2011). There is now substantial evidence indicating that e-mental health applications are very effective in providing interventions for anxiety and depression and realise comparable outcomes to face-to-face interventions (Bradford & Shneiderman, 2007; Cuijpers et al., 2010; Curry,

2007). E-mental health interventions may also be used as adjuncts to traditional mental health service provision (Preschl et al., 2012), therefore offering or utilising hybrid approaches to mental health interventions resulting in more specialised support for anxiety and other disorders and may increase the impact of face-to-face treatment (Cavanagh & Millings, 2013; Das & Faxvaag, 2014; Slade et al., 2009).

There is strong evidence indicating that some people living with mental health conditions are reluctant to access treatment for psychological distress and mental disorders because of associated stigma, resulting in an experience of isolation (Blanchard et al, 2012: Christensen et al, 2011; Cleary et al, 2008; Farrell & McKinnon, 2003; Slade et al., 2009). E-mental health interventions support client self-management by allowing clients access to e-mental health applications in their own time at home. Using an e-mental health intervention can improve access, particularly for those clients who wish to remain anonymous. It also allows for engagement at times and in places appropriate for the person living with a mental illness, therefore potentially reducing these identified barriers to clients seeking help (Blanchard et al, 2012; Cleary et al, 2008). Many e-mental health interventions and services provide 24-hour access, allowing users to obtain immediate support whenever and wherever it is required (Christenson et al., 2006; Curry, 2007; Klein et al., 2011). E-mental health allows delivery of support while clients are on waiting lists for treatment or can be routinely delivered as an initial step before commencing face-to-face care. Immediate treatment provided by e-mental health interventions readily enters the individual's everyday world by providing cues that support functional coping and reinforces what has already been learned in face-to-face sessions (Blanchard et al., 2012; Orlowski et al., 2016a; Rickwood, 2012).

To date, there has been extensive research evaluating effectiveness of e-mental health interventions for individuals with psychological issues (Al-Asadi et al., 2014: Andrews et al., 2010; Curry, 2007: Geraedts et al., 2013: Montero-Marin, 2015: Riper et al., 2010; van Straten et al., 2008). However, there is a dearth of research examining factors that influence the implementation of e-mental health interventions by mental health practitioners. The Australian Government (2012) has committed to providing mental health reform and was recognised as a leader in treating and caring for people with mental illness. The E-Mental Health Strategy (Australian Department of Health and Ageing, 2008) identifies the crucial importance of enlisting support of mental health practitioners in the uptake of e-Mental Health interventions. The Australian Government (2012) criteria for e-mental health investments are: access, quality and integration. Access to services refers to improving the ability for people who need mental health service to find services, regardless of where they live. Quality refers to investing in services with proven evidence of delivering clinically appropriate and quality care which

people can trust. Integration refers to the offering of treatment and support both on and offline to empower people. As a result, the Australian E-Mental Health Strategy provided an opportunity to promote e-mental health services amongst the community, families and the broader health workforce (Australian Department of Health, 2012).

1.3   Impetus for Study

My professional knowledge and experience span more than 25 years as a mental health nurse in regional and rural locations. The workplaces I have worked in throughout my career have been characterised by services that have limited mental health resources to support my practice, including access to other health care professionals. I have utilised e-mental health in my practice. E-mental health has allowed me to provide care for greater numbers of patients in a timelier manner than would have been possible if I had used only traditional face-to-face approaches to mental health care. I have knowledge and expertise in providing face-to-face, email, videoconferencing and SMS modalities of service delivery with individuals with psychological issues. This knowledge assisted with developing understandings of participants' lived experiences of providing mental health, both face- to-face and using e-mental health. However, it was evident that little was known about the experiences of mental health nurses' understandings and experiences of using e- mental health interventions. Hence, this study sought to fill that void.

1.4   Research Aim

The overall aim of this study was to capture an understanding of regional community mental health nurses' experiences and understandings of e-mental health.

1.5   Research Questions

The research questions that guided the study were:

1. To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?
2. What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?
3. What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?
4. What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

1.6   Research Design

1.6.1   Constructivist Research Paradigm

A paradigm is a human construction that can be defined as a set of beliefs that shapes actions that guide one's enquiry about a natural phenomenon (Polit & Beck, 2012). A constructivist paradigm represents learning as a process by which people build an understanding of their reality through the experiences of functioning in the world (Newby, 2014). A case study approach can be examined in a constructivist paradigm (Stake, 1995; Merriam, 1998). Stake's (1995) case study approach explicitly seeks out the multiple perspectives of those involved so was appropriate for answering the research questions. Merriam (1998) case study approach uses a constructivist approach that aligns with Stake. However Merriam's (1998), approach differs to Stake's (1995) as the final product of study is 'another interpretation by the researcher of others' views filtered through his or her own' (p. 22).

This qualitative research study employed multiple case study design to investigate the research questions across five different services. Individual interviews were conducted with community mental health nurses employed in regional Victoria, across five public mental health services. Data were collected through several methods frequently used in case study research including interviews, observation and document analysis (Simons, 2009; Stake, 1995). The full details of the research design are discussed in Chapter 3.

1.7   Significance of the Study

The overall significance of this multiple case study is the contribution it makes to knowledge about regional community mental health nurses' experiences and understandings of using e-mental health. This study assists with establishing what are current facilitators and barriers to the routine use of e-mental health in clinical practice. As outlined in Chapter Two, a significant gap exists in the literature about community mental health nurses and e-mental health. There is literature reviewing the efficacy of e-mental health applications, however the use and uptake by community mental health nurses lacks exploration and literature which findings can directly inform.

1.8   Structure of the Thesis

This chapter provided background information pertaining to this thesis and has also overviewed the aims, research questions, research design, and the significance of this

study. Chapter Two presents a review of the relevant literature and identifies the paucity of literature and the gap that exists and warrants this study. Chapter Three details the multiple case study research design – the constructivist paradigm and multiple case study design. The research methods are then detailed including the case and participant selection, data collection methods, timeline, data analysis, and ethical considerations. Chapter Four presents an overview of the sites. Chapter Five presents the case by case analysis of the data from each of the five cases. The data in the chapter are presented in five individual case studies. Chapter Six focuses on the cross-case analysis. Chapter Seven provides a discussion of the findings. Chapter Eight discusses the study limitations and highlights directions for further research.

1.9   Chapter Summary

This chapter has introduced the aim of the study, namely to investigate regional community mental health nurses' experiences and understandings of e-mental health. It has provided a background overview of the study and introduced the aims, research questions, research design, and the significance of this study. Chapter Two presents a review of the relevant literature. In doing so, it identifies a paucity of current knowledge in the area and articulates the gap that exists, thus warranting this study.

Chapter Two: Literature Review

2.1   Introduction

The previous chapter introduced the purpose of this research and outlined the background information pertaining to this thesis and how the study was conducted. This chapter presents the literature review strategy undertaken to identify relevant literature and identifies the insufficient literature and knowledge gap which exists and supports this study.

2.2   Mental health professionals and the application of e-mental health interventions

There has been extensive research evaluating the effectiveness of e-mental health interventions for individuals with psychological issues (Al-Asadi et al., 2014; Andrews et al., 2010; Curry, 2007; Geraedts et al., 2013; Montero-Marin et al., 2015; Riper et al., 2010; van Straten et al., 2008). However, factors influencing the implementation and uptake of e-mental health interventions by mental health professionals are less well understood, despite development of Australian national initiatives endorsing these interventions (Australian Government, 2012; 2015). It has been identified that e-mental health interventions are fundamental in the Australian public mental health system. This is evident in the response to transform Commonwealth mental health funding and leadership to achieve a more integrated and sustainable mental health system for the Australian community. E-mental health interventions provide the opportunity for innovative opportunities to communicate to the broader population groups who would ordinarily be geographically isolated and socially isolated as a result of stigma and self-stigma which is often experienced with mental health disorders (Australian Government, 2010; 2015; Klein et al., 2014).

The use of technology within the healthcare setting is on the increase, as technology potentially provides the opportunity to increase, broaden and expediate patient care delivery (Australian Government, 2012). For the purpose of a review of the existing literature, various search terms were used to elicit studies regarding mental health; alternative terms of mental illness and psychological problems were also used. To extract studies regarding e-mental health, alternative search terms were used including, teleconferenc*, videoconferenc*, webinar, smartphone, email, Internet and SMS or text. To identify studies regarding mental health professionals, the term 'nurse' was also included.

2.3   Literature Search Strategy

A search of national and international literature was undertaken to identify literature pertaining to the use of e-mental health interventions by mental health professionals. The literature search strategy involved electronic of journals and published literature in the Cumulative Index of Nursing and Allied Health Literature (CINAHL), and OVID. These are databases known for nursing-related research and PsychINFO database was used as it is a known database that publishes in the area of psychological aspects of healthcare.

After an initial search, it became clear that there was limited published information or research regarding the use of e-mental health interventions by mental health professionals. Rather, there was literature pertaining to evaluating the effectiveness of e-mental health applications for clinical treatment. The various search terms were used in combinations to ensure all relevant literature was identified. The literature was appraised and reviewed against the following criteria before including them in the literature review:

- o   Research-based studies
- o   Full journal article had to be accessible online through La Trobe University or affiliated university libraries
- o   Written in English language

To ensure the search was inclusive of various terms which could be used to describe mental health issues, the first search term included the key terms: psychological problems, mental illness and mental health problems. To assist with ensuring the search was inclusive of mental health treatment, the second search included the key terms: traditional interventions, traditional treatment, e-mental health, digital platforms, digital technology and face-to-face treatment. To ensure the search strategy kept focused on mental health professionals and in particular, nurses, the key terms used for the third search were: mental health professional, mental health professionals and nurse. The results of searches one, two and three were then consolidated. The next search was inclusive of various aspects which incorporate e-mental health, as such the key terms used were: teleconference, videoconference, webinar, smartphone, email, internet, SMS and text. The final search included the results of all of the above searches combined to provide the eventual result of 160 articles to be screened for the literature review. (See Appendix: A Literature Review Search Strategy; Appendix B: PRISMA chart).

As some governments have developed related visionary documents, a number of government health web sites were also reviewed which endorses the use of e-mental health to enhance and increase service delivery. These web sites included: American Substance Abuse and Mental Health Services Administration, Australian Bureau of Statistics, Australian Government, Australian Department of Health and Ageing, Australian Department Health and Human Services, Australian Department of Health and Human Services Victoria and the World Health Organisation (WHO). The use of technology within the healthcare setting is on the increase, as technology potentially provides the opportunity to increase, broaden and expediate patient care (Australian Government, 2012). For the purpose of this review, various search terms were used to elicit studies regarding mental health, so alternative terms of mental illness and psychological problems were also used. To extract studies regarding e-mental health, alternative search terms were used including: teleconferenc*, videoconferenc*, webinar, smartphone, email, Internet and SMS or text. To identify studies regarding mental health professionals, the term 'nurse' was also searched.

2.3.1   Contemporary Technology Available to Support e-mental health interventions

E-mental health interventions have been proven to be effective adjuncts to traditional mental health service provision, providing greater or more specialised support for specific issues, such as high prevalence anxiety disorders and increasing the benefit of face-to-face treatment (Klein et al., 2010). The established benefits of e-mental health interventions involve clients being empowered and access information which complements face-to- face treatment as required (Cavanagh & Millings, 2013; Slade et al., 2009). It is reported by mental health professionals and clients that e-mental health interventions can be as effective as face-to-face treatment for high prevalence disorders. Online e-mental health is a relatively contemporary treatment modality gaining momentum, which has the potential to revolutionise mental health service provision (Australian Government, 2010; Klein et al., 2014).

E-mental health interventions are being supported by national and international policy and research which have established clinical efficiency as a treatment modality for clients with mental health concerns. The World Health Organisation (2011) clearly articulates the strategy required to endorse and support the use of e-mental health for mental health clinical treatment. Research by Montero-Marin et al. (2015) conducted in Spain found that mental health professionals and individuals in Europe with psychological issues identified similar benefits when either e-mental health interventions or face-to-face services were used. The benefits were acceptance of either treatment modality, and the

possibility of advantages of flexibility with e-mental health interventions and established mental health improvement.

E-mental health also allows delivery of support while individuals are on waiting lists for treatment. E-mental health can be routinely delivered as an initial step before receipt of face-to-face care. Immediate treatment provided by e-mental health interventions readily enters the individual's everyday world, cues functional coping and reinforces what has already been learned in face-to-face sessions (Blanchard et al., 2012; Cleary et al., 2008; Klein et al., 2011). An Australian preliminary study of the effectiveness of general practitioner supported delivery of Internet-based cognitive behaviour therapy for patients with depression over a three-year timeframe, concluded that there were additional benefits of significant symptom reduction with therapist supported Internet-based therapy for clients with psychological distress and mood impairment (Hickie et al., 2010). Similarly, research conducted by Mackinnon et al. (2008) in Australia established that online cognitive behavioural therapy for depression provided similar client outcomes to face-to- face treatment. Whilst different interventions were provided, two groups received online interventions, and the third group received targeted questions regarding their lifestyle in face-to-face meeting. Findings included significant benefits with reduction in symptom severity for patients in all intervention groups, therefore indicating comparable outcomes between face-to-face and online treatment.

Technology plays a crucial role in e-mental health interventions (Blanchard et al., 2012; Burns et al., 2009). There is a large body of research supporting the effectiveness of various electronic modalities including web-based programs, email, chat, audio-conference, SMS and videoconference for e-mental health interventions, particularly for high prevalence mental health disorders of depression and anxiety (Bradford et al., 2007; Cuijpers et al., 2010; Andrews et al., 2010; Cook & Doyle, 2002; Eysenbach et al., 2004; Glasgow, 2007). A literature review by Nhavato and Gronlund (2014) that explored the use of mobile technologies and geographic information in health care identified challenges regarding infrastructure pertaining to integrating technology to e-mental health therapy. Concerns such as current technology not meeting clinical practice infrastructure, and practitioners' beliefs that technology does not achieve current clinical expectations were identified. Privacy issues and concerns regarding other people accessing an individual's program were identified but were overcome with contemporary technology which incorporated secure sockets layer (SSL) and encryption technologies (Midkiff & Wyatt, 2008), including the provision for automatic or password protection access (Fan & Yan, 2010).

Subsequent research by White et al. (2014) in the United States with a sample of health professionals focused on engaging mental health professionals and individuals with psychological issues in co-design of e-mental health technologies. The study sought to overcome issues, such as design flaws, which included previous technology platforms not accounting for various treatment methods and various clinical practices. The intervention of overcoming information technology platform barriers, by including mental health professionals in the design to address above-mentioned areas of concern, did not increase the uptake of e-mental health therapy. This was considered attributable to mental health professionals not being involved in the early stages of design development.

Mental health professionals and people with psychological issues have reported being concerned about security and confidentiality in relation to e-mental health (Cleary et al., 2008; Bennett et al., 2010; Blanchard et al., 2012; May et al., 2001). There is however, extensive literature which identifies strategies and recommendations to overcome these concerns. Strategies include only storing minimum levels of information required (Forjuoh et al., 2014), engaging information technology experts with the knowledge and expertise to develop and manage software components (Bennett et al., 2010) and professionals trained in appropriate usage and storage of software systems (Curry, 2007).

2.3.2 Evidence about client outcomes from E-mental health interventions

Extensive research has identified that traditional face-to-face mental health service delivery is unable to cater for the increasing volume and myriad of clinical needs of individuals experiencing psychological issues. The prevalence of mental health concerns is increasing within society, both nationally and internationally, however service delivery resources are not being increased sufficiently to meet the increased demand for mental health clinical treatment (Abbott et al., 2009; Andrews et al., 2010; Batterham et al., 2015; Blanchard et al., 2012; Burns et al., 2009; Cook & Doyle, 2002; Eysenbach et al., 2004; Glasgow, 2007; Gun et al., 2011; Maheu & Gordon, 2000; May et al., 2001; Rickwood et al., 2012). The use of e-mental health affords the opportunity for a greater number of persons with psychological problems to be managed in a time efficient manner, with services providing 24-hour access (Christensen et al., 2006; Curry, 2007; Klein et al., 2011).

There is evidence indicating that web-based interventions for anxiety and depression result in comparable outcomes to face-to-face interventions, and evidence for efficacy of programs for other problems is rapidly growing (Bradford & Shneiderman, 2007; Cuijpers

et al., 2010; Curry, 2007). Blanchard et al. (2012) identified that Australian youth mental health workers acknowledged e-mental health interventions could overcome some of the challenges, such as stigma, people experienced as the therapeutic modality provided for anonymity and privacy. Furthermore, e-mental health interventions may also reduce social and economic marginalisation that some individuals with psychological problems experience, as the financial burden of e-mental health treatments is likely to be less than conventional interventions (Australian Government, 2012; Klein et al., 2014).

In their report, Klein et al. (2014) established that online interventions may be most useful as adjunct treatments with face-to-face therapeutic modalities. Klein et al. (2014) identified that the clinical effectiveness to be gained with the use of e-mental health interventions included: health and wellness promotion, psycho-education, prevention and early intervention, crisis intervention and suicide prevention, e-therapies (treatment), and mutual support and recovery services. The clinical effectiveness which could be gained was also supported with the high usage of e-mental health in Australia due to the popularity, accessibility and acceptance of technology. The cost effectiveness and being cheaper to provide than usual face-to-face clinical mental health service delivery was also reported by Klein et al. (2014) and internationally by Hedman et al. (2012) as a treatment option. These findings align with earlier research undertaken by Wangberg et al. (2007) who surveyed 1,003 psychologists regarding their attitudes towards e-therapy using email and SMS with their clients. Data collection was limited to email and SMS as anecdotal reports suggested this was the prevalent mode of communication in everyday Norwegian life. Data showed that 64% believed e-mental health interventions would only be effective as supplements to face-to-face treatment and 3% believed e-communication was unacceptable. Whilst 86% reported that email had been most effective in communicating practical matters, 53% reported that email had been practical in addressing clinical issues. Overall, the study findings indicated that the majority of respondents were in favour of e-therapy via email and SMS (Wangberg et al., 2007). Consideration of these findings must include that e-therapy only included email and SMS, when in more recent years e-therapy has included many more dimensions including webinars, teleconferencing, and web-based programs (Klein et al., 2014).

A meta-analysis examining depression and anxiety undertaken by Andrews et al. (2010), established better client outcomes with an improvement with their mental health, when clinical treatment was provided with therapist support, rather than clinical treatment which was provided exclusively by e-mental health clinical treatment.
Adherence to treatment was satisfactory, and a majority of studies provided client follow-up data post-treatment with no evidence of relapse for clients. Client outcomes were improved and this is further reiterated by other by other studies. A meta-analysis of 12

randomised controlled trials of Internet-based cognitive behavioural therapy for depression and anxiety conducted by Spek et al. (2007) identified a correlation between the amount of therapist support and improved client outcomes. The increased level of therapist support resulted in improved mental health clinical outcomes for the clients. This occurred regardless of the type of illness the client had. Consequently, these findings reiterate the benefits to be gained from using e-mental health interventions as an adjunct treatment with face-to-face treatment for people with mental health issues.

Research by Stjernsward and Hansson (2014) in Sweden highlighted that stigma, self-stigma and isolation prevented people from accessing mental health services. They found however, if e-mental health modalities were available, these barriers were reduced providing an option for accessing mental health services that had not traditionally been available. Perceived stigma in the study related to being treated unfairly in personal relationships, in the workplace and by people who knew the individual had a mental illness. Self-stigma in this study related to an individual choosing to conceal their illness, and not engaging in close relationships because of their mental illness and the perception their mental illness negatively impacted on their personal relationships. Findings from this study indicated that using web-based tools to engage in a forum with others and to share their mental health experience with others allowed for increased trust and respect. The trust and respect derived from the anonymity and opportunity to participate in treatment at their own convenience in the privacy of their own homes was valuable. The barriers of stigma and self-stigma that clients experienced in accessing mental health services were overcome. These were primarily identified as being due to the safety and privacy offered by the program which participants rated as being very important. Reduction in stigma and self-stigma is reiterated by a systematic literature review conducted by Musiat et al. (2014a) of the collateral outcomes in e-mental health in relation to the evidence of added benefits of computerised cognitive behaviour interventions for mental health. The review did not identify any study which established if computerised cognitive behaviour therapy was less stigmatising than other forms of treatment. This gives rise to the question of whether participants in studies who identify reduction in stigma with e-mental health interventions also find a reduction in stigma if they were engaged in other mental health interventions such as face-to-face treatment. Many researchers have commented that the provision of privacy achieved through the use of online therapies has resulted in clients being more willing to disclose information of a personal nature (Burns et al., 2009; Elison et al., 2014; Furber et al., 2011; Musiat et al., 2014b). A number of e-mental health programs and services also provide the opportunity for 24-hour access, allowing users to obtain immediate support whenever and wherever it is required (Christenson et al., 2006; Curry, 2007; Klein et al., 2011).

Treatment for psychological distress and mental disorders tends to be associated with perceived stigma, self-stigma and isolation which often discourages face-to-face treatment seeking, and is likely to be a major contributor to the sub-optimal rate of help-seeking for mental disorders (Slade et al., 2009). The focus of e-mental health interventions is on supporting self-management and improving access to services. To ensure access for some people, providing a service that enables anonymity to be maintained is necessary. An explorative study conducted by Stjernsward and Hansson (2014) assessing the caregiver burden of adult individuals with mental illness in relation to stigma and discrimination, was conducted in Sweden. Findings highlighted the stigma of being shunned by others who knew about the mental illness in their relationships was reduced by participation in online forums.

Participants felt less alone and were more open to discussing their situation because they were being validated as individuals and their experiences were recognised.

An Australian comparative study conducted by Crisp and Griffiths (2014) explored the characteristics between individuals who were interested in engaging in online interventions and individuals who were unwilling to engage in online interventions for their mental health. There were 35,000 potential participants aged 18-65 years, randomly selected from the Australian Electoral Roll. Whilst stigma was the only significant predictor of participating in online treatment, self-stigma with the embarrassment associated with depression, and preference to deal with problems by oneself and not discuss problems was cited by 12% of the sample. The private nature of engagement which did not require patients to physically attend a clinic, along with perceptions of being stigmatised, may have been motivators to participate in online treatment. Stigma may also be a deterrent for an individual to engage with online interventions due to potentially increased feelings of social vulnerabilities and isolation (Crisp & Griffiths, 2014).

A study conducted in Australia by Burns et al. (2009) examined the role of the Internet in reducing stigma in mental health with clients who had mental health problems. A total of 87% (n=904) identified as repeat participants with e-mental health interventions, which for this study involved the use of an Australian Internet-based service. The participants in the study reported reasons for choosing e-mental health interventions. These reasons were related to trusting the intervention, benefiting from using the intervention, and enhanced knowledge about mental health issues and increased help-seeking. In the study, 85% of participants reported trust and confidence with the technological platform. Voluntary participation was a potential limitation of the study, as was gender bias in the

sample that was 85% females. This may have impacted on generalisability of findings, since females are more likely to seek help than males, therefore raising the possibility that males may have different experiences (Slade et al., 2009).

A Canadian study by Cook and Doyle (2002) involved a comparative study of people who engaged in face-to-face treatment and those who engaged in online therapy. One hundred therapists were contacted to recruit participants for the online therapy sample which included; email, chat, and audio-conference. Participants had varying presenting problems of depression, anxiety, relationship issues, family, school or bereavement issues and were self-selected. They were primarily female, highly educated with all socio-economic statuses represented. Themes of collaboration with the therapist in therapy, setting and achieving mutual goals between therapist and participant, and bonds of empathy were assessed. Major findings of the study were viability by the online therapy participants explicitly stating the effectiveness of online therapy, closely followed by five participants identifying disinhibition in detail. Disinhibition was identified as referring to the freedom for participants to express themselves online without judgement or fear of judgement. Overwhelmingly, it was established that online therapy was a positive experience and provided some unique advantages compared to face-to-face counselling. The unique benefits identified included the opportunity for honesty and frankness whilst being a reduced financial cost and easier accessibility for clients. Caution is necessary in accepting the findings as the sample was self-selected and the majority were female, group likely to seek help compared to males.

A meta-analysis conducted by Griffiths et al. (2010) examining the efficacy of Internet support groups for clients with depression and anxiety, indicated that long-term online peer-to-peer support group may also be an effective intervention for reducing depressive symptoms. There was evidence that therapist input enhanced efficacy and compliance with treatment. Limitations of the study were the low uptake resulting in a sample of 478 from a potential 14,487 being eligible, and high attrition rates. The high attrition rates, in turn, may have impacted on research findings. The participants may have withdrawn from the study because their symptoms had reduced and treatment was no longer required, or they did not like the treatment and its associated modality resulting in disengagement.

In another study, Casey et al. (2013), used an online survey of 238 Australian respondents over 17 years of age to determine the perceived helpfulness of online mental health services and the likelihood that respondents would use such resources in the future. Findings established that individuals were likely to use online mental health services in future, but unsure about the perceived benefit of the service. However,

findings also identified that individuals had a lower level of endorsement of perceived helpfulness of online mental health treatment and likelihood of future use of such programs when there was no therapist involved. Hence, therapist involvement increased individuals' perceptions of potential benefits of online mental health treatment.

2.3.3 Attitudes of healthcare providers to e-mental health (including policy, resource allocation and clinician attitude and utilisation pattern

Studies regarding therapists engaging with e-mental health overall have been positive, with studies showing positive response by therapists engaging with e-mental health argued to be due to the therapists embracing the modality of e-mental health (Blanchard et al., 2012, Christensen et al., 2011, Cleary et al., 2008, Orlowski et al., 2016a; 2016b). Willingness to embrace e-mental health evolved from acknowledgement that there was at times the challenge to engage with individuals with psychological issues because they were reluctant to seek help, or had difficulty in accessing services (Elison et al., 2014; Eysenbach et al., 2004; Forjuoh et al., 2014). Despite some controversy about e-mental health being used as a stand-alone service, there is support by mental health practitioners for e-mental health interventions being used to complement face-to-face service delivery. This has been established with mental health practitioners in a study conducted by Furber et al. (2011). That study explored the effect of using mobile telephones to communicate with clients in relation to scheduling appointments and enhancing the prospect of clients attending scheduled appointments. Mobile telephones were also used in conjunction with providing an opportunity for mental health practitioners to maintain contact with clients between face-to-face clinical treatment. The outcome was positive with an increased compliance with clients being more likely to attend scheduled appointments.

An Australian study by Orlowski et al. (2016a) explored youth mental health services staff and their perspectives on e-mental health service delivery with their clients. The study found that staff were supportive of the use of e-mental health service delivery to engage with their clients, however it was not standard practice. The results indicated overall resistance for e-mental health being used as standard practice related to staff concerns of a preference for direct face-to-face interactions. These findings were consistent with other studies in the field (Reynolds et al., 2015; Blanchard et al., 2012). It was established staff preference for face-to-face interaction was a result of believing that an accurate assessment and positive therapeutic relationship could only be achieved through face-to-face interactions.

Another Australian study by Blanchard et al. (2012), undertaken to understand the youth mental health workforce's attitudes and behaviours concerning e-mental health, established that staff were most concerned about clients' safety. The safety concerns related to whether clients accessed inappropriate sources, whilst the benefit of allowing staff to have a greater impact on clients by early identification and treatment of clients was a perceived benefit by half of the sample of mental health staff. Other perceived benefits of e-mental health identified were the ability to increase client engagement and assist in building credibility by using youth clients preferred medium of communication. E-mental health facilitated the development of rapport between the mental health clinicians and clients with the use of technology. Another likelihood of clients being empowered by the use of e-mental health was seen to be a benefit with the use of e-mental health in clinical treatment. This also allowed clients to have the opportunity to have ownership of treatment and feel empowered.

A six-month study in the United Kingdom evaluating telepsychiatry use in the community mental health setting by professionals, conducted by May et al. (2001), highlighted that the participants who were various mental health professionals, including psychiatrists, nurses and other health professionals, identified that they had to adjust their behaviour to accommodate the requirements of telepsychiatry within their practice. The professionals liaised with their clients to establish expectations given the limitation on behaviours during encounters. Some participants identified challenges which primarily related to the lack of presence of both the client and psychiatrist, which the psychiatrists felt made the professional encounters initially feel impersonal. Psychiatrists modified their professional behaviour with education regarding the process of telepsychiatry to assist with reducing communication barriers and disconnect with the therapeutic relationship. As a result, there was a focus on the verbal interaction and how to ensure it captured the client's current clinical presentation. The education of clients regarding the application of e-mental health was due to the psychiatrists identifying perceived benefits outweighed the barriers to accommodate the expectations of using telepsychiatry. Furthermore, findings identified a level of resistance by participants to engage in telepsychiatry, as they recognised they would need to modify their professional behaviour to accommodate telepsychiatry into routine clinical practice. The age of this research is a consideration, as visual clarity in telemedicine has significantly improved over the last two decades, particularly with the technology associated with telepsychiatry. May et al. (2001) also identified that lack of knowledge in relation to use of telepsychiatry by professional staff may have contributed to staff reluctance in relation to the uptake of telepsychiatry in their clinical practice.

Research by Mora et al. (2008) and Wangberg et al. (2007) demonstrated that education and training regarding various technological platforms for e-mental health did not necessarily result in change of clinical practice for psychologists and an increased uptake in technological interventions in mental health. The New York psychologist sample in the study by Mora et al. (2018) expressed concern regarding limitations of using online therapies, particularly in relation to restrictions with accessing the client's physical cues and lack of legal guidelines for using online technology in clinical practice. As a result, they lacked interest in education regarding use of online therapies and did not endorse the use of email or SMS. The study conducted by Wangberg et al. (2007) also included psychologists in Norway who, despite acknowledging the potential benefits of accessing clients in rural areas and clients who had difficulty with face-to-face treatment, would not endorse the use of e-therapy.

A mixed methods research study conducted in Australia by Blanchard et al. (2012) investigated the role of technology in young people's (12-25 years of age), and the youth workforce's attitudes to using technology to improve youth mental health, and how the workforce was employing technology into their clinical practice for young persons (aged 12-25 years) with mental health issues. Data collection methods adopted included an online questionnaire completed by 233 clinical staff from multidisciplinary backgrounds, five organisational audits of organisations providing mental health care to client's aged 12-25 years of age and nine expert opinion leaders of the services. This research also identified that participants believed the technology available in the workplace in the form of computers could realise a reduction in barriers to accessing treatment as the young people were more comfortable disclosing personal or sensitive issues online. They saw that computers could be used for electronic clinical files, email, access to external resources, training information, policy and procedures, electronic diary and recording clinical activity statistics. The study found that health professionals' credibility with the youth was acknowledged because they communicated through their preferred medium. The researchers concluded that professionals believed technology empowered young people living with mental illness who were involved in the study to be responsible and informed of their treatment (Blanchard et al., 2012).

E-mental health interventions provide valuable alternatives that can limit barriers that people need to access services, such as geographic distances from services and reducing perceptions of stigmatisation, as a result of visibility of accessing services (Australian Government, 2012; Slade et al., 2009). Slade et al. (2009) and Wangberg et al. (2007) note that mental health professionals lacked knowledge regarding treatment programs and potential benefits (Batterham et al., 2015; Waller & Gilbody, 2009). Literature indicates that there appears to be a lack of knowledge by psychologists

regarding the efficacy and utility of e-mental health in general, and how to evaluate specific programs or resources (Klein et al., 2010). Further research establishing knowledge and awareness of other disciplines employed in mental health service delivery (such as social workers and occupational therapists) and their knowledge and understanding of e-mental health interventions is imperative. While individuals with psychological issues may require guidance and encouragement by mental health professionals to identify and access appropriate online resources (McHugo et al., 2009; Montero-Marin et al., 2015), mental health professionals may require education and training to support the uptake of e-mental health interventions in their clinical practice (Blanchard et al, 2012).

The two studies undertaken by Mora et al. (2008) in New York and Wangberg et al. (2007) in Norway involved registered psychologists describing and explaining their attitudes and recommendations for e-mental Health interventions. Despite online treatment being more popular in Norway than in the U.S.A., findings from their respective research were consistent. It was identified that professionals were cautious and ambivalent regarding use of e-mental health interventions in their practice. However, they did acknowledge that e-mental health interventions may assist delivery of treatment for individuals with psychological issues in rural areas and patients with disabilities. Therefore, given that research occurred in two different continents and findings were similar, it is reasonable to conclude that results may be indicative of psychologists' attitudes internationally.

Two papers (Australian Government, 2012; White et al., 2014) identified mental health professionals' concerns regarding ease of access to e-mental health interventions. Challenges related to the possibility of inappropriate and excessive contact being made with the mental health professional from a person with psychological issues if staff were available 24 hours a day and seven days a week. However, ease of access may be of benefit to mental health professionals, allowing staff to respond to people with psychological issues in a timely manner which is convenient and appropriate for the client and the staff member. If the individual with psychological issues is identified as being in crisis, alerts are built into various programs that address these issues by prompting the patient to seek further urgent assistance (Australian Government, 2012; and White et al., 2014).

The study conducted by Mora et al. (2008) in New York of psychologists used a survey mail-out to evaluate their endorsement of Internet-based treatment modalities including email, individual chat, group chat and videoconferencing as a treatment modality. The psychologists raised concerns about health professionals not being able to assess verbal

cues and difficulty in establishing a working relationship with the person with psychological problems. Limitations of this research relate to its age and development over recent years of technology and e-mental health interventions that has occurred. Participants in their study were unaware of the availability and efficacy of e-mental health interventions. The participants were also not interested in receiving education to inform their practice, indicating unwillingness to change their current clinical practice. The study established that psycho-dynamically orientated psychologists were less likely to endorse online therapy. This may be attributable to the therapy relying heavily on face-to-face physical interaction between therapist and the person, whereas cognitively-orientated psychologists were more likely to endorse online therapy. Cognitive therapy relies on the therapist challenging the person's thought processes which can include face-to-face and/or the person writing their thoughts which can be relevant to online therapy (Mora et al., 2008). The response rate of the study was relatively low at 31% which may be indicative of the sample being unwilling to engage in e-therapy and associated research, and reflect the Norwegian guidelines prohibiting use of email to discuss sensitive health care information at the time of publication (Mora et al., 2008).

Other research (Dansky et al., 2006) found that some mental health professionals were concerned by lack of physical presence with e-mental health modalities, which is crucial for the therapeutic relationship to develop and be maintained. Consideration must be given to the age of this research as in more recent times, webinars and e-mental health interventions have allowed for concerns of body language to be overcome and addressed with significant improvements with audio and visual clarity. The lack of personal physical contact may be a concern for some, particularly in relation to the therapeutic relationship in the application of e-mental health. The privacy and anonymity which e-mental health encourages enables frankness of communication and expressions of information a patient may normally withhold (Bennett et al., 2010; Blanchard et al., 2012). These factors are significant within the therapeutic relationship and treatment regime, particularly in relation to stigma which is often the reason people choose not to seek or engage in treatment (Emmelkamp et al., 2014). Hence, e-mental health improves possible patient outcomes as a result of overcoming of physical presence and stigma.

Despite research evaluating the effectiveness of e-mental health resources finding such interventions to be as effective as face-to-face modalities (Cavanagh & Millings, 2013; Elison et al., 2014; Australian Government, 2012), there is reluctance by some individuals with psychological issues to engage in e-mental health therapy. Extensive research has identified that consumers who are not familiar with, or lack confidence using, technology and those who are not fluent English speakers may not engage in e-mental health interventions due to acuity of illness, stigma, self-stigma (Rickwood, 2012;

Tait et al., 2014). Research has established that the privacy, confidentiality and ease of access to technology afforded with e-mental health interventions can overcome these barriers associated with clients' perceptions of anonymity (Burns et al., 2009; Furber et al., 2011). E-mental health interventions overcome barriers of geography and stigma which impose on access to treatment for some individuals with psychological issues (Slade et al., 2009; Wangberg et al., 2007). It is also noted that individuals with psychological issues have little knowledge of what and where to look for resources online in relation to their mental health needs (Batterham et al., 2015; Waller & Gilbody, 2009). A literature review by Cleary et al. (2008) explored the advantages and disadvantages of e-technology in healthcare and mental health research. They discussed that disadvantages included the possibility of e-mental health interventions further contributing to isolation for the client if they did not have regular access to quality technology. Advantages were possible reduction in waiting time for individuals with psychological issues if a greater number of people could be seen and multiple patients receiving treatment simultaneously through e-mental health interventions.

Initial concerns of technology interfering with the treatment process to the detriment of the therapeutic relationship were soon overcome when health care professionals acknowledged benefits to be gained from e-mental health interventions. This was particularly in relation to the ability to obtain real-time monitoring of the patient and more accurate contemporaneous self-report (White et al., 2014). Accurate self-reporting assist in increased accuracy in diagnosis, and inevitably treatment and management, to assist the individual with their recovery. Adherence to treatment is potentially increased with e-mental health interventions that have the alerts and prompts to remind patients to participate in and complete programs (White et al., 2014). This assists with improved outcomes for patients via empowerment, nurturing and encouragement of self-management (Wetterlin et al., 2014). The instant recording and storage of data was also noted in studies by Blanchard et al. (2012); Riper et al. (2010) and White et al. (2014) and the ability to engage with the patient at a convenient time (Perle et al., 2011) as factors considered to be most beneficial for mental health professionals in reducing associated clinical workload.

Computer access and competency were strong indicators of mental health professionals' willingness to use e-mental health interventions in clinical practice in the study by Becker and Jensen-Doss (2013). The study reported the health professionals reported having access to atleast one computer in the workplace, however mental health professionals in private practice were less likely to have computer practice. One quarter of the sample reported not having high speed Internet access that is a requisite for some of e-mental health interventions. Despite these challenges, overall

participants were neutral in their attitudes towards efficacy of e-mental health interventions and their ability to implement e-mental health interventions into their clinical practice. The findings suggest that mental health professionals may be receptive to incorporating e-mental health interventions into their clinical practice. Australian research by Gun et al. (2011), who surveyed non-health professionals, health professionals and lay people, found participants were positive to the use of e-mental health interventions particularly if they had previous exposure to e-mental health treatment, and if they had good access to technology and interest in computerised interventions.

Blanchard et al.'s (2012) Australian study regarding youth mental health professionals' attitudes to technology in mental health treatment found that 72.5% of their sample of 223 youth mental health professionals reported having access to computers at work with none identifying that using computers to engage with patients was not a priority of use. However, more than half believed technology may play a role in early identification and treatment of psychological problems. Overall, 72% of the sample believed use of technologies would allow them to have a greater impact on improving patients' mental health.

Legal concerns regarding e-mental health interventions for youth have also been identified as areas of unease by mental health professionals. Blanchard et al. (2012) established that 74.7% of the youth mental health professionals in their study had concerns regarding young people's safety online, whilst Midkiff and Wyatt (2008) and Riper et al.(2010) identified challenges with e-mental health interventions relating to the ability of mental health professionals in verifying the age of individuals with psychological issues, particularly if they were under age and required parental consent. There is controversy regarding e-mental health interventions with some professionals in the U.S.A. believing this treatment modality is detrimental in relation to legal implications. Concerns expressed have been in relation to insufficient legal frameworks to support clinicians and concerns regarding privacy and confidentiality. These concerns were further perpetuated by professionals' concerns regarding security in relation to Internet infrastructure, particularly regarding secure and safe sharing and transmission of clinical information (Midkiff & Wyatt, 2008).

Overall, the literature reveals several gaps in relation to mental health nurses' experiences of e-mental health. In particular, the impact of rurality upon geographical isolation and lesser information technology availability for clients with mental illness is notably absent. The significance of clients with mental illness living in rural areas and

being socially isolated is a challenge. Such challenge could be overcome with the use of e-mental health. Another gap in the literature relates to mental health nurses, which constitute the largest discipline in healthcare service delivery. An understanding of mental health nurses' knowledge and experiences of e-mental health is fundamental to assisting with realistic uptake and engagement of e-mental health.

2.4 Chapter Summary

Current policy and economic pressures continue to influence clinical healthcare practice methodologies and broad practice principles. Focus on preventative treatment, rather than post-intervention healthcare practices, continues to gain momentum as evidence shifts thought paradigms of policy makers, therefore driving resource allocation in this space. This creates some reservation and can drive a lack of innovation and creativity in terms of practice development. The lack of uptake of e-mental health interventions may be a result of above-mentioned litigious issues, along with lack of specific knowledge and practice application skills, combined with lack of technological support and/or access in the workplace. Technology provides the therapist with a potential enabler to access support, a new pathway to standard treatments and an adjunct to the traditional modality of face-to-face sessions.

The reality is that use of the Internet and mobile applications is substantial and rapidly growing. Mental health illness and its treatment are already among the most commonly searched topics, implying a significant degree of acceptance of the web as a source of self-help resources. E-mental health interventions may be reflective of a new epoch in mental health professionals' education which embraces preventative health care rather than interventionist care. Such interventions have been shown to be effective in treatment of high prevalence mental health disorders. Therefore, it is imperative that mental health practitioners promote efficacy of e-mental health resources to their clients to gain greater understandings of the applications of mental health treatment available to mental health professionals. Furthermore, as a professional body, further exploration of the barriers to e-mental health interventions being facilitated in mainstream treatment options, seems warranted. This was the focus of the current study. The following chapter details the multiple case study research design and conceptual structure, research methods employed, timeline, data analysis and ethical considerations employed.

Chapter Three: Methodology

3.1 Introduction

The previous chapter presented a review of the literature. A gap in knowledge was identified that this research sought to address, namely regional Victorian community-based mental health nurses' understandings and experiences of e-mental health interventions. This chapter details with the purpose of the current study and research questions guiding the study are delineated. A description of the constructivist paradigm that informed the research design is presented. Next, the multiple case study research methodology adopted is described. The research methods are outlined including site selection, participant recruitment, data collection methods, and timeline. This is followed by discussion of the data analysis procedures, strategies for enhancing validity and trustworthiness of the study and ethical considerations.

3.2 Research Aim and Questions

There is evidence evaluating the effectiveness of e-mental health applications, which have been found to be effective for the treatment and support of high prevalence mental health disorders (Al-Asadi et al., 2014; Andrews et al., 2010; Christensen et al., 2006; Cuijpers et al., 2010; Griffiths et al., 2010; Klein et al., 2010; Mackinnon et al., 2008; Spek et al., 2007; van Straten et al., 2008). The uptake of e-mental health has been dominated by research exploring psychologists' use of e-mental health (Mora et al., 2008; Wangberg et al., 2007). There is a gap in the research related to regional community-based mental health nurses' experiences and understandings of e-mental health. Hence, the aim of this multiple case study was to answer four research questions:

1. To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?
2. What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?
3. What do regional Victorian community based mental health nurses identify as barriers to the utilisation of e-mental health applications?
4. What do regional Victorian community based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

In order to achieve the research aim, multiple case study was determined to be the most appropriate methodological approach. Multiple case study generally has more than one

question, to assist with a conceptual infrastructure to build the study and assist with understanding the quintain, that is 'an object or phenomenon or condition to be studied' (Stake, 2006, p.6). In this study, the quintain related to regional community mental health nurses' experiences and understandings of e-mental health interventions.

3.3 Research Design

3.3.1 Constructivist Research Paradigm

Constructivism is a subjective process, whereby the researcher is active in the construction and conduct of the research. The researcher believes there are multiple truths and the researchers biases contribute to perspectives (Liamputtong, 2013). The constructivist paradigm influences the qualitative research, enabling the researcher to examine the multiple realities to construct an understanding of the phenomenon being researched (Liamputtong, 2013). Other methodologies were explored for the potential appropriateness of this study, including phenomenology; however multiple case study was deemed most appropriate. This research was informed by Stake's constructivist paradigm (1995; 2006). The contemporary approach of Merriam's(1998) work was considered for this study, however Stake's method was advocated and the preferred method as ascribed for progress in this study as it was deemed to be most appropriate. Stake's (1995) case study approach aims to gather collectively upon what has occurred. Researchers view a case as 'a bounded system' and inquire into it 'as an object rather than a process' (p. 2). Thereby, it is beneficial to study programs and people rather than events and processes. Case study researchers using Stake's (1995) approach consider the interrelationship between the phenomenon and its contexts. The constructivist research paradigm was considered appropriate for this research, as this paradigm acknowledges the complexity of humans, and the idea that truth is a composite of realities, shaped by one's own experiences and understanding of their realties (Polit & Beck, 2012). The constructivist research paradigm relies on carefully collected narrative and subjective data to assist with understandings of the human experience. Diagram 1: Conceptualisation of Research in it's entirety represents the conceptualisation of the research design used for this study.

Diagram 1: Conceptualisation of Research
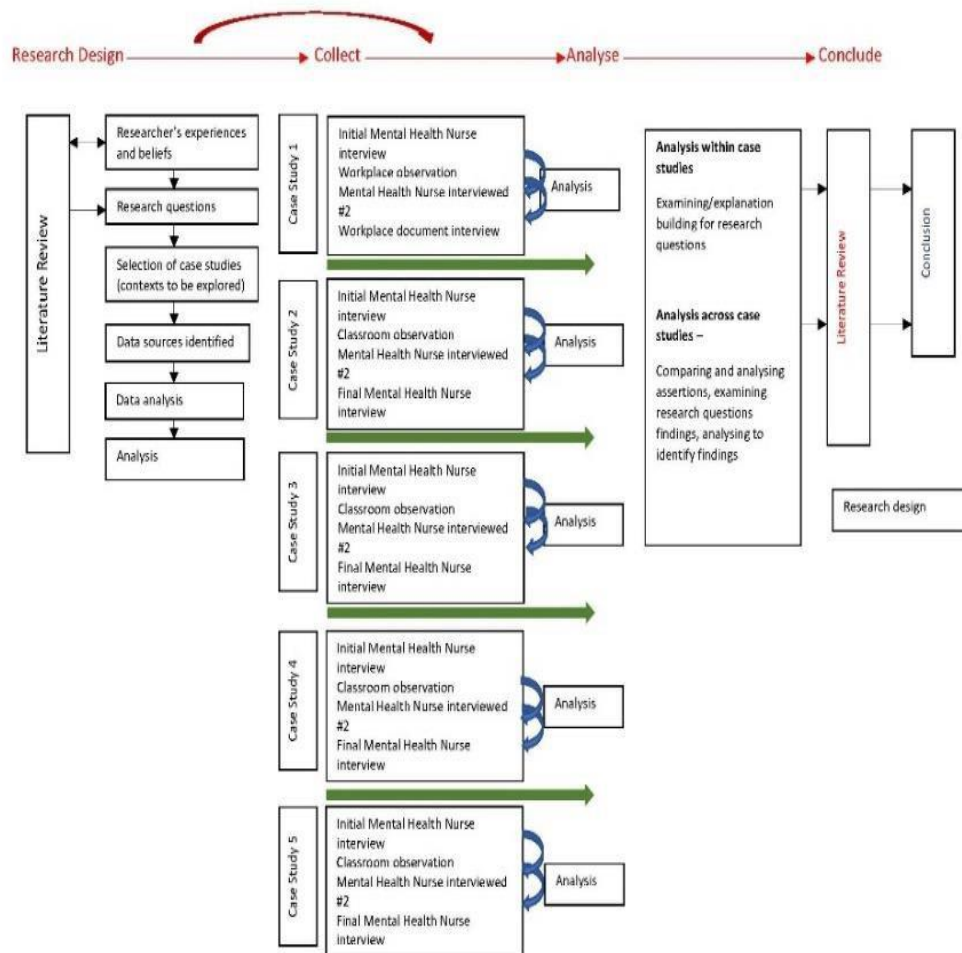
3.3.2 Multiple case study

To promote a constructivist perspective, I elected to draw predominantly from Stake's work on case studies (1995, 2006), that recognises multiple perspectives, to underpin this study. Multiple case study involves investigation of several cases simultaneously or sequentially in an attempt to gain deeper understandings of the research phenomenon from various perspectives and in multiple context (Stake, 2006). A selection of several cases creates a stronger case study compared to a single case study. Adopting a multiple case study methodology allows for the potential to theorise about a larger collection of cases (Stake, 2006).

Multiple case study research involves a multi-perspective analysis to highlight views of participants by using multiple sources of data collection across diverse contexts and situations. The research methods for a multiple case study include careful case selection, participant recruitment, collection of data from multiple sources, triangulation of data within cases, articulating the assertions of each case, and cross-case analysis and assertions (Stake, 2006). By using all of these research methods, a multi-perspective analysis was achieved for this study.

3.4   Multiple case study design

3.4.1   Case Selection

The careful selection of cases is an important process in case study research, as it allows for the opportunity to maximise what could be learnt about the phenomenon of interest, in this case, e-mental health. Denzin and Lincoln (2011), state that '…cases are expected to represent some population of cases' (p. 129). Defining boundaries is a key component of performing a quality case study.

Boundaries can be framed around time, processes and events (Creswell, 2013; Stake, 2006). The boundaries in this multiple case study which assisted with case selection related to the selection of five regional community mental health services, which provided community-based public mental health service delivery and met the Accessibility Remoteness Index of Australia (ARIA) Category B (48,000 to 249,999 persons). ARIA is a geographic accessibility index based on road distance which reflects challenges people may have accessing the nearest non-metropolitan services (Australian Department of Health, 2019). This process allowed the researcher to be logistically able to access sites in a timely manner and aligned with the recommendations for undertaking a multiple case study (Stake, 2006). Five disparate services in regional Victoria were invited to be

involved. Inclusion of the five services was predicted on the assumption that diversity of workplaces would allow for similarities and differences to be identified, thus illuminating the extent to which e-mental health is offered and variation of mental health nurses' experiences. The ARIA categories used based on population to guide this research are provided below.

Figure 1 ARIA+ Service Centres

Category	Population
A	250,000 persons or more
B	48,000 – 249,999 persons
C	18,000 – 47,999 persons
D	5,000 – 17,999 persons
E	1,000 – 4,999 persons

Australian Bureau of Statistics (2016)

For the purposes of this study, services that met the Accessibility Remoteness Index of Australia (ARIA) Category B (48,000 to 249,999 persons) were accessed. Some services had smaller sites within their agency; therefore, data were obtained in relation to some ARIA D (5,000 to 17,999 persons), ARIA E (1,000 to 4,999 persons) sites.

Diagram 2: ARIA locations of services involved in this research.
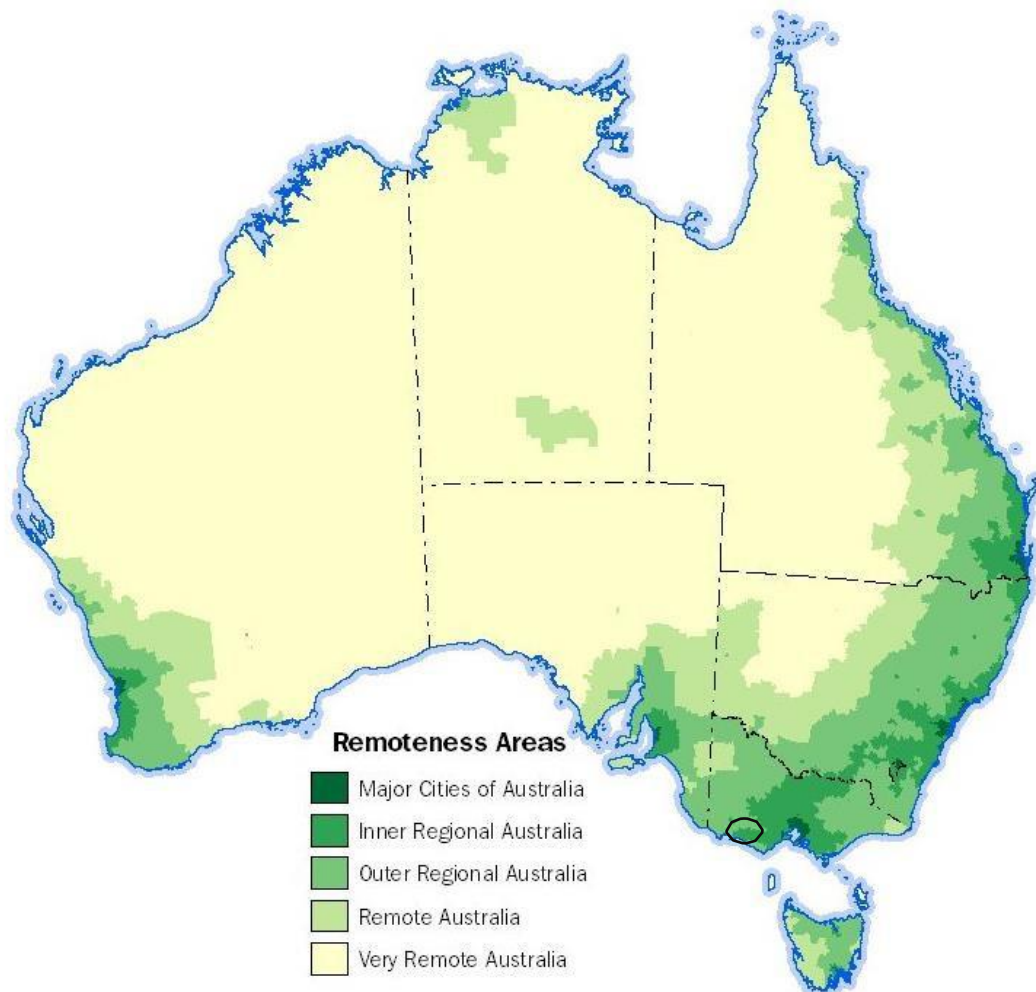
Australian Bureau of Statistics (2016)

Stake (2006) states that all cases are chosen because they represent the phenomenon. The cases may have a different or incidental relationship with the phenomenon, and in this study, allowed for different perspectives of regional community mental health nurses' understandings and experience of e-mental health interventions. It is important to remember in multiple case study research that each case has its particularities, according to the context, the situation, the relationships involved, its successes, and issues (Stake, 2006). The issues were analysed across cases, however it was vital to avoid grand generalisations which could remove unique contextual factors from each case.

This study examined five diverse and relevant cases, which allowed for the richness and depth in exploration of the use of e-mental health by regional community mental health nurses. The diversity of each case was reflected through characteristics of the sites

(including service/s provided, geographical location, geographical catchment, hours of service provided and policies), and characteristics of the mental health clinicians (including role provided and clients treated). The various sites selected for inclusion allowed for exploration of regional community mental health nurses' experiences and understandings of e-mental health interventions in a variety of workplace environments.

I undertook a selection of five cases for this research, which reflects Stake's (2006) suggestion that fewer than four cases limits the benefits of multiple case study. Stake asserts that having less than four cases does not allow for demonstration of 'interactivity between programs and their situations' (Stake, 2006, p. 22). The cases in this study were investigated sequentially over a period of five months, with up to 38 hours of researcher presence at each site. The sequential investigation of sites allowed for emerging data to inform subsequent data collection at consecutive sites. Inquiry in the field over an extended period of time allowed me to obtain information, insights and evidence to support a description to understand the quintain, which allowed me to answer the research questions (to develop an understanding of the phenomenon in the context of the quintain through collection of interviews, field note observations, and document analysis at each individual case and all of the cases collectively (Polit & Beck, 2012).

The cases for this study were selected as they met the following criteria:

1. Current public service providing community-based public mental health service delivery
2. Employed registered mental health nurses who delivered mental health care
3. Willingness to participate in research project
4. Active caseload of patients with mental illness
5. Located in ARIA Category B.

Ethical considerations of informed consent were established between myself and all participants prior to interview data collection. Boundaries included participants being advised that if they were uncomfortable during the interview, the interview would be suspended without judgement. Participants had the right to withdraw from this study up until the time of data analysis and if they did, it was without judgement.

Researcher reflexivity was a feature of the study. Reflexivity is defined as the researcher's awareness of procedures and characteristics which are underpinned by the researcher's interests and preconceptions, which may influence conclusions drawn from collected data (Sapsford, 2006). Reflexivity is a possible issue with observational data collection, as the researcher's background and assumptions may influence what is

actually observed in the environment. Therefore, acknowledgements of the researcher's assumptions were used to address this potential issue prior and during data collection and analysis.

3.4.2   Non-Participant Observation

Prior to commencing the non-participant observation phase, I undertook observation in public locations to rehearse capturing of different nuances people demonstrated, the activity that occurred and recording on an observation report template. Polit and Beck (2012) advised pretesting observation skills prior to undertaking the research to minimise researcher biases. The observation template I developed was based on existing knowledge and the constructive philosophical perspective chosen for this study (Newby,2014) in the context of establishing an understanding of regional Victorian community-based mental health nurses' understanding and experiences of e-mental health interventions. (See Appendix C). I was inactive and known during the observation at the sites. The observation template captured details including the audience and discipline of the staff on site. The nature of work, workplace relationships, service delivery and technology available in the workplace was observed. Field notations were taken which described the culture of each workplace to highlight the availability and use of technology and to interpret activities at the various sites. The data, gathered with the guidance of the observation report template, described the workplace culture of the sites in relation to the availability and the use of technology, particularly e-mental health technologies and to interpret activities in relation to the use of e-mental health at the various sites, as recommended by Stake (1995) and Polit and Beck (2012).

Staff at the sites were advised of my presence during non-participant observation and were aware I was interested in the activity within the workplace in relation to use of e-mental health interventions. Key stakeholders were sought as was appropriate to identify and clarify information gathered during observation at the respective sites involved. These stakeholders included staff of other disciplines, administrative staff and managers of respective sites. This provided validation of data collected (Newby, 2014). Resulting rich insights assisted me to identify issues for clarification in semi-structured interviews and document review.

Non-participant observation of the work environment was undertaken at each of the sites to explore the role of e-mental health within the model of care, service delivery and ways of working within the site. My role during data collection was observation only, and I did not participate in any workplace activities. No client contact was observed. I entered the sites at different times on different days, to observe different activity with different staff

being in the workplace site at these different times. The observation allowed me to become familiar with the environment, and how each environment operated in relation to the use of e-mental health in service delivery. This allowed me to explore the 'world of the case and of the participants (Yin, 2014, p.88).

3.4.3   Semi-structured Interviews

Semi-structured interviews were used to collect data from the community mental health nurse participants who consented to being involved in the study, regarding their experiences and understandings of e-mental health interventions. Semi-structured interviews are a common way of assessing meaning making and self-authorship (Polit and Beck, 2012). Individual interviews were also conducted with community mental health nurses to understand contextual factors surrounding each case. As recommended by Polit and Beck (2012) and Stake (1995), an interview template and questions were developed. A trial template was used with persons who were unable/not eligible to participate in the study (See Appendix D). This process provided the opportunity to determine if the questions were understood and the data generated would enable the questions to be answered. In addition, this process assisted me to become familiar with the format ensuring more natural interactions between the interviewer and participant (Gill et al., 2008).

The interview template allowed consistency of questions being asked which assisted with focusing on issues central to the research question and topics explored in relation to the phenomenon. The research questions were aimed at identifying and gathering information about mental health nurses' experiences regarding e-mental health interventions. Stake (1995) states the purpose of questions for an interview was 'not to get simple yes and no answers, but descriptions of an episode' (p.65), whilst allowing participants to answer questions freely in their own words which provides richness in data (Polit & Beck, 2012).

An interview template which has five to seven questions is recommended by Creswell (2013). In this study, questions were developed with the intent of eliciting information from participants to answer the research questions and exposing and understanding the quintain (Newby, 2014). The nature of the interview questions allowed freedom to clarify and further explore points made by participants, as indicated by Newby (2014), which in turn provided rich insights into the phenomenon. The interviews took no longer than 60 minutes to reduce potential strain on the participant and their work (Polit & Beck, 2012). They occurred in a number of locations within the sites, including staff offices, and

private interview rooms. All locations were deemed to be private and secluded to prevent interruptions.

Each interview commenced with broad demographic introductory questions and welcoming and thanking the person for participating. Polit and Beck (2012) note that once rapport has been established participants are more likely to be comfortable answering more specific questions. I then explained that the interview would be audio-recorded, that they could ask for the recorder to be turned off at any time and they were not obliged to answer every question. The interviews were digitally recorded and transcribed to a word document for data analysis. A digital recorder with a built-in microphone, which was neither obtrusive nor distracting for participants, was used. An advantage of this method is that stored data can be transferred and downloaded which makes the data easier to manage, store and transcribe (Newby, 2014).

The recording of extensive written field notes during an interview can be distracting and make it difficult for the researcher to pay full attention to enable the provision of non-verbal encouragers to participants (Liamputtong, 2013). During the interview written field notes were kept to a minimum to ensure my full attention was provided to enable non-verbal encourages to be provided, whilst also closely observing the participant's body language for congruent and incongruent body language. The use of the audio-recorder assisted during the interview process to enable me to keep focused on the participant. Recordings were sent to a transcriber within 48 hours of conducting each interview, uploaded securely to the transcribing service's web site. The transcriber was asked to omit any identifiers including names of persons and places. All transcripts were securely emailed to me from the transcription service. I then listened multiple times to each recording to ensure accuracy of written transcripts, and to become immersed in the data.

Data collection also included field notes that captured participants' body language, changes in position, and facial expressions. This information was recorded, both during the interview and immediately following, to ensure accuracy of data collected (Gill et al., 2008). The field notes provided validation for important points made by the participants and facilitated appropriate emphasis on emerging themes (Streubert & Carpenter 2011, p.43). Recording of the interview allowed me to give undivided attention to the interview process in its entirety, which is important. The transcripts and field notes assisted reconstructing interview accounts accurately.

Data analysis occurred simultaneously with data collection during and following each of the five sites' observation periods. Data collection and analysis were used to inform subsequent data collection. Direct interpretation of all data collected at each site was

used to gain deeper understanding of the individual case, known as 'vigorous interpretation' (Stake, 1995., p.9) and allowed generalisations to be developed, which then allowed categorical aggregation of findings. Case study requires the researcher to understand each case individually and 'through aggregation of instances until something can be said about them as a class' (Stake, 1995, p.74). Both the generalisation and particularisation of findings deepen understandings of the findings which assists in understanding the phenomenon (Stake, 2006).

3.4.4   Document Review

Document analysis provided a third source of data across the five cases. Document analysis can create a rich source of data relating to the activities surrounding the case (Yin, 2014). The documents that were collected included: service policy and procedures, and clinical practice guidelines. The data collection protocol was used to guide data collection and to assist with exploring possible sources (Yin, 2014), however this was applied in a flexible manner. The data collection protocol included policy, clinical practice guidelines and procedures in relation to telephone counselling, text communication, email, teleconferencing and web-based information. I aimed to gather a similar variety of information about each case to answer the research questions. For this research, documents reviewed focused on organisational policy and procedures available at the sites that guided clinicians' decision making, approaches to interaction with patients, and their choices of therapeutic interventions which informed clinical practice and decision making of the community mental health nurses. Applicability and authenticity of documents used is vital, particularly when documents support evidence collected from other sources, then construct validity of data collection is enhanced (Hancock & Algozzine, 2011). Data collection was guided by the use of a document review template to assist with data collection and to ensure consistency with data collection from each site (Appendix E). However, if documents contradict evidence collected, then further investigation and enquiry may be undertaken through further interviews and/or observation (Yin, 2014).

Whilst being employed in the region where the study was undertaken, I had no prior working relationship with staff at 4 of the 5 cases in the study. I had predominantly worked in academia during the study and not been employed in the clinical settings of the study. I used a reflexive process to question my assumptions as a method of maintaining the rigour and robustness of the study. As a result of my employment at one of the sites, it was necessary that an external person was sourced to collect data there on my behalf. The site where I am employed was the last site for data collection to assist with increasing likelihood of inter-rater reliability. Prior to data being collected by

the research assistant, training occurred to include practice sessions in comparing findings between the research assistant and researcher to ensure consistency of data collection (Polit & Beck, 2012). I explained in detail to the research assistant the research aims and questions to be answered. I provided the research assistant with de-identified data collected from observation, interviews and document review to assist them to gain an understanding of the phenomenon to date. The research assistant attended and assisted with observation at two sites and kept checking in during data collection of the last site, which was conducted without me.

3.4.5   Participant Recruitment

This project was considered to be ethically of low risk, as participants were able to provide informed consent and opt-out at any time up until data analysis. Following the study being approved by the La Trobe University Human Ethics Committee, ethical approval to access each of the five mental health services was also sought and obtained. (Appendix F Ethics Approvals). I contacted the Divisional Director of each of the sites to make a time to present an overview of the research study to all staff and gain consent to undertake up to 38 hours of non-participant observation at each site. Once directors agreed to facilitating the presentation, a suitable time for presentation to all staff at each site occurred.

At the presentation, plain language statements were provided and flyers inviting registered community mental health nurses to participate in the study. Staff were provided with verbal information regarding the study, opportunities to ask questions, and invited to participate. My contact details were included on the written information and during the verbal presentation. Registered community mental health nurses who were interested in participating in the study were encouraged to contact me to arrange a time to meet to discuss their involvement.

Individuals were recruited who met the following eligibility criteria:

- Registered Mental Health Nurse, employed by a public community based mental health service in a regional Victorian Community, ARIA (Accessibility/Remoteness Index of Australia) category B (Creswell, 2013; Streubert & Carpenter, 2011).
- Active caseload of clients with mental illness

Meetings were organised at each site involved and participant involvement was discussed. At the meeting, eligible people were provided with a Participant Information

Statement which outlined their involvement in the interview if they agreed to participate. It was explained that at during the interview, I would meet with eligible persons to conduct an interview to ask some questions about their understandings and experiences of e-mental health in clinical practice. Those individuals agreeing to be involved completed a written informed consent prior to participating in an interview.

3.5   Data Collection Timeline

Multiple case study data collection is complex and time consuming with numerous tasks, which requires the researcher to have deep engagement at the research sites. A research protocol was used to guide the researcher. Stake (2006) suggests that researchers devise a data gathering plan cognisant of the research questions, prior to data collection. The plan was to ensure the research remained focused throughout the process and to assist with construction of the final report. Participant recruitment in this study began after ethical approval in August 2017, and sequential site data collection then occurred from October 2017 until February 2018. Any periods between site visits allowed for transcription of interviews and field notes, preliminary analysis, and compilation of documents.

3.6   Data Analysis

According to Stake (1995), qualitative data analysis is an iterative and reflexive process that begins as data is being collected, rather than at the end of the data collection period. Through deep engagement with the data, interpretation and analysis of data occurred throughout the entire duration of the project at each site as data were collected. Data analysis involved all aspects of data collection, that is observation, semi-structured interviews and document review, to answer the research questions.

3.6.1   Single Cases

Data analysis occurred as data were being collected, which allowed for recording of information which assisted the researcher to make sense of observations in relation to the phenomenon. Post-observation reflection allowed insight to be gained, which assisted to shape perspective of the observations made (Newby, 2014). Stake (1995) highlights the importance of 'placing the interpreter in the field to observe the workings of the case, one who records objectively what is happening but simultaneously examines its meaning and redirects observation to refine or substantiate those meanings' (p. 8-9). The field notes assisted with providing a thorough and rich description which assisted with further analysis and reporting of the research. The observation and field notes were

transcribed to a Microsoft Word document to allow for initial broad coding (Braun & Clarke, 2006).

Analysis of the data commenced during data collection and continuously throughout the project. I commenced analysing the data as I was immersed in the data, which included the checking of the accuracy of transcripts with the original audio-recordings, along with repeatedly reading transcripts from the interviews.

Document analysis notes were transcribed verbatim to a Microsoft Word document to allow for initial broad coding of emerging themes identified during the data collection process (Braun & Clarke, 2006). This occurred concurrently with the interview and observation data analysis. Data analysis required demonstration of interpreting all of the evidence available, as well as addressing any rival interpretations. If an alternative explanation for findings became available, this was accounted for in the data analysis stage. Data analysis demonstrated analytical focus in alignment to the research protocol and was underpinned by the researcher's prior expert knowledge of the topic (Yin, 2012). Each case was analysed and written up separately providing a contextual description and interpretation of the site.

3.6.2   Cross-Case Analysis

The cross-case analysis approach by Stake (2006) can be described as case-oriented analysis, where the central question is in how the cases are alike. In this study, the themes were organised and analysed to allow commonalities and differences to become apparent, which provided richness in data. Cross-case synthesis technique was used to compare and contrast cases. This allowed each case report to have the data applied to the situated experience of the research question and phenomenon of regional community mental health nurses' experiences and understandings of e-mental health interventions. A general understanding of each case study experience was created and modified. Through data analysis, similarities and differences were identified of the case study reports.

Following identification of consistent themes, I needed to understand the data. Convincing and accurate interpretation and analysis occurs when the researcher balances the narrative and illustrative extracts (Smith, 2008).

3.6.3   Thematic analysis

There are various approaches to thematic analysis. As described by Braun and Clarke (2006), thematic analysis identifies, analyses and reports patterns (themes) within data,

which facilitates the description of rich data in detail. This method is well suited for multiple case study research as it allows the researcher to become familiar with nuances of uniqueness and generalisability within cases in relation to regional community mental health nurses' experience and understanding of e-mental health interventions (Stake, 2006).

To guide the thematic analysis, the six phases of analysis outlined by Braun and Clarke (2006, p.87) were employed, as follows:

Table 1: Phases of thematic analysis

Phase	Description of the process
1. Familiarising with the data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly

Phase One: Familiarisation with data

I became familiar with data by becoming immersed and actively engaged in the data to develop an understanding of the breadth and depth of the content. Transcripts were read and re-read for accuracy. I took notes and marked ideas as I was re-reading. Coding was not commenced until I had become familiar with all aspects of the data. Braun and Clarke (2006) describe this as an interpretive process, in which data becomes meaningful and a first understanding is generated.

Phase Two: Generation of initial codes

Once familiar with the transcripts, initial coding of sentences, paragraphs and sections began, with features of the data which related to the phenomenon. Codes were generated manually to assist with enhancing familiarity with data, and where possible, labeled with expressions participants used, to stay close to the participants' meanings. Throughout the process, consideration was continually given to the data in a meaningful way regarding the phenomenon and research questions. I worked systematically through each data set giving complete and undivided attention to each data item to ensure interesting aspects could be identified which may result in repeated patterns (Braun & Clarke, 2006). Initial coding involved writing notes alongside highlighted text and codes; this resulted in potential patterns across the data set. There were numerous codes which were more specific than themes, whilst providing context of the data. Following identification of initial codes, I matched the data to these codes to ensure data extracts were coded, and this assisted with establishing the importance of the codes (Braun & Clarke, 2006). There were occasions that codes identified represented several patterns. Data analysis attended to all similarities and differences by noting these aspects during the coding process. It was important during this stage of analysis that any preconception I had gained from the literature regarding this topic was put aside. This was managed through discussions with supervisors and reflections in my journal.

Phase Three: Searching for themes

Following completion of coding of all datasets, codes were collated into potential themes, keeping data extracts with their codes. Themes were compared and collapsed into broader categories for developing themes (Braun & Clarke, 2006). This process involved analysing codes to identify combinations, with some codes forming an overarching

theme and some codes becoming sub-themes, whilst other codes were discarded (Stake, 1995), whilst considering the phenomenon and research questions.

Phase Four: Reviewing themes

Once initial themes had been established, I revisited all coded data extracts in each dataset to ensure there was a logical pattern, and to consider the validity of themes to the dataset as an entirety. The preliminary themes were reviewed against all codes they entailed and reviewed against the data to check if segments of text were missed that would fit under one of the themes (Braun & Clarke, 2006). The various themes were refined and examined for significance to the phenomenon. Refinement of themes then occurred, renaming to identify the essence of each, and how themes represented and told the story of the regional community mental health nurses' experiences and understandings of e-mental health interventions (Braun & Clarke, 2006).

Phase Five: Defining and naming themes

I read through all underlying codes of one theme and refined the name/label allocated to the theme to best describe the content. Once I was satisfied that the isolated themes reflected my abstraction of the data a detailed analysis of each theme was written. I was mindful the context of each theme, the overall phenomenon and the research questions that I had posed. The process allowed 'identifying the essence of what each theme is about' (Braun & Clarke, 2006, p.92).

Phase Six: Producing the report

Analysis continued during this stage with themes becoming translated into a narrative account relating to the research question and relevant literature (Braun & Clarke, 2006). The analysis was written into an interpretable report using vivid and compelling extracts related to the themes, research questions and literature. The report demonstrated analysis supported by empirical evidence and addressed the research questions. The written report captured and provided a narrative of the themes common across all the cases, whilst also exploring similarities and differences to describe the cases.

3.7   Construct Validity

Construct validity is defined as 'the accuracy with which a case study's measures reflects the concepts being studied' (Yin, 2014, p,238). As recommended by Yin (2014), to maximise construct validity with multiple case study research, for this study the research

questions and parameters were clearly defined. Multiple sources of evidence were accessed and used. These were non-participant observation at the workplaces to establish use of e-mental health interventions, semi-structured interviews with community mental health nurses employed at the five sites and review of documents relevant to the clinical practice, decision-making and activities in relation to the use of e-mental health interventions. A chain of evidence was developed during data collection and analysis phases as advocated by Yin (2014). For this research I increased validity by collecting multiple sources of data at each site through observation, interviews and document review. Validity was further enhanced when cross-case analysis occurred when claims were validated by more than one source (Newby, 2014).

3.8   Internal Validity

Pattern matching to identify matching and comparing patterns within the collected data as advised by Yin (2014), occurred throughout the study. Comparison of data obtained through the different data collection methods enabled corroboration between data collected and analysed. This formed comparison (triangulation) which enabled identification of the position of the regional Victorian community based mental health nurses' understandings and experiences of e-mental health interventions (Silverman, 2011). Triangulation is described as the '…use of multiple methods to collect and interpret data about a phenomenon, so as to converge on an accurate representation of reality' (Polit & Beck, 2012, p, 393). Claims were validated by multiple sources of data providing the same evidence (Newby, 2014). Triangulation assisted with verifying congruency of findings with reality, whereby the consistency of findings by multiple sources of data ensured the interpretation of reality was as representative of the phenomenon as possible (Merriam, 1998). Triangulation of data from observations, semi-structured interviews and document review was undertaken to increase reliability of the data collected, by reducing reflexivity and to ensure the report was free from bias and an accurate representation of the message conveyed and obtained from each site (Stake, 1995).

3.9   External Validity

External validity refers to the ability of the results of a study to be generalised to other settings or samples (Polit & Beck, 2012). External validity is evident in this study as a result of the multiple case study design, modal comparison and thick description. The multiple case study design involved multiple cases with similar representation, allowing results to be applied to a further range of other similar sites (Merriam, 1998).

Modal comparison '…involves describing how typical the sample is compared with the majority of others' (Merriam, 1998, p.59). This was also evident with selection criteria for the sample for this study. Thick description is evident through the data collection and analysis occurring simultaneously, with data from non-participant observation, semi-structured interviews and document review. These thick descriptions provided evidence of the phenomenon being studied allowing an understanding of transferability of the findings (Merriam, 1998).

3.10   Reliability

The research protocol assisted with reliability of this research and allows for this study to be replicated and conducted in the same manner (Yin, 2014). Triangulation also assisted with reliability of the research, as multiple methods of data collection enabled consistency with the research. An audit trail recording the research as it progressed further contributed to reliability of the research (Merriam, 1998).

3.11   Ethical Considerations

The three primary ethical principles considered in this research were: (i) beneficence, (ii) respect for human dignity and (iii) justice, as outlined by Polit and Beck (2012).

(i) Beneficence

Beneficence is considered a fundamental requirement for ethical principles in research, according to Polit and Beck (2014), it '...seeks to maximise benefits for study participants and prevent harm' (p720). Researchers are morally bound to conduct ethical research that minimises risk of possible harm to participants (Bloomberg & Volpe, 2012). A priority for researchers is to ensure the participant's welfare is secure. Researchers exercise beneficence in several ways: in assessing and taking account of the risks of harm and the potential benefits of research participants and to the wider community: in being sensitive to the welfare and interests of people involved in their research and in reflecting on the social and cultural implications of their work (Australian National Health and Medical Research Council, 2007, p.11).

One risk identified in studies involving humans is maintaining confidentiality and anonymity. Confidentiality and anonymity are insisted upon to ensure participants identities are safeguarded. This study had ethical approval through La Trobe University Human Ethics Committees. Relevant ethics approval was also obtained from the five sites involved in the research.

Confidentiality

Confidentiality is imperative for a researcher to maintain (Wiles & Boddy, 2013). Polit and Beck (2014) define it as 'protection of study participants so that identifying information is never publicly divulged' (p723). Christians (2006) insists confidentiality must be assured to prevent unwanted exposure, harm or embarrassment as a result of insensitive research practices. However, Christians (2006) argues that confidentiality cannot be watertight and that de-identifying names and locations may not be enough. Christians (2006) also argues that researchers strive as much as possible to maintain confidentiality and anonymity but accept these are not complete. As this study explored mental health nurses' experiences and understandings of e-mental health, it was important to assure that their confidentiality would be maintained. Strategies utilised included:

1. Not referring to participants' names during interviews or using names in field notes.
2. Use of aliases during interviews and field notes.
3. Any information that may have identified organisations and/or participants, such as age and workplace, were deleted from transcripts.
4. The person transcribing audio-recordings signed a confidentiality contract and did not keep copies of the recordings or transcripts.
5. All audio-recordings, transcriptions and field notes were password protected and kept at a secure location from other data from the study.

Anonymity

The preferred method of protecting participants' anonymity is through the process of anonymisation. This was done through the use of pseudonyms for all participants and sites in reporting this study (Wiles et al., 2008). This ensured data cannot be connected with participants and offers participants in the study confidentiality (Polit & Beck, 2014).

Informed Consent

Participants were provided with information about the research, including details of the study aim and their intended involvement prior to commencement. They were all able to comprehend the information and had the ability to voluntarily consent or decline to participate. Copies of signed approved in-principle letters for the proposed individual sites agreeing to be contacted to support and participate in the study were obtained.

Following receiving ethical approval from each individual site, I contacted the Divisional

Director to arrange a mutually convenient time to offer to attend the site to present an overview to all staff of the research study. The potential benefits of the research were presented, outlining the study had the potential to raise mental health nurses' awareness of e-mental health as a tool to complement their work, and enhance access to services by people with mental health disorders.

Once participants agreed to be involved, a time and place to speak with them was arranged to further discuss the study. At the meeting between the interested mental health nurse and myself, they were provided with the Participant Information Statement, and participants had the opportunity to ask questions regarding the study and consent to be involved in the research. If the participant agreed to be involved, then I obtained written informed consent. The consent form was scanned to a digital file which was password protected and kept in my locked office. The signed consent forms were kept separate from other data collected during the study. Interviews required participants to be interviewed on one occasion. Therefore, the signed and dated consent form to participate was adequate to ensure participants' capacities to provide voluntary and informed consent. At the time of the participant and myself initially meeting to discuss the possibility of participating in the study, I explained that they were able to withdraw consent from the study up until data analysis, as detailed in the Participant Information Statement, and the consent to participate form. There was a withdrawal of consent for use of data form available, however no participant requested this.

(ii) Respect for human dignity

Respect for human dignity is considered another fundamental requirement for ethical principles in research. According to Polit and Beck (2012), the '...principle includes the right to self-determination and the right to full disclosure' (p. 84). All participants voluntarily engaged in the study. All potential participants were invited to an information session which provided an overview of the study. At the conclusion of the presentation to prospective participants, staff were invited to contact the researcher if they would like to participate in the study.

The potential benefits of the research were presented, outlining the study had the potential to raise mental health nurses' awareness of e-mental health as a tool to complement their work, and to enhance access to services by people with mental health disorders.

(iii) Justice

The final principle used to guide this research was justice. According to Polit and Beck (2012), justice '…includes participants' right to fair treatment and their right to privacy' (p., 85). The opportunity to participate in the research was available to all mental health nurses at the sites. I met with every staff member who expressed an interest in participating.

3.12   Chapter Summary

This chapter has outlined the constructivist research paradigm which informed the multiple case study design for this study. There was explanation of the research methods which underpinned the multiple case study. This included criteria for case selection for the five sites and criteria for participant selection. Careful selection of site and participant were critical to allow for the opportunity to maximise what could be learnt about the quintain. Data collection strategies involving three sources, assisting with triangulation, increased the validity of the research. A description of the single case data analysis and cross-case analysis which provided assertions for the research was provided. Ethical considerations were also discussed. The next chapter presents a case-by-case analysis of data from each of the five sites.

Chapter Four: Overview of Sites

4.1   Introduction

This chapter presents a case-by-case overview of each site. It provides context to the various sites and the presence of e-mental health: within the service, who was employed at the services and the workplace activity which e-mental health was applicable to. Additional details of each site are included with Appendix G.

4.2   Overview of Site One

Site One was a medium-sized not-for-profit community service located centrally in a regional centre (Appendix G). The service had numerous offices in the regional centre, however this site was the only eligible site for this study. The staffing profile at the site was seven, and this included two mental health nurses. Both mental health nurses employed on the site participated in the study. One mental health nurse was male (David) and aged between 41-50 years of age and provided clinical treatment on- and off-site within clients' own environments. The clients seen by the service were aged 16-65 years of age. David was a university qualified mental health nurse who provided mental health, and alcohol and other drug treatment. David stated that he knew what e-mental health was, however there was limited evidence of technology in use, rather a paper diary and stationery were evident in his workspace. The other mental health nurse (Margo) was a mental health nurse practitioner aged between 51-60 years of age. Margo was a hospital qualified nurse who had completed postgraduate nursing qualifications at university. Margo predominantly provided medication prescriptions to clients with mental health and alcohol and other drug presentations. Both mental health nurses explained that most clients had access to technology, however some clients sold or misplaced technology due to their illnesses and substance use. The service had the capacity to lend technology to clients, if it was deemed the client was able to be responsible of the technology. I used this site to set the scene for identifying possible areas of exploration with observation and document review.

4.2   Overview of Site Two

Site Two was a not-for-profit Commonwealth Government funded national community service (Appendix G). The site was located in the business area of a regional centre and was the only office. The staffing profile at site two was seven, and there was one mental health nurse employed. The male mental health nurse (Nigel) was aged between 41-50

years of age. Nigel was a university qualified mental health nurse who provided face-to-face on-site clinical mental health treatment to clients aged 16-25 years of age. Clients were able to receive other services on site as well. Nigel relied heavily upon technology for clinical treatment of clients, particularly as the clients generally were heavy users of technology. The staff employed on site all reported continual technology issues, particularly in regard to wireless connectivity.

4.3   Overview of Site Three

Site Three was a nationally funded Commonwealth Government not-for-profit health service which incorporated two offices in different sites (Appendix G). The main office was located in a residential location in a regional centre, and the smaller office was located approximately 100 kilometres from the main office in a central business location in a rural centre. The staffing profile was 100 staff at the main office, and they provided a multitude of services. There was only one mental health nurse employed at the main site and she (Grace) participated in the study. Grace was 51-60 years of age and was a hospital qualified mental health nurse. At the satellite site, a male mental health nurse (Peter) was 51-60 years of age and hospital qualified.

Both Grace and Peter provided assertive clinical outreach care for clients with severe and persistent mental illness. The clients were aged 25-65 years of age. Both mental health nurses reported knowing what e-mental health involved, however neither engaged greatly with technology as the service was not supportive of the use of technology. The mental health nurses reported being provided with technology with unrealistic limitations and inconsistent technology between the main site and satellite site.

4.4   Overview of Site Four

Site Four was a not-for-profit public health care service with three offices (Appendix G). The main office was located in a central business location and easily found by the community. The medium office was co-located with a rural health service in a rural town, approximately 100 kilometres from the main office. The small office was co-located with a rural health service in a rural town, approximately 200 kilometres from the main office. The staffing profile at the main office was 36 and there were 11 mental health nurses employed at the main office. Three female mental health nurses who were employed at the main office participated in the study. One was 61-70 years of age (Jan) and was hospital trained. Another mental health nurse was 41-50 years of age (Alison) and was university qualified. The other mental health nurse was 51-60 years of age (Tiffany) and

was hospital trained. Service delivery at the main office was 24 hours per-day, seven days per week. Staff provided clinical services to clients aged 25-65 years of age.

The staffing profile at the medium office was 11 staff, and there were nine mental health nurses employed at the main office, and one male mental health nurse (Dean) at the medium office who participated in the study. Dean was 51-60 years of age and was a hospital trained nurse who had completed postgraduate studies in mental health nursing. The service was staffed business hours, and clinical staff provided an on-call function to clients in their geographical region. Staff provided clinical service to clients across the lifespan.

The staffing profile of the small office was 11 staff and there were four mental health nurses employed at the small office. One female mental health nurse (Jess) at the small office participated in the study. Jess was 30-40 years of age and was a university qualified mental health nurse. The service was staffed business hours, and clinical staff provided an on-call function to clients in their geographical region. Staff provided clinical service to clients across the lifespan.

All sites had narrow scope of practice: assessing and treating clients with serious mental illnesses. There was varied knowledge of e-mental health with the mental health nurses who participated in the research and geographical black-spot connectivity was considered a significant barrier to the use of technology by these staff.

4.5   Overview of Site Five

Site Five was a private health service (Appendix G). The staffing profile was six clinical staff. There were no mental health nurses employed at the site to volunteer to participate in the study. The service was co-located with a hospital in a regional centre. The site was fiscal with resources of stationery and technology. There were clear policies and procedures outlining the use of technology in the service. Clients were aged 16-65 years of age and experienced postnatal mental health conditions. Clinical treatment was provided face-to-face on-site.

4.6   Chapter Summary

This chapter has provided an overview of the five sites involved in this research. There were mental health nurses employed at four of the five sites which allowed data collection of observation, interview and document review, whilst an interview could not be conducted of mental health nurses at one site due to recruitment of a mental health

nurse being in progress. All five sites had varying degrees of e-mental health applications with some satellite sites having lesser resources compared to their main site. The use of e-mental applications across all sites was minimal and almost non-existent. The e-mental health applications used in practice were limited to communication primarily within the services, between staff as a result of limited infrastructure in workplaces, poor understanding of e-metal health and the associated lack of information technology skills. The next chapter provides a case-by case-analysis of the five sites.

Chapter Five: Case-by-Case Analysis

5.1   Introduction

This chapter presents the case-by-case analysis of the data from each of the five cases. The contextual data will be further analysed in the cross-case analysis chapter, to allow a deeper understanding of the use of e-mental health for the purposes of this study. The research questions addressed the study were:

- To what extent are regional Victorian community-based mental health nurses, aware of e-mental health applications?
- What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?
- What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?
- What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

The following Appendices provide information, that was used in the data analysis for this study. Appendix H outlines the mental health nurse participant details involved. Appendix I outlines the demographic details of clients who engaged with the services involved in this study. Appendix J outlines site demographics of the services involved, and Appendix K outlines the site details of services involved. Appendix L outlines the mental health nurses' use of technology. Analysis of data from the cases was conducted to assist in highlighting potential interactions between individual cases and their contexts (Stake, 2006), which is further discussed in the following chapter presenting the cross-case analysis. The research questions guided analysis of the data collected, which led to the development of themes used as a framework to present the themes of the sites. The chapter concludes with a summary of the major themes that emerged from the site. Coding from the data analysis (See Appendix M) resulted in three major themes and eight sub-themes.

Table 2: Summary of Themes and Sub-Themes

MAJOR THEME ONE	MAJOR THEME TWO	MAJOR THEME THREE
(i) Mental Health Nurses' Workplace Environment	(ii) Mental Health Nurses' Practice	(iii) The Mental Health Nurse being Supported by Information Technology in Clinical Practice
SUB-THEMES	**SUB-THEMES**	**SUB -THEMES**
• Affordability of Technology • Service characteristics • Client Group	• The Education and Training of Mental Health Nurses • Mental Health Community Nurses' Caseloads • Mental Health Nurse Role Focus	• Availability of Technology • Use of Technology

The first major theme considers mental health nurses' workplace environments and the three underlying sub-themes of affordability of technology, service characteristics and client group. The sub-theme of affordability of technology pertains to the services' provision of technology and the necessary funding to support the purchase and ongoing use of technology for clinical activity. The services all had e-mental health available. However, services which had satellite offices, had lesser provisions of e-mental health available to staff, which led to staff feeling frustrated.

The sub-theme of service characteristics included some offices being sole premises, whilst others had satellite offices. Services were funded differently, some Commonwealth and some State funded, which all contributed to the variability of e-mental health resources in the workplace. Geographical location was also key to service characteristics for this study. Some clients were at increased risk of limited services and resources to assist with their mental health disorders because of the rurality of their place of residence. The mental health nursing workforce years of employment varied across the services, with some mental health nurses new to their careers, whilst others were nearing retirement. Some mental health nurses were familiar with using e-mental health, whilst other staff opted to persist with paper-based resources for clinical activity.

The sub-theme of client group included some clients who voluntarily engaged with clinical treatment whilst others were mandated to engage with clinical treatment. Most

clients were able to access technology in some capacity and some clients were au fait with the use of technology, whilst others needed education regarding the use of technology from staff. Some clients opted to not engage with technology as they were suspicious of the privacy and confidentiality, whilst others did not engage in technology as a result of misplacing the technology. Appendix N provides an oversight of site descriptions and Appendix O provides a summary of themes and sub-themes.

5.2 Site One

5.2.1 Mental Health Nurses' Workplace Environments

Affordability of Technology

Site One was equipped with the necessary technology required for staff to perform their roles both clinically and administratively. There was no surplus technology within this service. Most technology was used, however not to its maximum capacity. This included the mobile telephone, the teleconference capacity of the desk telephone, and videoconferencing equipment available at another location nearby within the service.

Staff delivering clinical outreach services were each provided with a wireless tablet. Staff were aware of the location of the tablets but not the chargers. Some clients engaged with this service could not afford the cost to purchase and/or maintain technology. Therefore, clients were assessed for their suitability to be given access to a loan tablet if required. This procedure was introduced as there was a reported history of clients who did not have access to technology or sold the technology to assist with their alcohol and other drug dependence.

Each staff member had been able to nominate the number of computer monitors they required (one to three) for their roles. All staff had two or three monitors except the mental health nurse practitioner who had a single screen. Staff with multiple screens indicated that this allowed them to multitask. Most staff used an electronic diary, with the exception of the mental health nurse and the manager, who both used paper diaries and relied on additional stationary located on their desks. The information technology staff were reported to be very responsive to issues which previously included unreliable connectivity. Each staff member had a commander telephone and smartphone, with the exception of the mental health nurse practitioner and receptionist who did not have smartphones as they only worked on site. Ensuring the safety of staff and premise was addressed via two methods: personal security devices and a private security service contractor.

Service characteristics

Clinical outreach and face-to-face clinical services were provided to clients across the entire geographical region. David described the service provided as:

> '*A combination of treatments which is preparing clients for home-based or residential treatment. It's also about liaising with stakeholders, whether it be mental health workers, the AOD (Alcohol and other drugs) team, hospitals, GP's etcetera, relevant pathology, things like that.*' (P1, L17).

The care David provided was:

> '*…tailored for each client. Because I cover the entire region. Generally, it's once a week with follow-up phone calls when necessary.*' (P1, L27).

Client Group

David and Margo met with their clients at various stages in their weekly treatment regimes. Margo stated that: 'I would see them every week for the first four weeks and then push them out to every month.' (Margo, P4, L23). David indicated that his level of engagement with clients was tailored to meet each person's needs. He justified this method, stating: *'I cover the entire region. Generally, it's once a week with follow-up phone calls when necessary too.'* (P1, L27).

He explained that there were clients who were mandated to engage with mental health intervention: '*These clients can, of course go through the forensic system, where they're mandated to attend.*' (P2, L32).

David commented that clients could access technology with the assistance of family or friends, even if they did not own their own technology:

> '*Generally, the client base I work with will have friends or family involved and generally most clients will have access to a phone. If not, I do have that outreach component in my job, so I can get in a work car and go and visit a client.*' (P7, L20).

David contended that there were a number of reasons why clients did not have access to technology:

> '*Certain clients simply don't own a computer, maybe due to their current mental state, their level of intoxication, etcetera. A lot of my clients have actually pawned a lot of their expensive items to try and fund their habit.*' (P7, L30).

5.2.2   Mental Health Nurses' Practice

The Education and Training of Mental Health Nurses

Margo attributed her knowledge of e-mental health to exposure during her postgraduate studies at university: *'I haven't had any formal training; it's been an adjunct at university.'* *(P7, L33).*
She described e-mental health as: *'people accessing mental health support through the electronic systems. It is also like telehealth where professionals can be at the other end of live streaming.'* (P5, L3). The benefits of telehealth from her understanding were:

> *'The ability to give people access from remote areas…also people who are still got that stigma around mental health; it's breaking down barriers there. People don't want to be seen going to the psychiatrist or the mental health clinician. Where they can go online and still get professional help.' (P5, L6).*

Margo expressed an interest in learning formally about e-mental health to assist with her clinical practice and expand her knowledge:

> *'I definitely would consider if it was offered, some more overarching e-mental health, and you know, like just increasing your knowledge.' (P8, L20).*

David affirmed he knew what e-mental health was, although when asked to explain his understanding, he replied: *'I haven't got a broad understanding, I believe it's, you've got me there.' (P4, L10).*

Mental Health Community Nurse Caseload

Margo offered that the younger clientele (30-35 years of age) generally had access to technology and were more technologically savvy than other clients:

> '*Around the thirties. So, 30-35, would have best access (to technology) and know how to use it.*' (P10, L4).

Mental Health Nurse Role Focus

Prescribing medication was a primary role for Margo and she used a purpose developed computer program and printer. She explained:

> *'This program makes it easy to do prescriptions....' (P7, L1). 'All of your client records are on there. The good thing about this program is you can bill directly from it, and you're supposed to do the prescriptions that you can just type on the computer'. (P7, L8).*

She also enjoyed using technology to educate and inform her clients by:

> *'It allows me to empower them, for them to own their life. And really, I've worked with people who haven't had much joy in their life, and the disadvantaged people as well, where you can get them to a point where they're taking a bit.'* (P4, L5).

David stated he used technology with his clients, but he would always meet with them face-to-face initially to establish each client's capacity to use the technology:

> *'I will see every client face-to-face for the initial, and just to gauge and develop that rapport and whether I feel the client can adequately handle the iPad'. (P5, L22).*

David used FaceTime as he found it a user-friendly application. David reported technology assisted with efficiency of service, with quicker access to clients and other services and co-ordinating client care:

> '*Streamlining delivery of care…greater connectability through technology with others'* (P6, L4).

5.2.3   The mental health nurse being supported by Information technology in clinical practice

Availability of technology

Initially, there had been connectivity issues when the service shifted to the site, however Margo reported that this had been resolved. The shared commercial printer had posed an issue for Margo, as it made it difficult for her to prescribe medications. As a result, the

service acquired a purpose printer for her role:

> *'First of all, it was the printer. They fixed that, and they gave me my own printer, because if I use the big one, I'd be running back and forward, putting in a piece of prescription paper, and then you'd need to say to everybody else in the office, don't print now'. (P7, L11).*

The location of the shared commercial photocopier being near clinicians' desks where clients were unable to access meant secure printing was not required. David used dual screen monitors which he preferred, offering that he had: *'…numerous things open at the same time. So, whether email, statistics, things like that on both screens.' (P6, L12).*

Whilst, Margo had a single screen monitor as a dual screen she found:

> *'It distracts me, and it distracts the client. I find it quite impersonal with the clients, when you are looking at a website. There's another screen there, and what's coming on there. It's more personalised, when you're both looking at one screen'. (P6, L24).*

David reported there were tablets which could be lent to clients, subject to clients meeting established criteria involving a risk assessment based on the knowledge of the client, and the likelihood of the tablet being looked after by the client:

> *'We do have an iPad, so I can lend that to clients, which have to be adequately screened because of the monetary factor there. But using certain technologies like find my phone etcetera are connected to that, so if it does go missing, we know where it ends up'. (P5, L19).*

Use of Technology

David embraced technology: *'to maintain that connectability with each client and also each client can contact me.'* (P7, L14). The dual screen computer monitors allowed him to multitask, whilst allowing him to liaise with other services in a time efficient manner.

The commander telephone and smartphone were solely used to make and receive telephone calls, except for the receptionist who would transfer telephone calls to staff. The smartphone was also used to text messages and the occasional Face Time with clients. Staff were not aware of the teleconferencing capacity of the desk commander telephones.

David stated that desktop computers were used to access electronic clinical files and to email colleagues: '*communication is generally by email…*' (P9, L21), and to search information on the Internet for staff and client knowledge. He advised there were no policies or documents within the organisation governing the use of technology in the service: '*…they (the organisation) should get some sorted I guess…*' (P10, L14).

Despite tablets being available to assist staff who provided clinical outreach, it was reported by David that: '*The tablets are not routinely used in practice by clinicians*…' (P5, L 24).

5.2.4   Summary Site One

Site One was well equipped with the necessary technology to assist staff to perform their clinical and administrative roles. Management provided appropriate technological resources as requested by staff for their roles. All staff were able to use to use the provided technology, however much of the technology was not used to its capacity. The smartphones were used to text, make and receive telephone calls. There were tablets available for staff who provided clinical outreach, however they were not routinely used. The teleconferencing capacity of the desk commander telephone was neither known, nor used by any staff. The use of the available technologies was limited, and it is unclear why. Most staff used an electronic diary, with the exception of David and the manager who both used paper diaries. These two staff relied on traditional stationary as primary workplace tools. Technology was used at this site as an adjunct to face-to-face treatment. The potential benefits of treating clients who were unwilling to engage due to stigma and geographical isolation was not evident. Staff were expected to provide case management, make referrals and educate their clients. The provided technology allowed all staff to complete these roles. All staff expressed confidence in the support provided by the information technology staff who were responsive to addressing any technology issues on site. Initially, there had been issues with connectivity when the service initially opened at the site however, this was no longer seen as an issue by staff on site.

5.2   Site Two

5.2.1   Mental Health Nurses' Workplace Environment

Affordability of Technology

Site Two had the necessary technology for staff to perform their roles, both clinically and administratively. Some technology however, was not used to its capacity and this was mainly due to connectivity issues. Due to these issues, there were desktop computers throughout the building which were not used as the wireless connectivity did not support the use of portable wireless laptops, nor did it adequately support clients on site accessing their technical devices.

Each staff member had a single computer monitor, with the exception of the administrative staff and manager who both had dual computer screens, and all staff used an electronic diary on their computer. The information technology helpdesk was reported to be ineffectual and delayed in responding, resulting in the ongoing wireless connectivity issues. Staff were frustrated that management did not appear to be attempting to address connectivity issues, despite most clients of the youth age group relying heavily on the wireless connectivity when on the premises. Each staff member had a commander desk telephone and a smartphone was shared between all staff, which was solely   used to text clients their appointment reminders. Ensuring safety of staff and premise security was addressed via three methods: personal security devices, key access   to premises and security cameras.

Service characteristics

The service provided only face-to-face clinical client services.

Client Group

Nigel reported that the clients he saw had access to technology, explaining that for clients who had difficulty accessing technology, it could be for various reasons:

> *'Reasons for not having access to technology, usually comes down to the socio-demographic stuff. Like some of the kids' parents are able to do that and they'll have wi-fi at home. And it's amazing how many still have access even though they might reach the data limit. So, it's usually those kids in the older age group that have left home. Younger kids at home have access. The older ones go to*

the library and plug into the free wi-fi system, you don't have to go to McDonalds to get free wi-fi really.' (P15, L11).

Nigel stated there were safety concerns regarding appropriate use of technology with some clients he saw:

> *'The safety type things which are of concern are more to do with your social media areas when they're using snapchat, when they're sexting nudes…they are going to areas and on sites and accessing and putting information out there that's not appropriate…'* (P15, L28).

He identified the safety concerns are:

> *'Most likely the kind of issue that tends to come up more with the kids that have certain learning disabilities and probably are attending like the specialist school…some of those kids are older and maybe their developmental stuff isn't so great and they don't realise the implications.'* (P15, L36).

5.2.2   Mental Health Nurses' Practice

The Education and Training of Mental Health Nurses

Staff at the site all reported that there was assumed knowledge that all staff and clients knew how to use the available technological devices. Nigel claimed that he did not have an understanding of e-mental health, however he was able to articulated what it was:

> *'I guess I don't know about it in a huge sense…but it's pretty much about using the electronic kind of media and different technologies to deliver mental health strategies.'* (P8, L20).

Staff were notified by email of availability of various education opportunities, which was generally self-directed, but staff seldom engaged in the education due to clinical work commitments. Nigel stated:

> *'When we engage in education, it is definitely self-directed …even webinars that are booked are missed because of clinical work being priority.'* (P18, L16).

In relation to using clinical applications on mobile telephones with clients, Nigel offered that the use of organisational technology was assumed, and that staff knew how to use

videoconferencing equipment and the shared mobile smartphone. In relation to the mobile smartphone:

> *'It's probably assumed that you have brought some knowledge about technology usage with you, that you are competent enough in using equipment, whatever it is in a safe and effective manner.'* (P19, L5).

Nigel used e-mental health to educate his clients regarding mental health self-care strategies, as well to inform them of the appropriate applications they could use:

> '*Smiley Minds is a classic one that most of them (clients) look at. So we get kids to do that and look at the application.*' (P13, L25).

Mental Health Nurse Role Focus

Nigel's role involved case management, counselling and education. The younger clients also required education from Nigel in relation to the appropriate use of technology. Some clients had accessed sites and uploaded inappropriate content in the form of personal nudity and had been cyber-bullied: 'Y*ou get a lot of bullying and cyber-bullying with our clients.'* (P2, L16).

The service allowed clients to drop in which increased the likelihood of an unpredictable clinical schedule, resulting in case management, at times, being negatively impacted upon with unplanned clinical activity with unscheduled clients. Nigel found the use of electronic clinical records and electronic forms provided flexibility regarding this unpredictable nature of his clinical work:

> *'(electronic clinical records)…it is giving me access to things that I need about the client and allows me to go back to it and finish the documentation.'* (P17, L7).

5.2.3   Mental Health Nurse Support from Information Technology in Clinical Practice

Availability of Technology

Access by clinical staff to the organisations' databases that enabled access to electronic clinical files and the Internet required them to use unique passcodes. Computer access on the site however was limited to desktop computers, as wireless connectivity was unreliable. Tablets provided by the organisation were limited, and therefore priority was

given to staff for use to complete pre- and post-clinical consultation surveys with clients. Nigel reported the poor wireless connectivity as a significant concern on site as:

> '*Staff trying to use a laptop in here isn't always the most viable thing because the Internet keeps dropping out.*' (P16, L32).

All clinical staff had single screen desktop computers, while the administrative staff and manager had dual-screen computer monitors. All staff had a commander landline telephone on their desk. There was a shared mobile smartphone used to text clients' appointment reminders. There was videoconferencing equipment on the premises and a commercial photocopier which all staff could easily access in a locked office space which only staff could access, therefore secure print access was not required.

Use of Technology

Most of the available technology was used at the service, however the unreliable wireless service capacity posed challenges with some of the technology, resulting in laptops not being used. Nigel used his desktop computer to access electronic clinical files, email and to search information on the Internet. He said that clients who attended the service with their personal smartphones were shown by clinical staff how to safely and appropriately use them. They were also shown applications on the mobile telephones which clinical staff encouraged clients to use to assist in their treatment:

> '*So, there are some YouTube elements of accessing different videos for them (clients) in strategies to cope with their problems.*' (P9, L7).

There were occasions when the surveys were not administered because wireless connectivity was failing:

> '*We are meant to use tablets here for the surveys but at times we don't when wireless connectivity plays up…which is fairly often.*' (P11, L7).

5.2.4 Summary Site Two

Staff at Site Two were equipped with the necessary technology to perform their clinical and administrative roles. The wireless connectivity posed a significant challenge and source of frustration due to the unreliable nature of connectivity which was frequent and persistent, and resulted in staff changing their practice to accommodate unreliable wireless connectivity. Technology was used at this site as an adjunct to face-to-face

treatment. All staff were assumed to have knowledge to use the provided technology, resulting in some technology not being used to its maximum capacity. The videoconferencing equipment was used to project the minutes from on-site business meetings, rather than for videoconferencing as staff were not aware of how to access and use the videoconferencing equipment.

Potential benefits of treating clients with the use of technology were embraced by clinical staff, due to the age demographics of the client group being 16 to 25 years. Staff were expected to provide intake and engagement, which included: case management, making referrals and educating clients. The technology provided allowed all staff to complete these roles. Information technology security was evident at the site, with clinical practice reiterating the service policy which advised the need for security passcodes to access the Internet and email, and individualised staff member security passcode to access electronic clinical files.

5.3 Site Three

5.3.1   Mental Health Nurses' Workplace Environment

Affordability of Technology

Finances were a consideration in relation to the use and availability of technology in the workplace at both office locations of Site Three. The technological resources available at Site Three were closely scrutinised by managers, particularly in relation to use of the mobile smartphones. The 'Mobile Phone Use' policy outlined financial cost considerations in relation to the use of mobile telephones in the workplace, hence the policy reiterated that the mobile telephone should be used as a last resort, and landline communication was the preferred medium for communication other than email. All clinical staff employed at case three, were provided with a business smartphone linked to a $30 per month data plan, regardless of their position or role within the organisation. The 'Mobile Phone Use' policy provided insight into this process stating:

> *'…there is also a substantial financial cost associated with mobile phone calls. This has led to the development of a fair for all process in relation to mobile phone bills. Any mobile phone accounts that come into the finance department over $30 dollars will have a "Mobile Phone Account Letter to Managers", attached to it and forwarded to that worker's manager. It is then up to the manager and the worker to check why the bill has exceeded the allowed $30 and to determine whether it is due to personal use.'* (P1, L18).

When the service originally commenced at Site Three in both locations, there were capacity building funds available which enabled gifting of mobile telephones to clients. The criteria for a client to be engaged in the service required the person to have a severe and persistent mental illness. Individuals would often be receiving disability pensions and not be able to work, therefore would not be able to afford mobile telephones. Staff reported that the gifting of the mobile telephones was well received by clients, however some of the phones had been lost. Peter advised that the associated funds supporting this initiative had now ceased with changes in the consortium leadership: '*Once leadership changed in the consortium…funds all dried up.' (P6, L8).*

During establishment of the service, all sites were provided with the same technology. Staff at both locations had dual desktop computer monitor screens, a laptop, tablet and a smartphone, regardless of being a manager or a clinician. Both locations of Site Three had videoconferencing facilities available. There were commercial photocopiers available

at both locations, which were shared with other staff employed in different roles. The commercial photocopiers had secure printing access due to the vast array of professionals in different roles sharing and accessing photocopiers. Some staff used electronic diaries, whilst others continued to use paper diaries.

Historically, there had been information technology issues as there had been different information technology support for the different services on site. At the time of data collection, the service employed site specific information technology support, which resolved issues in a timely manner. They provided training for staff regarding new systems as required. The wireless connectivity for staff and clients also at both locations of the service was considered adequate. Ensuring safety of staff and premise security was addressed via three methods: personal security devices, keypad access to premises and security cameras.

Service characteristics

The mental health nurses were required to provide predominantly outreach clinical services, however they also provided face-to-face clinical services. The mental health nurses provided services to people in geographical defined areas from the two different locations. A change in the consortium leadership resulted in differing viewpoints regarding service delivery. Grace highlighted that the change in service delivery resulted in an increase in caseloads. She clarified that the leadership had led to a change in her clinical role over the previous 12 months:

> *'It's changed my role significantly. I don't do much mental health anymore. My time in the office at the computer has increased dramatically. It's become more of a mixture of administration and co-ordination with much less client contact.' (P3, L6).*

The change in leadership within the consortium had also led to a perception that there was inequity in staff's access to technologies between sites. Staff were no longer able to arrange videoconferencing meetings, as not all sites had the same equipment anymore:

> '…*they (agencies in the consortium) are all buying whatever they want with no consensus on consistent technology…*' (P6, L32).

Peter identified the change in his role as a result of the change in consortium leadership:

> *'When my role changed those silos have been built up again. Our role changes*

form that assertive outreach assessment and engagement to becoming support to co-ordinators assisting with the NDIS. So, there's no longer that real clinical or hands on element. It's becoming that you co-ordinate things via telephones and emails, rather than the hands-on.' (P4, L20).

The ability to provide mobile telephones to clients also ceased with the change within the consortium and cessation of capacity building funds.

Client Group

The staff clinical role included assertive outreach which involved them providing intensive and proactive support to clients with ongoing complex mental health needs to a large geographical area and to clients with severe and persistent mental illness. The provision of mobile telephones to the clients Peter acknowledged as being most beneficial, as clients who may ordinarily not have been able to afford a phone, had access to one and: *'...the clients have our numbers, so they can send a text if they want to change plans as can we. They can leave voice messages.' (P8, L3).*

Grace commented that some of her clients would not use a telephone to talk but would text and email:

> *'I have a few clients who won't use the telephone but will text or email. So, I have text and email capability on my phone that I use if I'm not in the office.' (P9, L8).*

Grace and Peter provided clients with their work mobile telephone numbers despite the service policy 'Mobile Phone Use' clearly stipulating:

> *'It is strongly recommended that staff members do not give their mobile phone numbers or direct line numbers to clients.' (P2, L23).*

The manager justified the rationale for clinical staff providing their work mobile telephone numbers, reporting that clients were often difficult to engage with due to their severe and persistent mental illnesses. The adoption of this practice was justified based on an assumption that allowing clients to make direct contact with clinical staff assisted them develop rapport. Grace stated:

> *'…because of my job I am hardly at my desk so clients need to be able to contact me direct, so that's why I'm happy for them to have my mobile number.' (P9, L2).*

Grace indicated that several of her clients had lost their mobile telephones that the service had provided. She rationalised this phenomenon to be the result of the client's underlying mental ill health effected their thinking:

'Due to the complexity of our clients, some of them lose their phones very regularly, or something happens to their phone regularly. I've got one client in particular that goes through phones weekly. At the moment to contact her I have to ring, I don't know if it's a friend or a neighbour, and leave a message on her mobile phone, so she can pass a message to my client.' (P9, L26).

There were connectivity issues within the region which Peter confirmed was a challenge when he was providing a clinical service. He explained that:

'The connectivity issue, at times, is because of the geographic location of some of the clients. They live in blackholes. So, they have to actually move to get a signal on their phone. And the best way of communicating is leaving a text or a voice message which they can pick up at a later date.' (P8, L9).

Peter had some clients who chose not to use mobile phones. He affirmed that some clients were paranoid and uncomfortable using technology, while others preferred not to engage with the service at all. He elucidated that:

'Clients may live in poor housing conditions and don't want people to visit. They won't make appointments so you can't come and visit. If people don't answer the phone then there's an assumed accountability to be there for an appointment and so they don't want that responsibility. They want a form of being able to control what they're doing and control services.' (P8, L21).

Peter confirmed that some clients he had responsibility for were not familiar with how to use the technology and preferred face-to-face interaction:

'...clientele from the 25 to 64 age group, there's a range of people that are techno [technologically] friendly and those that are not techno friendly. Some prefer a paper copy of information. Quite often they prefer face-to-face because they may be geographically and socially isolated because of their circumstances and mental health conditions.' (P9, L 22).

While Grace stated that some of her clients preferred hard copy forms, rather than electronic versions:

> *'Some clients because of the severity of mental illness with our clients, a lot of them are very suspicious about using computers in their homes. And it tends to be easier to just get out a piece of paper.' (P5, L9).*

5.3.2 Mental Health Nurses' Practice

The Education and Training of Mental Health Nurses

There was a requirement of the service that staff completed mandatory training, most of which was online. Grace described her mandatory online training and her understanding of e-mental health as:

> *'...it's courses to do online. Some of them are mandatory, some out of interest. And they're provided by employers, unions, some is available whether you work in a service or not.' (P5, L36).*

Peter advised that the service provided some funds to assist with the cost of attending external courses, which he also pursued, and all staff were regularly emailed regarding education opportunities, and there was: *'... a lot of information coming through, certainly the desktop information through education opportunities, programmes, conferences.' (P 16, L3).*

Grace reported that the information technology staff at the service were proactive in provision and delivery of education to all clinical staff as new systems were introduced. This had resulted in seamless introduction of new systems such as electronic client files:

> *'We needed a fair bit of training in the beginning...We asked for training because something's been implemented and we didn't have the faintest idea how to do it, or we didn't understand it. So, it became a need that was identified by us of information technology and so we'd have some training.' (P8, L,10).*

Staff were also educated in relation to the use of remote access capacity of their tablets and laptops. Despite this, staff reported they no longer used remote access on their tablet, and this was since the change in leadership within the consortium resulting in differing and conflicting viewpoints of service delivery. This led to staff losing confidence in processes and what was acceptable practice. Peter advised that the change in

practices:

> '…was assumed knowledge and that everyone would know what to do, even when role expectations changed.' (P7, L21).

Both Peter and Grace reported that use of the smartphone and videoconferencing was assumed knowledge and they were generally self-taught, or asked peers for assistance. Peter said:

> 'Pretty much with the smartphone, the knowledge of how to use it was an assumption everybody had basic knowledge.' (P7, L11).

Mental Health Community Nurses' Caseload

Grace and Peter's caseloads encompassed large regional geographical areas, which required intense clinical service for clients with severe and persistent mental illnesses. Some clients were reluctant to engage in services, therefore Grace and Peter reported the caseload at times was challenging to manage. Peter reported many clients preferred face-to-face interaction:

> 'Some clients prefer face-to-face contact because they may be geographically and socially isolated because of their circumstances and mental health conditions.' (P9, L24).

Staff acknowledged technology, particularly the Internet, was beneficial to educate clients as it provided a platform to reiterate discussion which occurred during clinical consultation. Peter stated:

> '…when we're with a client, I'll be talking about certain elements and there may be some confusion over that, we can access the Internet and get clarification and justification.' (P9, L15).

Mental Health Nurse Role Focus

The clinical role focus for staff at this service was clients with severe and persistent mental illnesses. Staff predominantly provided assertive outreach to clients within the designated geographical boundaries, but also offered face-to-face services on site. In the previous 12 months, their role had differed with a change in leadership within the

consortium and introduction of an insurance scheme for people with all types of disabilities.

Peter stated in more recent times:

> *'My clinical role it's going to support coordination, and the business model, you get allocated a certain amount of funds per hour of support coordination you can do for a person. So, your caseloads have increased because you're becoming, you're dealing with a lot more people tapping for business, getting paid by the hour for co-ordination services which is completely different to that hands-on element.' (P5, L18).*

To facilitate assertive outreach and face-to-face visits with clients, Peter *found 'the best way of communicating is leaving a text or a voice message which the client can pick up at a later date' (P8, L 11),* especially if the client lived in a geographical area which was a blackspot. Peter and Grace reported they spent a significant amount of time travelling in cars to see clients, however the *'Mobile Phone Use'* policy, stipulated that a car kit was not to be installed:

> *'...as current research has indicated that the use of mobile phones via a car kit, constitute an unacceptable distraction whilst driving.' (P2, L9).*

Staff used electronic clinical files which were considered to be an asset for providing seamless clinical care to clients. The manager reported this was due to the electronic clinical files allowing staff to be able to quickly and easily access the clinical information. Grace also identified the benefits of technology assisted her in her clinical role:

> *'I think the ability to be able to communicate a bit easier, certainly mobile phones have made that easier than the old days, when you had to make an appointment, and just had to wait for that to happen. Whereas now you can confirm with the client, they're going to turn up, or you're going to turn up.' (P11, L21).*

5.3.3   The Mental Health Nurse being Supported by Information Technology in Clinical Practice

Availability of Technology

A secure screensaver was automatically activated following a period of inactivity on the computer and mobile telephone. Passcode access was clearly stipulated in the

'Acceptable Use of Internet & Email' policy:

> *'System users should secure access to their mailboxes through the use of passwords and other security devices and should not leave the System on and available to unauthorised users' (P3, L11).*

All staff had smartphones, and connectivity and service coverage were a challenge in relation to the routine use of the smartphones with their clinical roles. Peter and Grace reported that there were some clients who lived in areas which were 'blackspots', therefore the flexibility of text messages and voice mail messages were generally a more effective means of communicating with clients. Grace stated that:

> *'…it (clients) can be in crisis, or it can just be a question from a client so they can easily contact me…'* (P9, L4).

Some staff identified a limitation with availability of technology was in respect to all clinical staff being on a $30 per month data plan, regardless of their role. Grace and Peter were expected to use their mobile telephones for emergencies and were expected to predominantly use the landline on site. Grace stated in relation to using the landline at her desk: *'I usually use it for receiving and making calls and for people to leave a message.' (P10, L4).* This was challenging because the staff travelled distances in cars to provide assertive outreach.

There were videoconferencing facilities at both offices for Site Three, however some other services affiliated with the consortium did not all have videoconferencing amenities, therefore they held face-to-face peer meetings.

Use of Technology

All clinical staff used their desktop computers to access electronic clinical files. Staff appreciated the immediacy of information with electronic clinical files, and dual monitors. Peter said:

> *'…with a couple of computer screens, that's generally the standard and two screens is far more efficient for note writing and comparing assessment forms…'* (P7, L8).

Paper-based forms were used on occasions because some clients and staff preferred them to electronic forms. Peter stated some clients were not comfortable with

technology, therefore some clients preferred paper-based assessments: *'…there's a range of people that are techno-friendly and those that are not techno-friendly. So, some prefer a paper copy.' (P9, L22).*

Staff used technology, landline, mobile telephone and email to communicate with clients, colleagues and other service providers. Peter stated that he preferred face-to-face communication rather than technology to communicate:

> *'because I'm a dinosaur when it comes to psych [mental health] nursing, a lot of my skills are in the interpersonal and being able to communicate to develop rapport and trust and then get relationships happening that way' (P14, L34).*

However, Peter used technology to communicate with his clients, particularly in relation to appointments. The use of technology allowed for messages to be left which clients could access when they had Internet service:

> *'The issue there, at times, is because of the geographic location of some of the clients, they live in black holes. So, they have to actually move to get a signal for their phone. And the best way of communicating is leaving a text or a voice message which they can pick up at a later date.' (P8, L9).*

Peter stated: *'the clients have our numbers, so they can send a text if they want to change plans as can we. They can leave voice message.' (P8, L3).* This was despite the service policy 'Mobile Phone Use' clearly stipulating: *'It is strongly recommended that staff members do not give their mobile phone numbers or direct line numbers to clients' (P2, L23).* The manager justified the rationale for clinical staff providing their personal work mobile phone number, reporting that clients were often difficult to engage with due to their severe and persistent mental illnesses, therefore allowing a client to be able to make direct contact with them assisted with developing rapport. Peter also stated that using the computer to research and clarify information with a client was most valuable to supporting the therapeutic relationship:

> *'When working with a client, being able to access the Internet with a client if they have a question or a concern or a query, being able to provide that for them. Because a lot of them don't have access to a computer. They don't have the education, the funds to have a computer.' (P14, L9).*

Peter used the Internet and computer for various tasks including searching information and completing assessment forms: *'…there's quite a lot of research done on the computer, especially when you're doing administration or you're looking up assessment*

tools….' (P12, L1). On the other hand, Grace at Site 3 used the technology at her workplace to complete online training. Some was mandatory and included fire training and optional online training which appealed to her: *'Some of them are mandatory training, some out of interest.' (P5, L36).*

Peter and Grace at Site Three both previously used videoconferencing and teleconferencing to meet with their colleagues. However, Grace reported this no longer occurred as not all sites had adequate equipment for the videoconferencing of meetings to occur.

5.3.4 Summary Site Three

Staff at Site Three were assumed to have the knowledge to use the provided technology, resulting in some technology not being used to its capacity. This had been influenced by a change in leadership within the consortium resulting in different services of the consortium having different technology which posed a hindrance. Staff were no longer able to communicate via teleconferencing or videoconferencing because each site did not have the resources. Staff also cited the challenge in relation to the mobile phone policy of the service. Staff were required to abide to a $30 per month data plan, despite their clinical role requiring them to cover vast geographical region and clients being difficult to engage with at times. The client group also required assertive outreach which often involved use of a mobile telephone because staff were not in their offices to use landlines. As a result, staff often exceeded their $30 per month data plan allowance.

The initial capacity building funds used to purchase and provide mobile telephones to clients who would not normally be able to access them was identified as being most valuable. A reason for clients not being able to use technology was reported as being due to lack of education, unemployed due to severity of mental illness and not ever being exposed to a mobile telephone.

The benefits of technology in current clinical practice was identified as a necessity for the future allowing for timely communication (See Appendix H: Mental Health Nurses Participant Details) and increased work efficiency with quicker access to resources including electronic clinical files and the ability to multitask.

5.4 Site Four

5.4.1   Mental Health Nurses' Workplace Environment

Affordability of Technology

All clinical staff at the main office and the two satellite offices of Site Four had equitable access to technology to assist with their clinical practice. Despite the technology being provided, some was not routinely used by clinicians. The primary reason for not using the technology was poor connectivity. This was a problem particularly at the two satellite offices where staff were not familiar with the technology. Alison reported that all staff had previously been provided with remote access and wireless Internet, however due to connectivity issues and financial costs, this had no longer been available except for the senior managers:

> *'We did have remote access a long time ago, but it didn't work very well, and apparently it costs a great deal of money, so if you weren't using it you had to give it back.' (P6, L1).*

There were varying degrees of client engagement in service delivery at Site Four, and ability to afford technology. Some clients were employed, whilst others were unable to work as a result of the impact of their mental health condition on their level of functioning, which resulted in the inability to afford technology.

Service characteristics

Mental health service was provided to a large geographical area. The main office was located in a large regional location, and the two smaller offices were located in smaller rural locations. Staff at all of the offices explained that they were often contacted for support and guidance from people in the community either face-to-face or mostly via telephone, and the issues of concern may not be mental health related. Clients would self-refer, or be referred by others, which included other professionals, family and friends. The referrals were received in the form of fax, letter, email, telephone and face-to-face presentation. Dean described the process:

> *'…we get referrals from all agencies. Like with the police and hospital and things like that. What we do is we triage them and see if they are suitable for our service. If they're suitable for our service, then we go on and do an assessment and that's a decision point.' (P2, L21).*

Clients received face-to-face and/or outreach service delivery in their homes, at police stations or in hospital emergency departments. This was at a minimum, weekly contact. The contact was either via text, telephone or face-to-face.

The model of care of the service was a recovery framework. Only two of the mental health nurses interviewed were able to articulate this, Dean and Jan, both of whom were the eldest mental health nurses who participated in the interviews. Dean described:

> *'Our service delivery or model of care would be a recovery framework…as soon as a person is strong enough, mentally strong enough to cope in the community, well they're discharged form service care.' (P3, L21).*

Client Group

Staff employed at the satellite offices provided after-hours support to clients via by mobile telephone. Clients engaged with the service either voluntarily or were mandated under the Mental Health Act 2014. Treatment was delivered face-to-face or via electronic resources sourced from online platforms. Some clients required medical intervention in the form of electroconvulsive treatment (ECT) which was documented and recorded, in the client's electronic file and a monthly report of ECT were emailed to the Office of Chief Psychiatrist. Alison reported that clients mandated to engage with the service were often non-compliant with treatment both face-to-face, and/or via technological platforms:

> *'To be honest clients who don't engage by choice, generally don't engage with any treatment, whether it be face-to-face or via technology.'* (P6, L18).

Jan stated youth clients were technically capable. She offered:

> *'I think it's [technology] helpful for clients because for younger clients that's their world, it may not have been my world when I started nursing, but that's the world of the young people today. And it's just normal communication for a lot of people.' (P6, L10).*

Jan also acknowledged there were some older clients who were also competent with the use of technology. This was reiterated by Alison who suggested that clients of all ages could use technology. Jan said:
> *'I work with clients of most ages and age doesn't' determine who uses technology, but rather if the client wants to engage with treatment at all…I see all ages have the capability to use technology.'* (P6, L31).

Alison reported, some clients' lower levels of education, as a result of their mental illness, meant they had not completed schooling which resulted in them having difficulty using technology:

> *'Clients with a significant illness would always be a little slower on the uptake with technology potentially than other people anyway and that could be for various reasons…the majority of my clients don't have a smartphone and wouldn't know how to use it properly anyway.' (P6, L31).*

Dean and Jan spoke about the resources they used to support the recovery process and accessing of technology with these processes to access evidence-based resources. Dean spoke about:

> *'…the Beyond Blue...which is great to assist with recovery principles for our patients.' (P13, L6).*

5.4.2 Mental Health Nurses' Practice

The Education and Training of Mental Health Nurses

Some of the mental health nurses who were confident they knew what e-mental health interventions were had gained their awareness and knowledge through postgraduate studies, by attending mental health conferences or from their peers. Alison had attended a mental health nursing conference which presented information regarding e-mental health. She stated she had not read the information since she returned from the conference:

> '…*it was the International Mental Health Conference on the Gold Coast…had a whole lot on e-learning, which I did go to, but not a lot has stuck to be honest.*' (P7, L18).

Jess stated she learnt about e-mental health from her colleagues who were psychologists:
> *'Those with psychology background are very cluey with all the apps (applications) and what to use…I don't know the good apps from the bad apps.' (P9, L28).*

Tiffany had learnt about e-mental health from her peer, a psychiatrist at the service, who recommended: *'…a great app called Mood gym' (P10, L21),* whilst Alison relied on younger staff and administrative staff to assist her with any technology issues as they

arose; she had also learnt from her clients commenting:

> '*Some of my clients are more tech-savvy than me and it's great for the*
> *therapeutic relationship and their confidence to show me things.*' (P14, L5).

Jess and Dean had participated in webinars after-hours to assist with their professional development. Dean had found some of the online education to be mundane and lengthy:

> '*Some of them are a bit hard to concentrate on at times. They get a bit mundane.*
> *A bit boring and not stimulating…I feel that bombardment of information doesn't*
> *sit with me.*' (P5, L23).

All mental health nurses interviewed expressed interest in learning about e-mental health treatment. They reported there was a degree of assumed knowledge that staff and clients all had access to the various forms of technology and knew how to use the technology in the workplace and in their lives. Some explained that most of their e-mental health usage knowledge was self-taught or assumed knowledge. Jess said she was: '…p*robably never trained properly in it and maybe the systems…*' (P6, L7).

All clinical staff within the service had been recently provided with smartphones, but not taught how to operate the various functions. Jess believed that it would be ideal for staff to be educated in relation to being able to maximise the use of the smartphones:

> '*They want us to be time-efficient, but don't teach us how to use the tools of the*
> *trade (smartphones), so we can maximise the use of them…it's ludicrous.*' (P10, L6).

Mental Health Nurses' Caseloads

There were some clients with chronic mental health presentations, such as paranoia, that did impact on their abilities to work and interact with other people, and their ability to engage with technology. These clients were unable to afford the costs associated with computers and or mobile phones. Some clients, as a result of their mental illnesses, had left school at early ages, and intellectually had difficulty comprehending how to use the technology. Alison reported that, as a result of '*…the actual illness itself and the paranoia, she [a client] would think that I was tracking her.*' (P6, L37).

Tiffany and Dean reported that geographical areas posed issues with connectivity, black spots and no service availability. Tiffany stated: '*…the phones that we get sometimes you*

don't have access to a network' (P8, L11), whilst Dean reported the main difficulty with the phones were related to coverage, particularly: *'…because we work 24 hours, we are on call…' (P8, L35),* and colleagues had difficulty contacting Dean, and Dean had difficulty contacting colleagues.

Mental Health Nurse Role Focus

Clinicians were required to undertake various, but similar, roles at the site. Dean described the focus of his role included:

> *'Case management work and triage, assessing the individuals to see if their needs can be met by this service, case managing the person if required, arranging for some appointments with the psychiatrist and just educating the person, providing some psychosocial interventions and monitoring mental state and risk and treatment compliance and side effects.' (P1, L5).*

Clinical service was provided 24 hours per day and seven days per week at the main office site. Dean and Jess were employed at the two satellite offices and were required to provide on-call response after business hours. Dean had a focus on service delivery as it stands rather than a greater understanding of opportunities to engage with clients in an alternative mode with technology. Dean reported that they relied heavily on reliable mobile telephones and adequate mobile telephone coverage when they were on call:

> *'Our role requires us to at times work 24 hours, we are on call. I take a call last night on the on-call mobile phone and sometimes there are issues with getting through to who activated me as the on-call worker.' (P8, L35).*

Whilst at the main office, staff were actively on duty 24 hours per day, seven days per week, with no on-call requirement of clinical staff. The clinical staff at all the offices relied heavily on their smartphones to ensure safety, and to be able to communicate with clients and peers as required.

The duration of engagement with clients within the service varied depending on client engagement being voluntary or mandated. Clients mandated to engage with the service were generally more difficult to contact. Dean stated:

> *'It is such a challenge working with clients who are forced to have care…so any engagement and treatment is difficult regardless of what it is…client just doesn't think they need our service.'(P14, L6).*

Mobile telephones assisted to overcome this difficulty with communication, by allowing for immediate contact in the form of text and speaking to them which clinical staff reported as being most beneficial. Dean reported he communicated with clients by:

> *'Texting them and say I'll call you in a few minutes, and they pick up the telephone, so they know it is you.' (P8, L16).*

All the mental health nurses affirmed that their primary role was to support and empower their clients. Jan stated she used technology to locate information and educate clients regarding client diagnosis and treatments, which she and some of her clients had found to be most useful:

> *'Some clients certainly have the capacity to access it themselves. They just need to know what sites or what web addresses.' (P6, L27).*

Various mental health nurses at each of the three locations utilised technology to support their clinical roles on a daily basis. The issue of wireless connectivity and service coverage was identified as a significant challenge, so much so that on occasions it resulted in staff adjusting their clinical practice to address technological issues. Jess advised that the three locations ideally teleconferenced or video-conferenced regularly to facilitate staff meetings, however the smaller locations did not have adequate or reliable resources. Jess had attempted to participate in meetings with teleconferencing; however, there were a limited number of telephones on the premises where she worked which had capacity to teleconference, as most landline telephones did not have speakers. She elaborated that: *'The phone in the room that we use is just a standard phone, it doesn't have loudspeaker, and you have to hold it to your ear the whole time for 60 to 90 minutes.' (P6, L8).* Jess also described challenges with videoconferencing being:

> *'The quality is really, really poor in that with discharge planning and stuff like that. All it is just shadows on their faces.' (P11, L26).*

Jess believed that technology was beneficial. She acknowledged however, that when technology malfunctioned in the workplace the impact was: *'…a negative…because for some reason our technology does not like to work a lot.' (P12, L39).* She added that practice decisions were adopted to overcome technology malfunction that included staff travelling to have face-to-face meetings when the videoconferencing equipment did not work.

Several of the various mental health nurses reported that there had been many occasions of service-wide technical outages which created significant obstacles for staff undertaking their clinical roles. Jess said:

> *'There were times you would be joining a videoconference but because of service outages you couldn't connect with the other sites.'* (P9, P14).

As a result, landline telephones were not working, and there had been no access to client clinical records, clinical forms or the Internet. Alison and Jess spoke in detail about their experiences of the service-wide technical outages. Alison stated:

> 'T*he frustration when we have a code yellow [technology systems malfunction] is huge as there isn't a back-up plan which is ridiculous for a service this size and slows us all down immensely as we then write on paper and then have to transfer to electronic records when systems are working again.'* (P9, L14).

Jess described professional isolation and issues with accessing necessary clinical information to safely and competently care for clients when there was a service-wide technical outage*: '…that's a huge clinical risk and totally not helpful.' (P13, L9).*

Alison clarified that in relation to service-wide technical outage that staff were required to document on paper. When staff were triaging a new client and there were potentially significant risks involved, staff were unable to access necessary information which may assist with accurately considering all aspects of risks for the client from electronic mental health databases and clinical files. Once the technical outage was resolved, staff were then required to transfer what was written on paper to the electronic client file and cross-reference the information obtained on the electronic databases. Despite these challenges, Alison summarised the use of technology in the workplace *as: '…professionally, it's vital.' (P14, L28).*

Dean described important aspects of his daily role which required technology to undertake the role as: *'…arranging appointments with the psychiatrist, educating the person, monitoring mental state and risk.' (P1, L7).* Dean required technology because the psychiatrist shared his electronic calendar so all staff could arrange appointments on his behalf.

Several staff interviewed reported that younger staff were more comfortable with technology use than older staff. Alison explained the resistance of some older staff in relation to the transition from paper-based clinical files to electronic prompted:

> *'…literally nearly try and pull teeth to get them to start typing on the computer, cause they were so used to handwriting it and were so reluctant because they were one finger typers and they thought it was much slower to type than to write.' (P13, L25).*

Jan, the eldest mental health nurse interviewed, described herself as *'technically-challenged' (P5, L7)*, whilst Jess, the youngest interviewed stated: '*I'm a little bit younger and I understand a bit more how technology works.*' (P5, L 36).

5.4.3   The Mental Health Nurse being Supported by Information Technology in Clinical Practice

Availability of Technology

Passcodes were required to access the organisation's databases which provided access to electronic clinical files and Internet. The passcode access was described by clinical staff as consistent with the service's nonclinical guideline, *Information Technology Security Architecture,* which reiterated: *'the service maintains security of service information by 'users should be granted access to authorised services only.' (P12, L10*).

All locations of Site 4 had access to personal desktop computers and smartphones. Tiffany explained that: '*the main difficulty with the phones that we get is sometimes you don't have access to a network.' (P8, L11*). This caused staff frustration, whilst Dean highlighted posed it a safety issue, especially if he was assessing a new client and there was no mobile telephone coverage, therefore he was required to make alternative arrangements to assess clients where there was mobile telephone coverage and another person present.

There were individual landline telephones at each clinician's desk, however not all of the telephones had speaker capacity, therefore this limited the location that a teleconference was held. Jess was frustrated by this as she was employed at a small rural location and being able to teleconference meetings with colleagues at other sites would have been most beneficial, however this at times was not able to occur: *'….the phone in the room we use is just a standard phone.' (P6, L8).*

There was shared technology at the different locations. Clinical staff at the three locations shared tablets. It was noted that some staff did not know the keypad access and that it was generally not used. In relation to colleagues using the iPad, Tiffany *said: '*

I don't even know the key to it.' (P3, L18). Jess said she seldom used the shared iPad because: *'…if somebody's already got it, it's gone.' (P9, L21).* She also spoke about the shared laptop which was used to record clinical meetings. Tiffany explained that due to the laptop not having wireless connectivity capabilities it was not used off site by any staff. Whilst, on site, all staff had their own desktop computers, therefore the laptop was not required.

There were commercial photocopiers which faxed and printed documents. Staff reported they all were able to use the various functions and they used this constantly. There was secure print access to ensure privacy of documents at the main site, however the two satellite offices did not have this function.

Dean described the various unique security passcodes, which were not to be shared with anyone else, and were required to access mobile telephone, computer, teleconferencing and videoconferencing devices. This was consistent with the service's 'Internet –Access' Nonclinical protocol which stipulated that:

> '*Under no conditions should a user provide his or her password to another person or share a smart card to access the computer systems. This includes sharing your passcode.' (P2, L4).*

Staff also needed to provide temporary passcode access for students whilst they attended for clinical placement which allowed them to access the organisation's library site and to be able to access Google and other sites, so students could undertake research whilst on clinical placement.

Use of Technology

Site Four staff used technology to access electronic clinical files. Staff appreciated the immediacy of information with electronic clinical files. Alison reported that technology assisted with everything being communicated: *'…heaps quicker than getting faxed results.' (P8, L 27),* unless there was a service-wide technology outage.

The Internet was used to access information for clinical staff and used to educate clients (See Appendix H: Mental Health Nurses Participant Details). Alison confirmed that she accessed information from the WHO (World Health Organisation) such as statistical information. Alison also used her desktop computer to access the service's intranet to access service policies, while Dean used his desktop computer to access mandatory online training and email official letters to doctors. He also accessed the psychiatrist's

electronic calendar and arranged appointment for his clients to see the psychiatrist stating:

> 'It's great being able to book clients straight into the psychiatrist's appointment book.' (P14, L19).

Some staff used Skype for clinical supervision, however Jess said that Skype was not permitted within the organisation. There were no policy or procedures available, that confirmed or negated the use of Skype within the organisation.

All staff involved in interviews at Site Four used the Internet to educate clients and locate information to educate them. Some reported websites accessed were evidence-based and others were not. Alison spoke in detail regarding the benefits and the pitfalls in relation to her use of technology in her clinical role, she summarised the interview with: *'...professionally, it's vital....' (P14, L 28).* Tiffany used a paper diary but was unable to articulate the rationale, except: '*I always have my written diary.' (P4, L10).* This was consistent with other staff on the main site who used paper diaries because they always had, despite smartphones having capacity to allow staff to access electronic calendars.

5.4.4   Summary Site Four

Technology use was considered imperative for clinical staff to conduct their roles. The organisation promoted the use of teleconferencing as an effective and efficient method of sharing information, however not all sites had landline telephones and speaker capacity, that was identified as a barrier to using this technology. The ability to videoconference, was also impacted by outdated and intermittent server platform technical breakdowns. Technology allowed staff to engage in a timely manner with clients who may have had engagement with the service enforced upon them as a result of the Victorian Mental Health Act 2014, allowing staff to text and ring clients at short notice and provided flexibility with opportunities to contact clients.

Mobile telephones facilitated easy access to staff provided they were in an area with good connectivity. Providing staff with mobile telephones ensured they could be contacted when needed. Technology also supported electronic clinical files which assisted staff accessing information in a timely manner. There were aspects of technology at the service which were not used to capacity due to connectivity issues, but also staff reported there was assumed knowledge regarding how to use technology to its full capacity. As a result, staff self-taught, sought learning from peers or administrative staff. It was identified that younger staff and clients were generally more technology

efficient, however it was noted that there were individuals across the lifespan, both clients and staff who were also technically capable.

5.5   Site Five

5.5.1   Mental Health Nurses' Workplace Environment

Affordability of Technology

Finances were a consideration in relation to use and availability of technology in the workplace at Site Five. Technological resources available at the site were closely scrutinised as being necessary by respective managers prior to their purchase. The policy, Information Services Governance, outlined the purpose of the policy was to ensure: *'…value for money purchases that support organisational demand for information technology.' (P1, L13).* Financial considerations in relation to the information technology used by the service was further reiterated by the service document, *IT Governance Committee –Information Technology Principles*:

> *'In order to provide exemplary service, yet minimise cost to the service, the service has chosen the value discipline of operational excellence. This means "doing things once and implementing many". Thus, standardisation and the convergence to a single operating model across the entire organisation is a key enabler. This minimises complexity to ensure systems and technology are secure, robust, and scalable and that ongoing support costs are minimised whilst service is increased.' (P1, L12).*

The financial cost of technology was generally not an issue for clients who engaged in the service, as they were generally able to afford all forms of technology, rather time to access the technology was the barrier. Lack of time to access and use technology was generally attributed to the clientele receiving mental health treatment, as a result of perinatal mental health issues (See Appendix I: Site Demographics Details of Clients) and they were tired from caring for their babies.

Service Characteristics

Service provision was only face-to-face for clients on site (See Appendix J: Site demographics). There were various disciplines employed at the service, however at the time, there were no mental health nurses, which they were attempting to recruit. All clients voluntarily engaged with the service and clients seldom did not attend scheduled appointments. Most clients were female due to the requirement to engage with the service being postpartum mental health disorders. Clients were generally aged between 25 to 40 years of age and clinical service was provided to a large geographical region of

over 40,000 people. Despite the large geographical region, clients were willing to travel to the large regional site for clinical treatment.

Client Group

Clients were cooperative with treatment, particularly during the sessions. Compliance with treatment sometimes was reduced post-therapeutic interaction due to the often-presenting demands of caring for a baby at home. Therefore, treatment occurred on site during the session.

5.5.2 Mental Health Nurses' Practice

Education and Training of Mental Health Nurses

There were no mental health nurses employed at Site Five. They were however, in the process of recruiting a mental health nurse. The manager was unable to confirm what education a mental health nurse may require in relation to the use of e-mental health interventions in their clinical role. Staff confirmed that they did not use e-mental health applications in their current roles as these approaches were not considered part of the model of care at this site. There was however, limited technology available with their workplace. Clinical staff, who included a social worker and a psychologist were aware of e-mental health treatments and had experienced using e-mental health interventions in previous clinical roles.

The clinical staff reported they generally engaged in education relevant to their roles in their own time. They explained that the demands of their clinical roles did not allow for them to undertake education during their working hours. Staff had been recently been educated regarding the various functions of the commander telephone. There was an electronic instruction manual available on their desktop and administration staff were helpful with troubleshooting any issues clinical staff had. There were videoconferencing facilities on site, however during observation clinical staff advised that they had never used the equipment, nor had they been shown or educated how to use the equipment.

The manager was able to advise where policy and procedures were located to support and guide staff in relation to the safe, secure and appropriate use of technology in the workplace. On review of the documents, they were comprehensive and clearly documented service expectations of staff within the service and using technology. The documents provided guidance in relation to ensuring privacy, security and confidentiality of service and clinical information.

Mental Health Community Nurses' Caseload

The manager on site reported that the caseload was manageable due to clients generally being punctual and attending the site for clinical treatment. The affordability and accessibility of technology was generally not an issue for clients at this site. The barrier to using technology however, related to consultation times being time limited accommodating childcare demands of the clients.

Mental Health Nurse Role Focus

While this site did not have a mental health nurse employed at the time of data collection a job description was available. The role of a mental health nurse reflected that of the other clinical staff that included client assessment, and implementation of therapeutic interventions including counselling.

Clinical staff accessed and recommended to clients YouTube educational videos and other reliable evidence-based Internet websites. All client information records, forms and client appointments were made electronically. Clinical staff reported that most of the treatment and consultation provided to the clients was through verbal face-to-face interaction.

5.5.3 The Mental Health Nurse Being Supported by Information Technology Resources and Support

Availability of Technology

Although a mental health nurse was not employed at this site, technology was available and was used by staff. Passwords were used to access computers that ensured security of information accessed and uploaded and protected client's right to privacy. While video-conferencing facilities were available, staff indicated that they had not used the equipment, nor were they aware of how to use the facilities. They explained that they had never been required to learn how to use the equipment.

Staff reported during observation that information technology support was prompt in responding to any technology issues, which they encountered on site. As a result of the information technology staff being efficient, staff reported that there was seldom a requirement to seek their assistance. Staff also reported that given there was adequate, but minimal, technology within the workplace, any issue they may have had was

generally a server issue and was quickly resolved. The wireless connectivity which was mostly used by clients on site was reliable and clients seldom complained of issues.

There was one shared smartphone on site, which was used solely when staff were attending meetings off site. Use of the smartphone was infrequent, as meetings with peers occurred via teleconference if at all. All staff during observation advised they had recently been provided a new commander telephone for each of their desks. Staff reported being confident in being able to use the commander telephone system, as they had been educated by information technology staff, regarding the functions. There was an electronic and a hard-copy user manual available on site to support staff with the new system.

Use of Technology

The predominant use of the desktop computer was for staff to access electronic clinical files and information for themselves and to educate clients and arrange clinical appointments.

The monitor of the videoconferencing facilities was used to project minutes for the onsite staff business meetings. There was a commercial photocopier located in the reception, which all staff were able to access and use. This machine was used to fax, photocopy and print documents, as well as to receive documents.

The service had an Email Usage policy which advised staff regarding the appropriate use of email for work purposes. The policy reiterated the importance of: *'the framework within which email may be used lawfully, ethically and respectfully….to aid performance of their duties.' (P1, L9)*. The policy, Information Systems: Access and Security, clearly outlined the service parameters in relation to staff accessing technology and ensuring information accessed and shared, ensuring secure and private access for staff, clients and the service. This involved staff accessing the Internet, password access, computer access, wireless access and service networks. The Internet Usage policy provided clarification regarding expectations of staff in relation to staff being able to: *'Access up-to-date health care and business information…to assist caregivers to perform their duties.'(P1, L4).*

5.5.4   Summary Site Five

Staff at Site Five were all assumed to have the knowledge to use provided technology, resulting in some technology not being used to its capacity. Technology not being used to the optimum involved videoconferencing equipment. Staff stated they had not been

educated on how to use the equipment, nor had they had a requirement to learn to use it. Therefore, they had not sought clarification regarding the use of videoconferencing equipment. The videoconferencing monitor was used as a screen to project minutes of business meetings. Staff reported there was adequate technology to competently perform their clinical roles and adequate policies to inform their practice in relation to the use of technology and ensure privacy and security. It was well evidenced that clinical practice at this service was well informed by various policies of the service.

5.5.5 Chapter Summary

This chapter has presented findings from each case to allow each case to tell its unique story, through its relationships, problems and situations (Stake, 2006). The following cross-case discussion chapter highlights and merges key findings and relationships across the five cases. The chapter also explores the situationality (Stake, 2006) of each case in relation to the understanding of the phenomenon of regional community mental health nurses' experiences and understandings of e-mental health.

Chapter 6: Cross-Case Analysis

6.1 Introduction

This multiple case study examined the quintain of regional Victorian community mental health nurses' experiences and understandings of e-mental health. Commonalities and differences between sites were found. According to Stake (2006), multiple sites allow for in-depth examination of the quintain with respect to the research questions asked. This methodology allowed for commonalities and uniqueness of the quintain to provide cross-case analysis which retains 'experiential knowledge' (Stake, 2006, p.44).

The cross-case analysis involved comparing themes generated from the analysis of data collected for each site. According to Stake (2006), analysis relies on thick rich description in order to get a better understanding of the quintain. The cross-case analysis realised three major themes inclusive sub-themes that were common across the five sites. The themes are summarised in Table 2.

All five sites provided face-to-face clinical consultation, whilst Sites One, Three and Four also provided clinical outreach. The necessary technology was provided at all sites for clinical staff to provide face-to-face and clinical outreach as required. However, all sites reported regular technology connectivity issues which influenced the technology staff used and posed challenges when undertaking clinical activity, including accessing electronic clinical files. All sites had access to the Internet which staff at all sites reported was most beneficial to provide timely and contemporary information for staff and clients.

1.   To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?

Therapeutic relationship

Service forms for clients at all five sites were electronic, however one mental health nurse at each of Sites One and Three preferred paper forms as they were more comfortable with the process with paper forms. Both staff believed that it was important in the first instance to meet the client face-to-face to develop rapport and engage in a face-to-face assessment to assist with the development of the therapeutic relationship. They believed that face-to-face assessment was pertinent to obtain an accurate assessment of the client, paying attention to their appearance and behavioural clues during the interview process.

Assumed knowledge

Common across all five sites, was technology that was not used for its intended purpose/s or not used at all. Assumed knowledge by all clinicians in relation to the use of technology was also a consistent assumption. Site Three staff however had been introduced to and used electronic clinical files. While Site Five staff had been trained in the use and functionality of commander telephones when they were purchased.

2.   What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

Referrals to all five sites were from clients themselves or family members, general practitioners or other service providers, to name a few. Referrals were mostly face-to-face but some were made by telephone, email or fax. The use of technology was significant in assisting with the referral process to public mental health services. Unique user passwords were required to access the organisations' databases, and these provided individuals with access to electronic clinical files, technology, email and Internet. The unique passwords ensured appropriate access and use by staff, and security and confidentiality of service information. The unique passwords were beneficial to staff as they ensured the individual was responsible for the content accessed and no other person could access the technology or information without authority to do so. The staff at Site One chose the number of monitors they had, and all staff except the mental health nurse practitioner had dual monitors, which all staff on Site One reported to most beneficial as it allowed them to multi-task. The mental health nurse practitioner at Site One was the only mental health nurse to have an individual printer for sole use. This equipment enabled printing of client medication prescriptions following health assessment. This was most beneficial as it allowed timely consultation with clients and ensured prescriptions were not misplaced amongst the other printed content with the shared printer.

Several of the sites shared technology. Mental health nurses at Site Four had access to a shared tablet; however, this was seldom used as it was not always available when a staff member required access. The tablet did not have wireless capacity, therefore was unable to be used off site and some mental health nurses did not know the passcode to access it. The shared technology was taxing for staff as inadequate provision of technology within the organisation to support work practices was not equitable and impacted on workflow. Mental health nurses at Sites One and Three had individual tablets which they used during outreach clinical consultations.

Staff at Sites One, Two and Four spoke about availability of webinars which were often difficult for mental health nurses to participate in, because clinical work was a priority. These were generally offered during working hours although after-hours webinars were offered. These were also impractical for most staff as the times conflicted with their family meal times and other personal commitments.

IT not used to capacity

Staff at all five sites had access to electronic calendars; however, the uptake of the electronic calendar was poor. Reasons attributed to why they did not use electronic calendars included preference for paper diary they could 'carry with them', and for some not knowing how to use the technology. Some staff suggested education regarding use of the available technology was advocated to assist them understand benefits of using the technology.

Use of IT

All five sites had clients who voluntarily engaged in the service; however, Sites One to Four reported that compliance with attending appointments at times was an issue. All sites sent electronic appointment reminders to their clients. Staff reported that clients at Site Five were cooperative overall and attended their scheduled appointments. Clients at Site Two were ad-hoc in their attendance to appointments. Staff were not able to identify reasons for non-attendance, except attributing non-attendance to their clients' younger ages. Clients at Site Two were required to be less than 25 years of age, often lived with parents and were still attending school and or university. Therefore, they may have had limited funds for data plans, or their parents had them on limited data plans for their technology, relying heavily on locations which provided free wireless Internet connection. Clients serviced by Site Three generally had clinical staff attend them in their homes. This strategy was part of the service's assertive outreach program. Clients generally co-operated with appointments. Sites One and Four had some clients who were mandated to engage in the service. Some clients at Site One were mandated by the courts, whilst some at Site Four were mandated under the Mental Health Act 2014 to engage in the service. Clients at Sites One and Four often had compliance issues, therefore it was challenging at times for clinical staff to engage mandated clients with treatment, both face-to-face or via technology. Staff at all sites were unsure if the appointment reminders assisted with client engagement and compliance, however they identified it was a measure which demonstrated the attempt to encourage their clients to comply.

Staff at Site Two also used technologies to support their younger clients regarding appropriate use of various sites and privacy settings. These staff felt this was particularly important, especially with clients who had learning disabilities. Technology was also used to administer pre- and post-consultation surveys to clients via tablet. The surveys were optional and there were occasions when the surveys were not administered, as a result of unstable wireless connection on site, which frustrated staff due to the impact on their clinical activity.

Staff at Site Three, used technology to instruct clients, that facilitated the establishment of rapport with them. Staff found that accessing Internet information reiterated what had been discussed with the client to clarify information was most valuable in developing the therapeutic relationship.

Some clients at Sites One, Three and Four reported to the staff that they did not know anyone who owned technology as they were socially isolated due to their mental health issues of severe and persistent anxiety or paranoia. Some clients had left school early as a result of their mental illness and had not been able to seek employment or had capacity to work. These clients could then not afford the costs associated with owning a computer or mobile telephone. As a result of the symptoms of their mental illnesses, they experienced poor concentration, which posed a challenge, and for some misplacing the technology was an outcome. There were reported examples provided of clients at Site Two having their technology removed by their parents for range of reasons.

Client group

Staff at Sites One, Three and Four disclosed that there were some clients who were reluctant or unwilling to use technology because of their paranoia. These clients were concerned about having a device recording information, and/or the lack of privacy settings related to use of the technology. Many of these clients preferred face-to-face interaction, whilst clients who were paranoid were generally reluctant to engage with the services, irrespective of the modality used for consultation (face-to-face or via technology). Staff at Site Three reported that some clients with severe and persistent mental illness opted to not respond to their mobile telephones. They believed if they answered the telephone, they would be assuming responsibility and would then need to engage. Therefore, clients did not want to engage.

Some clients at Site Two presented with teenage relationship issues and bullying, which were often exacerbated by use of technology through inappropriate use of sites and impulsive messaging to peers. There were some clients at Site Two who had borderline

lower intellect and required support regarding safe and appropriate use of technology following clients accessing inappropriate sites and sexting.

It was reported by staff across all five sites that younger clients were generally more technologically aware. However, this was generally in relation to the social use of technology and particularly in relation to use of social media sites. It was acknowledged however, that clients across the lifespan were aware of, and able to use technology. Staff at all sites explained that they used technology in their clinical role to educate clients as part of their treatment regime.

3.   What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

Connectivity and black spot issues

Staff found it difficult to utilise computers and smartphones in areas with wireless systems offering poor connectivity. Sites Two and Four had active connectivity issues which impacted staff ability to communicate with others and clients and to access information which influenced the technology staff used. The laptop was never taken out of the office as it did not have wireless connectivity capacity. The staff at Site Two were unable to use laptops due to unreliable connectivity. Site Two had hard-wired computers in every room to overcome computer access issues. This enabled clinical staff to undertake their roles, however staff needing to log-on to various computers was problematic as it was time-consuming as staff would need to log-on to another device and source the information they required for consultation.

Researcher Reflection One
Laptop computers were available but not used by clinicians as a result of the unreliable connectivity within the office space

Sites Two, Three and Four had blackspots outside the facilities impacting on staff travelling that potentially puts them at risk as they can't be contacted and are unable to contact others with black spots in areas which resulted in inability at times to use mobile telephones for communication. The geographical areas of Sites One, Three and Four, posed issues with connectivity, as in some areas no mobile telephone service coverage was available.

The five sites provided services to large geographical regions. The technology available to support staff, including the mental health nurses and the services in general varied depending on the platforms available. Clinical staff at Site Three provided assertive clinical outreach services to wide geographical area. Internet connection was patchy across parts of the region they serviced and there was limited mobile telephone coverage in areas. Staff reported they left messages for clients and hoped they would respond. As a result of poor Internet connection and poor mobile telephone coverage, staff often provided face-to-face contact with clients who were often socially isolated because of their severe and persistent mental illness. Some staff believed it was easier to communicate face-to-face with these clients than use technology they considered was not reliable nor useful method of communication for these clients via telephone were often thwarted due to poor mobile service. Staff relied on pre-arranged face-to-face appointments with clients, however this approach was undermined when clients failed to attend. Staff reported reliable mobile telephone network coverage would be most beneficial, and if there was flawless mobile telephone coverage it would be an excellent resource to complement their role.

Unreliable technology

Sites Two, Three, Four and Five had videoconferencing facilities, however this equipment was not used for videoconferencing. Staff at Site Four had attempted on numerous occasions to teleconference with peers at the other offices, however due to connectivity issues as a result of old and unreliable equipment staff opted to choose alternative means to communicate with their peers which was generally travelling to meet face-to-face. Staff at Site Four discussed the preference clinical staff had for videoconferencing to communicate with their colleagues at the other offices. There were also multiple videoconferencing facilities, but there were often server breakdowns, resulting in videoconferencing facilities not working. The videoconferencing equipment was old and screen quality was poor. Other reasons staff did not embrace videoconferencing was attributed to them not knowing how to use the videoconferencing equipment.

> **Researcher Reflection Three**
>
> *Three sites had videoconferencing facilities which none of the staff interviewed or spoken to during observation were educated regarding the use of the equipment to its capacity.*

Clinical staff at Site Four reported significant obstacles encountered when there were service-wide technical outages. During these occasions, staff were unable to access electronic clinical files to assist with gaining an accurate clinical presentation, which posed challenges with ascertaining a client's level of risk, as staff were unable to access all necessary clinical information. Staff were frustrated during these service-wide technical outages as they were required to document on paper then transfer information to electronic databases which was time-consuming.

Clinical staff identified that overall they were provided with adequate resources to conduct their clinical roles; however challenges predominantly related to unreliable technology. The services experienced technical outages which effected three sites. The services did not have contingency plans when this occurred which frustrated staff. Connectivity issues on the two smaller sites, particularly in relation to videoconferencing which was important to be able to conduct team meetings between clinic staff at all of the sites, was challenging as it was unreliable. Therefore, staff either travelled to join meetings face-to-face or if time did not permit, they did not engage in team meetings.

As a result of staff not being aware of the capacity of the technology within their respective workplaces, available technology was generally not used to capacity. Site One did not have documentation concerning the use of technology within the workplace, however Site One was well-resourced with the necessary technology for staff to complete their clinical roles. All staff reported that management was supportive with timely provision of technology if staff identified and were able to account for the rationale for technology to be purchased. An example of this was the mental health nurse practitioner requiring a printer which was not shared and able to print prescriptions.

Client access to IT

If clients did not have their own technology, it was provided by the service if deemed necessary at Sites One and Three. Whilst staff at Sites One, Two, Three and Four reported that if a client did not have their own technology, they would often know

someone who owned technology which they could access if required. The clients at Site Five, who had mental health issues postpartum, were reported by staff as not having issues with affording technology, rather the challenge posed was having time to access technology, however given the nature of their postpartum presentations, and having babies to care for, were unable to access the technology as a result of being time poor.

Clients' abilities to purchase and maintain technology varied between sites. At Site One, some clients were able to purchase and maintain the technology, or there was the capacity for a tablet to be lent to them. Many clients at Site One had alcohol and other drug issues and some had been known to sell the technology to purchase licit and illicit substances. Therefore, it was at times difficult for him to arrange and confirm appointments with clients. Clients at Site Two, were of younger ages (16 to 25 years of age), and generally had technology provided by their parents. They also had access to data unless they had used the data allowance or left home and therefore did not have access to a data plan. Socioeconomic status of the parents influenced clients having access to technology and being able to afford the purchase and on-going costs associated with technology, however these were not common issues.

Some clients at Site Three had been provided with Australian Commonwealth funded mobile telephones to assist with service engagement in the past, however the Australian Commonwealth capacity building funds had since ceased. Some of the gifted mobile telephones were still in use, whilst others had been lost by the clients who lived with a severe and persistent mental illness. The majority clients accessing services provided at Site Three were commonly unable to afford mobile telephones as they were reliant on a pension for income. The staff used the opportunity to develop trust and rapport through providing instruction to them on the functions and use of the mobile telephone.

The clients at Site Four had difficulty affording technology, but lack of technology use was generally attributed to being on disability pensions by choice as a result of paranoia and not trusting technology.

Communication was expediated through use of technology at all sites in this study. Technology in the form of email communication also assisted staff at the five sites to communicate with clients, peers and other service providers in a timely manner which was identified by staff as being most beneficial. Staff at Sites One, Two, Three and Four regularly utilised text communication to and from their clients.

Staff access to IT

At Sites Two and Five, the administrative staff generated text appointment reminders to clients but, but clients were not able to respond to these. Staff at Sites One, Three and Four regularly used mobile telephones to text, call and receive calls from peers, clients and other service providers. Sites Two and Five accessed a shared mobile telephone which generated appointment reminders for their clients and this shared telephone was used, if staff were attending meetings off site. Clinical staff at Sites Two and Five, which both provided only face-to-face on-site clinical service, shared a mobile telephone on their respective sites. Both sites maintained the mobile telephones to be used by staff when they were attending meetings off site. Site Four had governing documents regarding safe and appropriate use of email and Internet, particularly in relation to confidentiality and security with the requirement of individualised passcodes to access the technology.

Site Five had several documents governing use of technology within the workplace. The information pertained in the documents was evident in the workplace. There were adequate technology resources provided on location, however there was no technology on location which was in storage and not used, apart from videoconferencing equipment not being used to capacity. Documents for case five explained fiscal considerations in regards to the purchase and ongoing use of technology within the workplace. Safety and privacy considerations were also detailed, and this was evident with technology requiring individualised passcode access to use.

There were financial considerations in relation to the provision of technology for staff employed at Sites Three and Five. Purchase and maintenance of technology was closely scrutinised by management of their respective sites. Site Three had a policy which clearly outlined the expectation that staff used the mobile telephone as a last resort due to financial and health reasons. Staff were expected to ensure mobile telephone use was limited to $30 per month, despite their role involving assertive clinical outreach to a large geographical region. The staff were expected to use their work-issued mobile telephones only for emergencies and were expected to predominantly use the landline on location. Staff reported this was difficult due to the assertive outreach nature of their role, requiring them to travel across large geographical regions in rural areas where technical service coverage could be poor.

Sites Two and Three had documents governing the safe and appropriate use of the email and the internet and the individualised passcode access for use. Case three also had a governing document limiting mobile telephone usage with a $30 per month data

plan. There was an expectation that staff used the mobile telephone as a last resort if they were unable to use the landline.

4.   What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

Staff education

The clinical staff at Site Three reported that they were fortunate to have been educated by the information technology staff as new computer programs were implemented within the service. The clinical staff identified that information technology staff were approachable and responded to their queries in a timely manner which was appreciated. They were however able to guess what e-mental health involved. A mental health nurse at Site Two used a web application with his clients, whilst there were also mental health nurses at Sites One and Four who were confident they were familiar with e-mental health.

Researcher Reflection Four

Some mental health nurses at Site Two and Three were familiar with the term e-mental health but were unsure what the term encompassed.

Some mental health nurses had been exposed to e-mental health during their postgraduate studies in mental health nursing, or from attendance at conferences. Despite learning about mental health, none of these mental health nurses had applied these learning into their work practice. All mental health nurses interviewed and staff spoken with during the observation reported interest in learning about e-mental health. They identified the benefits of being more resourceful and able to capture a greater audience with the use of e-mental health.

6.2   Chapter Summary

This chapter provided a cross-case analysis data from all five cases. The next chapter presents a discussion of the analysis in the context of existing literature to capture an understanding of regional community mental health nurses' experiences and understanding of e-mental health and position the findings in the broader knowledge base.

Chapter Seven: Discussion

7.1   Introduction

The aim of this study was to explore regional community based mental health nurses' understandings and experiences of e-mental health applications in Victoria across five services. The multiple case study approach has shown that the five services had commonalities and diversities as discussed in detail in the previous chapter. This chapter commences with a review of the study's theoretical and methodological framing. The key findings are examined, including implications for theory, existing research and the practice of the various stakeholders. The chapter discusses the relevance of the findings to other contexts and existing knowledge and responds to the research questions study:

1. To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?
2. What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?
3. What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?
4. What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

The chapter further concludes with some reflections on the limitations of the study and suggestions for future research.

Writing this thesis has been a highly reflective process. I have developed learnings, and have reflected on new understandings, at a deep level. I have questioned and reflected and come to understand the way I view knowledge and reality. Roulston et al. (2008) discuss critical self-reflection as a step towards developing reflexive research practice. Writing notes and maintaining a reflective journal and concept mapping assisted me throughout this research process. It allowed me to critically document and attend to my own biases and subjectivities as they arose. The journal also allowed me to keep track of new insights, interpretations, and ideas for future research.

The results of this study demonstrated a multitude of factors were at play for these community mental health nurses in relation to their understandings and experiences of e-mental health in their clinical roles. Whilst some factors were internal, other factors were broader. The results of this study indicate that e-mental health was used by some of the

mental health nurses to engage with clients. Some internal factors, which influenced the application of e-mental health, were person dependant and limited by the assumed knowledge of the mental health nurse. These factors were similar to studies conducted by Blanchard et al. (2012) and Nambisan et al. (1999), and a literature review by Batterham et al. (2015). They found that technology adaption was lessened when staff were not educated regarding the use of technology. Some staff used technology primarily for the purpose of communication within services and between staff. Staff also advised they opted for alternative means to practise rather than use technology because they did not know how to use the technology.

External factors influencing the application of e-mental health included connectivity issues and technology availability, which were both barriers in this study and the studies conducted by Blanchard et al. (2012) Becker et al. (2013). These findings are further reiterated by the research by Nambisan et al. (1999), Blanchard et al. (2012) in relation to the use of technology in the workplace. E-mental health is an under-utilised resource, and the community mental health nurses in this study acknowledged and identified that an increased uptake of e-mental health as a work practice standard could benefit their clinical practice. E-mental health could assist with expediating service delivery and assist in extending the reach to clients with mental health issues, stigma, and those who are often difficult to engage with because of their social and or geographical isolation. This is in line with national and international reports which identify benefits to be gained by engaging with e-mental health to broaden mental health service delivery to a greater community audience of people with mental health issues (Department Health and Ageing, 2008; World Health Organisation, 2011).

The use of e-mental health was not standard practice, nor was it used to its capacity by most sites in this study. The endorsement of e-mental health was reflected in one site through multiple policies and procedures and the application of e-mental health was most evident there. Whilst other sites had minimal, if any policy or procedure, there was lack of responsive corporate and clinical leadership in relation to connectivity issues and unreliable technology (Blanchard et al., 2012). These barriers were identified in this current study, as impacting on the community mental health nurses' decisions to use e-mental health in their clinical practice.

Factors contributing to underutilisation of technology in the current study included staff education, training, corporate and clinical leadership support with technology. Staff education related to educating staff about what e-mental health entails, what e-mental health is available and was endorsed by the service and updates for staff to ensure they were competent and confident with the use of e-mental health. Staff training included

what e-mental health was available and how to use it to its capacity and in a manner that the service endorsed through policy and procedure. The staff training would also facilitate opportunities for clinical staff to become competent and confident in the routine use of e-mental health service delivery. Staff education related to staff having the capacity to attend education that endorsed e-mental health use and to identify resources available that could be embraced in the e-mental health landscape to enhance clinical treatment. Corporate and clinical leadership related to the overall lack of policy and procedures within the various services to support use of e-mental health and provide guidance and direction regarding service expectations of e-mental health use. This is consistent with reported factors contributing to underutilisation of technology in primary health care. These such barriers have led to the exploration and suggestions of various conceptual frameworks to address them, and to support policy-makers and clinicians to implement and integrate the use of e-mental health in routine care (Reynolds et al., 2015). The proposed conceptual frameworks inform professional training, promotion of e-mental health resources for staff and evaluation activities and support by leadership to endorse this activity. The Australian Department of Human Services (2009), Commonwealth of Australia (2009), Australian Department of Health and Human Services (2016) and Klein et al. (2014) endorse the initiative to use technology and educate clinicians to support workforce innovation in public mental health service delivery. There must be consideration to some significant components. It is imperative that there is staff engagement and the knowledge of how to perform one's job effectively, in conjunction with the motivation to apply that knowledge with organisational commitment is fundamental to this process (King et al., 2018).

The findings of this current study demonstrate that mental health nurses had an interest in increasing their uptake of e-mental health as standard practice. The under-utilisation of e-mental health was attributed to the mental health nurses having lack of knowledge of use of e-mental health and the potential capabilities e-mental health affords. Literature reviews by Abbott et al. (2009), Batterham et al. (2015), Fairburn and Patel (2017), Gagnon et al. (2012) and Waller and Gilbody (2009) highlighted barriers of clinicians' lack of awareness of e-mental health services and reiterate the necessity for clinicians to be adequately trained to ensure safe and competent practice occurs. Research conducted by Atkinson et al. (2008) of people in the Australian community, including 30% of the sample being educated professionals, established that people of varying ages reported an assumption and expectation that they knew how to use technology. The participants reported this confused them, because their specific knowledge needs were not addressed. This was evident with younger people and older people alike, which is consistent with the findings of this current study. All participants of this study reported

that knowledge in relation to the workplace technology was assumed and staff either learnt about technology from their peers or were self-taught as the need arose.

The study undertaken by Blanchard et al. (2012) ascertained from the sample of Australian youth mental health clinicians that there was a relatively low awareness of e-mental health within the sample, which resulted in limited evidence of e-mental health being used in clinical practice. The study by Clarke et al. (2017) also established that e-mental health was underutilised as a result of lack of clinicians' knowledge. An overwhelming 98% of their participants stated they would consider engaging with e-mental health with youth clients if they were educated regarding online technologies. Undergraduate students were studied the sample in the research by Ziefle (2002) which concluded a correlation between participants who had expertise regarding the various functions of a smartphone and increased usability of smartphones. These findings corroborate the importance of individuals having knowledge to enhance the uptake of technology in practice. Lack of knowledge regarding e-mental health by participants in this study was further extenuated by lack of opportunity for mental health nurses to use e-mental health to its capacity. Contributing factors included lack of knowledge regarding technology, lack of reliable resources and connectivity issues. The service with the greatest uptake and that maximised the use of e-mental health had the most policies and procedures to endorse, and guide use of e-mental health. Most services had minimal if any policies and procedures regarding e-mental health use.

While a study by Mora et al. (2008) found that many psychologists were not familiar with e-mental health, nor were they interested in being educated, endorsing or adopting e-mental health in clinical practice. The rationale provided by the psychologists were concerns regarding the negative impact on therapeutic relationships due to not being able to clearly observe physical cues. Staff within this study were generally self-taught about technology use as the need arose, whilst alternatively they opted to avoid using the technology and chose alternative ways to perform their roles without it, which included face-to-face meetings and consultations with clients.

Barriers regarding the lack of reliable technology and connectivity available were significant in this study. Research conducted by Becker and Jensen-Doss (2013) established that 25% of their sample who were American therapists reported having no high-speed Internet at work. The mental health clinicians in the sample of the study by Orlowski et al. (2016a) identified that there was a need for reliable Internet access to support and allow engagement with technology in the service. The sample in the study by Blanchard et al. (2012) also reported concerns regarding lack of technological infrastructure being a hindrance for clinicians working in Australian youth public mental

health, particularly as the staff identified that technology was important to their youth clients. While a study by Mora et al.(2008) found that many psychologists were not familiar with e-mental health, nor were interested in being educated, endorsing or adopting e-mental health in clinical practice. The rationale provided by the psychologists were concerns regarding the negative impact on therapeutic relationships due to not being able to clearly observe physical cues. Staff in the current study were generally self-taught about technology use as the need arose, whilst alternatively they opted to avoid using the technology and chose alternative ways to perform their roles without it, which included face-to-face meetings and consultation with clients. They attributed this to youth in society generally using technology as their preferred medium of communication; therefore, staff felt this was a hindrance to the therapeutic relationships with clients.

The rural-urban divide in the U.S.A., as researched by Hindman (2000), also was identified as a structural barrier to the adoption of technology in various communities. These findings are consistent with Australian data regarding the available infrastructure being lesser in rural areas posing connectivity issues and low Internet connection speed (Curtin, 2001), reducing options with Internet-delivered interventions. The study by Bowen et al. (2006) and literature reviews conducted by Fairburn and Patel (2017) and Musiat et al. (2014a) reiterate the challenge with disseminating the use of technology in clinical practice in mental health as a result of restricted coverage for Internet-enabled devices across the population. A study undertaken by Handley et al. (2014) with a sample of public communities in rural Australia found that availability of Internet access was reduced with increasing remoteness, however the sample reported this had limited impact on feasibility of using the Internet. These outcomes suggest that geography may not impact on the engagement and use of technology, but living with a mental health issues does influence individual's capacity to access and use technology.

Consideration must be given to the sample of the study being over the age of 55 years of age. They also tended to be reluctant to engage with technology in their lifestyle due to lack of personal exposure to technology. The study by May et al. (2001) identified that psychiatrists in their U.K. sample reported connectivity issues posed challenges when conducting interviews and a potential negative impact on the therapeutic relationship when the reception signals were faulty. Despite concerns regarding faulty reception signals, the psychiatrists reported being more concerned with how to best conduct a clinical encounter within normal constraints of the camera and screen. However, further development and advances in technology since the study by May et al. (2001) should be considered. The visual and audio capabilities and enhanced quality of technology in recent times have advanced.

The following key findings to this study will be discussed further in this chapter:

7.2   *Key findings to the study*

1. There are varied levels of corporate and clinical leadership supporting the application of e-mental health in the workplace.
2. Appropriate information technology infrastructure and ongoing support is imperative to assist with embedding the use of e-mental health in the workplace.
3. Financial considerations significantly impact on the availability and use of e-mental health in the workplace.
4. Community mental health nurses generally do not have the knowledge, working awareness and experience of e-mental health.
5. Technology is under-utilised in the workplace.

Each of these findings is discussed in detail in relation to the research questions for this study, including the implications for theory and existing research, and for stakeholders (government, managers and clinicians).

7.2.1   Varied degree of corporate and clinical leadership supporting the application of e-mental health in the workplace.

Research Question 1: To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?

The reality was that most sites in this study had limited policy, procedure, or documents to guide the use of technology in the clinical environment. Policy generally related to email and Internet usage broadly, however provided no guidance in relation to the usage of videoconferencing, teleconferencing, mobile service coverage, or how to raise or escalate concerns regarding technology when unreliable or lack of service coverage. These were all areas which clinicians involved in this study reported would have been beneficial to assist, support and guide them with their clinical practice and to support and endorse increased clinician confidence in the use and application of e-mental health resources. The studies conducted by Ramsey et al. (2016) and Orlowski et al. (2016b) identified that staff were more receptive to the use of technology when the use of technology was authorized by management and resourcing was available. On the contrary, unresponsive corporate and clinical leadership posed a consistent challenge with the services. Staff who shared technology generally opted to not use the technology, due to that technology not being available or being misplaced.

Research Question 2: What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

Despite evidence of national initiatives endorsing the use of e-mental health as a standard for public mental health service delivery (Australian Department of Health and Ageing, 2008; Commonwealth of Australia, 2009; Commonwealth of Australia, 2010; Australian Government, 2015), there was no evidence of these national initiatives embedded in any of the sites through the service delivery model, nor any endorsement at local policy and procedure level. Local policy and procedures regarding application of e-mental health, if they existed, focused on security and confidentiality. Staff were required to use unique logins to access individual technology devices to ensure service-related information was not inappropriately shared. The service which had numerous policies and procedures having their greatest uptake of technology, whilst others had rudimentary if any, policy and procedure regarding technology and when they were available were not linked to clinical practice service delivery guidelines to assist with embedding technology in clinical practice. A literature review conducted by Fetter et al. (2009), and study conducted by Clarke et al. (2017) also highlighted the necessity to have policy and procedure embedded into the service model to assist with embedding e-mental health into routine service delivery. Furthermore, research by Orlowski et al. (2016b) established that there was a need for a commitment by both leadership and workplace culture to support, nurture and embed e-mental health as an organisational priority. The sample consistently reported the need for policy and procedure, systems and the necessary and useful technology to be readily available, and clear and detailed policies and procedures to support and guide practice.

Research Question 3: What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

The barrier of unresponsive corporate and clinical leadership was evident at several sites, with participants reporting that information technology connectivity issues and unreliable equipment were reported to their management. However, these concerns were not acknowledged or addressed. Unresponsive corporate and clinical leadership was also evident as a challenge in the findings in the study conducted by Blanchard et al. (2012), which identified that staff who attempted to integrate technology into their practice were faced with opposition from managers and peers because they felt the use of technology posed risks. Alongside the barrier of unresponsive management was the barrier of inconsistent leadership and unequal distribution of technology resources. At the sites that had satellite offices, these satellite offices did not have equivalent technology to the main offices. It was reported that not all staff at all sites had landline telephones with

speaker telephone capability to allow staff to participate in scheduled teleconference meetings. The lack of equitable technological resources was evident in the research conducted by Blanchard et al. (2012), whereby 25% of the sample shared computers, whilst 75% of colleagues were provided with their own individual computers, which impacted upon their clinical practice. Participants in the study also reported experiencing opposition from peers and management in relation to the use of technology in their practice. This opposition frustrated some of the sample as the service did not support the use of technology despite 75% of the sample believing technology would allow them to have a greater impact on a young person's mental health.

Another discrepancy in relation to inequitable distribution of resources was that at some sites, managers had dual monitors for their computers, whilst clinicians were provided with single monitors. Most clinicians were frustrated by having single monitors as they acknowledged the benefits that could be gained from dual screen monitors to assist with time efficiency and multi-tasking. Management at all sites in this study attributed the single monitor provision resulted from fiscal considerations, despite staff reporting they could be more productive with dual-screen monitors. These fiscal considerations resulted in most staff feeling devalued as professionals and mental health experts in their clinical roles. Christensen et al. (2002) identified concern in relation to the cost of technology in the workplace in a national Australian study. Participants in the study identified one of the main disadvantages to implementing e-mental health was the expensive cost to develop and associated on-going maintenance costs. Ramsey et al. (2016) also identified in their U.S.A. study regarding the use of technology in behavioural health care, that insufficient budget to develop and ongoing maintenance costs were the main barriers to implementation of behavioural health technologies. Klein et al. (2014) conducted research which demonstrated cost efficiency of e-mental health, particularly for anxiety and depressive disorders, particularly when used to complement face-to-face service delivery. The cost effectiveness occurred by allowing staff to engage with clients in a timely manner, therefore being able to engage with an increased number of clients. Organisational commitment to practice and change in practice facilitates organisational citizenship behaviour which promotes staff engagement with workplace culture and to feel valued (Little & Little, 2006).

Historically, the consortium involved at one of the sites had provided corporate and clinical leadership which was considered invaluable by the staff. The clinical staff reported this was due to the leaders of the various consortium services supporting and agreeing on service delivery expectations, objectives, and with the technological resources required to deliver service. Over time, leadership changed with new leaders, inconsistent decisions regarding service delivery and technological resourcing provided

to staff. Staff felt disaffected complaining that they were unable to participate in videoconferencing, as not all services within the consortium had videoconferencing facilities available. Therefore, there were changes in clinical practice because staff were given less support and technological resources to carry out their jobs. As a result, some mental health nurses reported that they spent the majority of their workdays at their desks undertaking administrative tasks.

Another mental health nurse increased clinical outreach via face-to-face service delivery. This was necessary to meet needs in the absence of technologies that had become defunct and were not replaced. Staff were forced to adopt face-to-face service delivery methods that reduced overall productivity and were time inefficient. Concerns regarding the lack of support from leadership were reported by staff in a study conducted by Blanchard et al. (2012). Their participants reported that a lack of awareness of e-mental health and associated policy to support the use of e-mental health, resulted in staff continuing to offer traditional face-to-face service.

Job satisfaction and related commitment is associated with being valued and supported in the workplace (King et al., 2018). Conversely, when management withdraw resources and make decisions without consulting staff in this study has been found to impact adversely on client care. This was despite clinicians acknowledging the use of e-mental health could empower clients and reduce barriers to engagement with clients. Gammon et al. (1998) established that staff reported changing their clinical practice as a result of using telepsychiatry to ensure communication was adequate that enhanced client outcomes.

There were limited policies and procedures guiding the use of e-mental health in most of the sites involved in this study. Lack of policy and procedure were also found to be barriers for participants in the study by Blanchard et al. (2012) and in literature reviews by May et al. (2001) and Fetter et al. (2009). Lack of policy and procedure resulted in a lack of service systems to support safe and appropriate use of technology in clinical practice. There were discrepancies at sites with some clinical staff providing their mobile telephone numbers to clients and there was no policy or procedure to guide the staff decisions to do so. The literature reviews highlighted the necessity for local and national policy advocating the use of technology as a necessary facilitator to embed the use of technology in clinical practice (Bennett et al., 2008; Blanchard et al., 2012). There were discrepancies at some sites regarding clinical staff providing their work mobile telephone numbers to clients. Some sites had no policy or procedure regarding access to work mobile telephone numbers. The importance of accurate and detailed policy and procedure to support use of technology in the workplace was further highlighted by more

recent Irish study conducted by Clarke et al. (2017). They surveyed 900 professionals from education, health and mental health who worked with individuals with mental health issues who strongly advocated for leadership in the form of policy and procedure and processes to assist with supporting and guiding professionals in relation to treatment of those with mental health issues.

Research Question 4: What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

One site in this study, that proactively supported the use of e-mental health, had multiple policy and practice guidelines that supported the use of email, Internet, telephone and information technology platforms. The policies and guidelines provided structure and guidance regarding supporting professional practice for clinicians, the organisation and clients and community. Adherence to policy and guidelines ensured ethical use of e-mental health occurred and ensured privacy and confidentiality for all stakeholders. The site was poorly resourced in terms of e-mental health resources which is consistent with the participants in the study by Blanchard et al. (2012), whereby staff often shared computers. However, staff reported that they were provided with adequate resources regardless of whether they were shared, and policies and procedures to guide their clinical roles. Underutilisation of e-mental health interventions was a feature of this site. At the site, which had policy and procedure guidelines directing use of technology in the clinical environment, staff felt supported and were confident with the clinical decisions they made. The various policies and procedures provided a framework by which clinicians used the various e-mental health resources within their clinical roles and was encouraged. A literature review by Rickwood (2012) highlighted benefits to be gained with the introduction of initiatives such as the Beacon project, which allowed the implementation of online interventions to be regulated and to ensure high quality, well monitored, evidence-based interventions. The Beacon Project was an initiative which services could lever as a pivot to developing policy to implement e-mental health into routine service delivery. The implementation of action research which seeks to develop and implement change could be most valuable in further developing the services involved in this study (Newby, 2014). The principles of action research could facilitate change in goals and practices necessary for e-mental health to be embedded into mental health service delivery. Klein et al. (2014) discuss that e-mental health services, which had incorporated the Beacon project afore mentioned, all adhered to clinical risk management and security standards, which also aligned with ensuring quality policy and processes which could be utilised by services.

The endorsement of e-mental health use in contemporary mental health practice is reiterated and endorsed by national policy, which recommends use of e-mental health in clinical practice (Australian Department of Health, 2012). The uptake of routinely using e-mental health resources enhances equity of access to services for people with mental health problems, reducing stigma and discrimination, thereby allowing for a greater number of people with mental health problems to have access to mental health support and service Klein et al. (2014) and Australian Department of Health (2012). Policy and procedure considerations have been identified as the number four barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011).

7.2.2 Appropriate information technology infrastructure and on-going support is imperative to assist with embedding the use of e-mental health in the workplace

Research Question 1: To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?

There were concerns expressed by staff at some sites in this study in relation to privacy and security for staff and client information. This was despite staff at all sites being aware that access to technology required unique user passcode to access. Mental health professionals, and people with psychological issues, have reported concerns about security which included concerns of not being able to guaranteeing that only the intended recipient would receive the information (Blanchard et al., 2012), and confidentiality of the client the clinician was engaged with due to concerns of level of security of the technology (Blanchard et al., 2012; Bennett et al. 2010; Christensen et al. 2002; Furber et al., 2011; Orlowski et al., 2016a). There is however, extensive literature that identifies strategies and recommendations to address these concerns, for example storing minimum levels of information required (Forjuoh et al., 2014). The World Health Organisation (2011) makes numerous recommendations addressing data security. Recommendations include password protection as a priority risk management initiative to ensure data security, along with network login requirements, synchronising files to the devices, backup and recovery applications. It is also recommended that it is essential that all devices have antivirus and firewall capabilities to prevent data loss or infection. These recommendations should be evidenced in all services' policies and procedures where e-mental health constitutes the service model. Concerns regarding privacy issues and other people accessing an individual's program were identified. These concerns were overcome with the recommendation and use of strategies for use of contemporary technology by incorporating secure sockets layer (SSL) and encryption technologies (Midkiff & Wyatt, 2008), and including the provision of automatic or password protection access to reduce privacy breaches (Fan & Yan, 2010). All of the sites involved in the

study adopted all of these strategies. Some clinical staff however, lacked understanding that unique passcode access was to facilitate secure and private access to the technology; the sharing of such insight by clinicians, encouraging clients to utilise a unique passcode with their technology may assist with addressing and resolving clients' concerns in relation to the engagement with technology. The fundamentals of organisational commitment, job involvement, consultation regarding one's role, and sense of workplace inclusion and belonging are fundamental to reducing staff turnover and assists with the increased likelihood of staff work satisfaction and staff remaining committed and engaged with their role (King et al., 2018).

A recommendation by Bennett et al. (2010) advises that services have procedures in place to direct how to manage privacy of information and how to address breaches of privacy, should they occur. A report by Car and Sheikh (2004) established that staff who were concerned about security and safety, reported they would be more confident using e-mental health if there was standardised communication guiding clinical practice regarding e-mental health. Most of the sites had policies directing privacy in relation to the use of technology; however, some staff were not aware of the existence of these. Therefore, the culture of the workplaces with the lack of policy and direction in relation to technology use, were not conducive to empowering staff, in relation to the practice and application of technology. Perle et al. (2011) and Yuen et al. (2011) suggest that to support safety and confidentiality of client information, the clinician should educate the client regarding potential issues and take measures to protect the client. This involves the clinician being knowledgeable in relation to the software and programs in use and being able to proactively troubleshoot potential limitations they are aware of, or as they become known.

Workplace cultures at all sites involved in this study were not conducive to routine use of e-mental health in clinical practice. The participants in this study were not au fait with aspects of technology available and expectations for use of e-mental health. To assist staff embrace technology in the workplace, research by White et al. (2014) focused on engaging mental health professionals and individuals with psychological issues in co-design of e-mental health. This approach was adopted to overcome issues such as design flaws, which included previous technology platforms not supporting treatment methods and clinical practices. Notwithstanding, modifying the technology platform in response to mental health professionals input into the design, there was no significant increase in the uptake of e-mental health therapy.

Despite challenges with lack of reliable technology equipment, connectivity issues, geographical black spots, and lack of information technology support, all of the mental

health nurses involved in this current study were interested in engaging with the use of e-mental health interventions in their clinical practice if barriers were resolved and necessary resources provided. These findings are consistent with the research conducted by Gun et al. (2011) who surveyed non-professionals, health professionals and lay people, and found that participants were positive to the use of e-mental health interventions, particularly if they had good access to technology and interest in computerised interventions.

Research Question 2: What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

Discrepancies between main and satellite sites were evident in relation to information technology support. Satellite sites were disadvantaged because there was no on-site information technology staff available. The main sites received on-site face-to-face support as required, whilst satellite sites received remote information technology support which was often insufficient. Such concerns regarding lack of consistent technology support within this study are similar to those reported by Blanchard et al. (2012). Australian National Standards for Mental Health Services clearly state that services are required to manage and maintain information systems that facilitate appropriate service delivery and that all public mental health staff are aware and supported with these systems (Australian Government, 2010). Findings arising from the current study confirmed that information technology processes and support were lacking for staff, so adoption to above-mentioned standards ensuring medical technologies and information systems are embedded in clinical services would potentially assist with increased uptake in use of e-mental health, and clinicians would be informed, knowledgeable and supported in practice.

Unreliable equipment and connectivity issues were raised as significant concerns for frustration of clinical staff at most of the sites within this study. Despite the issues being raised with management in relation to ongoing issues with connectivity, the issues were not resolved. The technological equipment was often unreliable and the mental health nurses identified they lost confidence in the ability to use the available technology. A study conducted by Becker and Jensen-Doss (2013) established computer access and computer literacy as being strong indicators of clinicians' willingness to use e-mental health interventions. Their study found that when equipment was not available or reliable, staff opted for alternative ways to conduct business.

Mental health nurse challenges in relation to connectivity and unreliable technology were evident across all sites to some extent, and this was a major concern and frustration and

contributing factor to the digital divide for clinical staff in this and the study by Blanchard et al. (2012). Many staff reported connectivity issues and/or unreliable technology which generally resorted to alternative means of undertaking their clinical roles. Alternative means were generally more time-consuming, with staff resorting to face-to-face contact with clients and peers, rather than the use of teleconferencing, videoconferencing or mobile telephones. Connectivity issues impacting on staff ability to access and use technology in their clinical work was found in the study by Becker and Jensen-Doss (2013). The sample in the study who did not have access to high-speed Internet also shared computers with their colleagues which also posed challenges in relation to the use of technology. Musiat and Tarrier (2014a) identified that lack of high-speed Internet in rural areas limited the option for some Internet-delivered treatment, and staff in rural locations further reiterated that lack of Internet connectivity with the findings in the literature review. Only 20% of the sample indicated interest in regular use of Internet-delivered treatment in the future. Therefore, this suggests that the flexibility to routinely use Internet-delivered treatment in the future requires increased accessibility and acceptability in workplaces.

Research Question 3: What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

A major theme identified by mental health nurses throughout this study related to staff frustration resulting from lack of reliable technology equipment, connectivity issues, geographical black spots and lack of information technology support available to assist as needed in a timely manner. These factors impacted on the clinical staff's abilities to routinely use e-mental health with their clinical roles. As a result, staff often needed to change their practice to overcome these barriers. Ineffectual technology infrastructure has been identified as the number three barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011). Ineffectual technology infrastructure was also a major contributing factor to all of the sites in relation to routinely implementing e-mental health.

Research Question 4: What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

Sites which had prompt information technology support and on-site local education regarding information technology platforms, resulted in staff being more confident in the use of technology in their clinical roles. Research by Bennett et al. (2010) and a literature review by Gagnon et al. (2012) affirm that specialist information technology support assists with developing and implementing technology platforms for healthcare

professionals. The information technology support mitigated potential risks to allow e-mental health to be embedded into workplaces. The information technology staff collaborated with clinicians to ensure from a technical perspective that clinical practice could accommodate the routine use of technology. One site in this study had specialist technology support staff on-site. The participants at this site described their experience of using technology as being positive and they identified the introduction of new technological platforms had been seamless.

7.2.3 Financial considerations significantly impact on the availability and use of e-mental health in the workplace

Research Question 2: What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

This current study identified that there was a diversity of reasons client's did not have access to, or use technology. For example, some clients chose not to have technology as they were fearful due to their underlying mental ill-health about their privacy being compromised and security being threatened. These concerns were generally expressed by clients with paranoia who had concerns about their overall safety at home and feeling safe. Other clients had not been exposed to technology, therefore lacked sufficient knowledge and understanding of technology. This was generally as a result of unemployment or lack of formal education and the associated exposure to technology used by society. Therefore, the clients did not know what technology was available nor how to use it. These findings were consistent with research by Klein and Cook (2010) who identified that over 50% of a sample of Australian people were not knowledgeable regarding e-mental health. Participants of this study reported there were clients who were unable to afford the purchase and ongoing costs associated with technology, as reported in research by Blanchard et al. (2012) and White et al. (2014). The digital divide in Australia nationally also pertains to the financial cost to purchase and ongoing cost of technology (Curtin, 2001). Some staff in this study reported some clients chose to not have technology, not only because of mental health symptomatology, but also as a result of choosing to sell technology to support the purchase of substances due to their substance use. The study conducted by Orlowski et al. (2016a) identified that youth mental health clinicians did not endorse the use of technology for clients with particular diagnoses. The diagnoses which concerned staff in Orlowski et al's. (2016a) study were in relation to staff study maintaining professional boundaries for clients diagnosed with borderline personality disorder and the appropriateness of use of technology for clients diagnosed with schizophrenia.

Research Question 3: What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

Some of the technology available at the various sites was also shared between clinicians. Participants reported that this arrangement compromised their capacity to utilise the technologies available efficiently and effectively. Staff involved reported fiscal considerations influenced the purchase of fewer technological devices and the resulting expected sharing of resources between mental health nurses. Unfortunately, staff generally opted to either not use the technology because it was not available, or more commonly they would not use the technology because they were unsure of where the technology was and/or they did not know the passcode to access the technology. All of the mental health nurses who shared technology believed they did not get the opportunity to use it and develop the knowledge and skills required. These findings are supported by research by Becker and Jensen-Doss (2013) that established that the extent of computer literacy and use were strong indicators of mental health professionals' willingness to use e-mental health interventions. Earlier research by Gun et al. (2011), who surveyed non-health professionals, health professionals and lay people established a positive attitude towards the use of e-mental health interventions particularly if they had good access to technology and an interest in computerised interventions. Positive attitudes were attributed to strategies and knowledge about efficacy of e-mental health for clients and staff and establishing ethical and professional guidelines for safe and responsible use of e-mental health.

It is well known there is a disparity in access to technology for people living in regional, rural and remote Australia as compared to people living in metropolitan Australia (Curtin, 2001). Australians' Internet use continues to rise, however inequity of access to reliable Internet provision persists. The digital divide is also evident in relation to the education of individuals. Individuals who have a minimum Year 12 or equivalent (final year of high school) are significantly more likely to have access to the Internet individuals who have education equivalent to Year 9 education (Australian Bureau of Statistics, 2006). Living in rural and remote locations is often cited as contributing to the inequity. However, income, education (Australian Bureau of Statistics, 2014-2015), and age are more determinants of inequity of Internet access than geographical location. Rural and remote locations generally have fewer younger residents, along with fewer tertiary educated residents or residents with higher incomes than the average Australian income. All of these factors have been

shown to be identifiers of higher Internet users (Australian Bureau of Statistics, 2014-2015). This suggests that use of technology for rural and remote e-mental health purposes may pose a challenge due to the lesser availability of technology provided in these areas. A higher proportion of the population will have lower formal education and will less likely have access to technology. Both are factors which are prevalent in clients with mental illness and may be pivotal contributing factors to persons with mental illness not having the finances and being socially isolated due to their illnesses. In addition, those over 55 years of age are less likely to have Internet access at home due to the lack of awareness, interest, no perceived need for the Internet, or may be retired and therefore have less finances to support Internet connection, especially with clients with mental health problems. These identifiers are further enhanced with individuals who live in rural and regional locations generally earning less income and have greater likelihood of unemployment (Curtin, 2001; Australian Bureau of Statistics, 2006).

Fiscal considerations have been identified as a primary disadvantage to the routine implementation of e-mental health nationally by Christensen et al. (2002). Financial constraints have also been identified as the number one barrier internationally (World Health Organisation, 2011; Ramsey et al., 2016). The barriers imposed due to fiscal considerations were consistent in being the main contributing factors at all sites in relation to routinely implementing e-mental health. Lack of staff training and orientation could be addressed if specific staff were employed to deliver relevant training and to provide ongoing assistance with technology. The provision of equal technology to all staff at all sites, including the satellite sites, would ensure all staff can access the necessary technology. Upgrading of infrastructure to address blackspots and connectivity issues could be addressed at a cost. Availability of satellite technology could address issues identified by staff at all of the sites. There were concerns regarding the absence of technological infrastructure, posing a barrier to the use of e-mental health for the individual organisation and the service system, and this was expressed by those involved in the youth mental health service in the study conducted by Blanchard et al. (2012). Research conducted by Handley et al. (2014) identified that Internet access decreased with increasing remoteness, however participants reported that limited Internet did not impact on feasibility of using technology, but rather poor uptake of technology was related to lack of exposure and awareness of technology.

Staff in this study expressed frustration with organisational and operational parameters in relation to the limited technological devices, as the limitations placed a significant impact on them satisfactorily completing their roles of assertive clinical outreach. Some staff were unsure of what e-mental health was available and necessary for them to undertake their clinical roles. These parameters were generally determined by fiscal considerations

regarding provision of technology. Fiscal considerations were evident at all sites. Despite some staff being expected to provide assertive clinical outreach for their roles, the use of mobile telephones was restricted by limited data plans provided to all staff, regardless of their role being on-site or off-site. Restrictions on mobile telephone usage by clinical staff was imposing on their ability to engage with clients who were generally resistive to engagement, hence the requirement for assertive clinical outreach. The necessity for funding to support uptake of e-mental health is endorsed by Batterham et al. (2015) and Ramsey et al. (2016) who identify the necessity for funding by government to endorse implementation and support of e-mental health. Christensen et al. (2002) also identified financial consideration being a significant barrier to the uptake to e-mental health, as identified by the national sample of their study. Local policy also required the mental health nurses at the sites to use their landline telephones for communication. This was impractical, because their roles required them to be out of the office for the majority of the time. Monetary considerations were identified earlier as the number one barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011). Similarly, this study established poor resourcing of e-mental health technologies and staff training was a major impediment for mental health nurses using and/or recommending these technologies. Most clients were able to access technology in some capacity. They owned it themselves, family or friends had technology or clients could use technology available from the clinical services.

Research Question 4: What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

Some sites involved in this current study gifted technology in the form of mobile telephones to clients in order to overcome the barrier of finances in relation to clients accessing technology. Staff reported this was most valuable and allowed for development of therapeutic relationships, whilst also allowing mental health nurses to engage with clients who would ordinarily be difficult to engage with due to their social and or geographical isolation as well as clients who would not ordinarily be able to afford the technology.

Another site involved in this study loaned technology in the form of a tablet to clients. This was following due consideration in relation to the ability of the client to be responsible for the technology. The clients of this site would sometimes lose the technology, as a result of poor concentration resulting from their mental health symptomatology distracting them. There were also occasions when clients at this service with co-existing alcohol or other drug issues, would sell the technology for financial benefits to support their dependence on alcohol or other drugs.

At some sites, clients were provided with various types of technology such as mobile phones, laptop computers and iPads by their families. This was generally the case for younger clients who resided with their parents. Those clients were generally on limited data plans, and often also readily able to access free wireless Internet connection provided by local cafes and public libraries, unless they resided in geographically isolated locations. The Australian Bureau of Statistics (2014-2015) identifies that another factor influencing who may have access to the Internet at home is two-parent families as they will generally have a greater source of income. Children under the age of 25 years are most likely to have Internet, as they are more likely to be living with family members, followed by the 25 to 54 years age group. This demographic data was consistent with the clients at the sites involved in this study.

A literature review conducted by Aguileria et al. (2015) established that in the U.S.A in 2013, 56% of citizens owned mobile telephones. Therefore, consideration must be given to the reality of who owns technology and who can access it. Some initiatives implemented at some of the sites participating in this current study should be considered as initiatives to be implemented in all services of public mental health service delivery. For example, the gifting of technology to persons experiencing mental illness who would not normally be able to access or afford technology should be considered, especially given clients with mental illness may be on a pension as a result of their mental illnesses.

7.2.4 Community mental health nurses generally do not have the knowledge, working awareness and experience of e-mental health.

Research Question 1: To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?

There was an assumption by employing sites that the mental health nurses had knowledge of, and were able to use, available technology. When staff commenced in their clinical roles, it was assumed that they knew what technology was available, the functionality of the technology, and which technologies were relevant to their clinical setting. Not all sites provided training for clinical staff (including mental health nurses) on the use of technologies, nor was it routine for training to be provided to these staff when new technology was introduced. Similar outcomes of this study, Kay-Lambkin et al. (2011) found that participants involved in their research were being expected to be familiar with e-mental health programs. The lack of understanding by management that not all staff were proficient users of such programs was a barrier when a new e-mental health initiative was introduced to enhance when working with clients with depression

and addictive disorders. A literature review conducted by Gagnon et al. (2012) in relation to the adoption of technology in healthcare also cited lack of familiarity and training regarding technology as a significant barrier for staff adopting e-mental health.

Research by Ziefle (2002) determined that staff who have expertise with mobile telephone technology have increased success in using and troubleshooting, particularly in relation to the use of smartphones. These findings are consistent with research conducted by Blanchard et al. (2012) whereby youth mental health clinicians reported limited capacity to utilise e-mental health due to lack of awareness of youth evidence-based technologies. This concerned the participants of the study, as it was believed that communication with younger people via their preferred medium of technology could assist with therapeutic relationships and building credibility with youth clients.

Various research notes that mental health professionals lack knowledge regarding e-mental health treatment programs and potential benefits (Christensen et al., 2011; Klein et al., 2010; Slade et al.,2009; Wangberg et al.,2007; Waller and Gilbody., 2009). These findings are consistent with findings in relation to mental health nurses' knowledge of e-mental health in this current study. While individuals with psychological issues may require guidance and encouragement by mental health professionals to identify and access appropriate online resources (McHugo et al, 2009; Montero-Marin et al., 2015), mental health professionals may require training to support the uptake of e-mental health interventions in their clinical practice. Staff at all of the sites utilised technology to assist with their clinical roles in some capacity. All staff utilised electronic forms, in their clinical practice, however some opted to use paper-based clinical forms due to clients' preference generally due to the client's mistrust of technology. Some staff also chose to use paper-based clinical forms too and they were more comfortable with them, whilst some mental health nurses cited they would use paper-based forms if a client was paranoid or if the client preferred paper-based forms. Research has established that privacy, confidentiality and ease of access to technology afforded with e-mental Health interventions can overcome these barriers associated with clients' perceptions of anonymity (Burns et al., 2009; Furber et al., 2011).

The participants in this study had varying degrees of understanding of e-mental health and its applicability within their clinical roles. They acknowledged that technology was underused in their respective workplaces, whilst there were many benefits to be gained from a commitment and increased uptake of e-mental health in the workplace. Identified benefits acknowledged were the ability to support individuals in a manner which provided discretion and privacy, and ultimately reducing stigma to be a major benefit. These findings are consistent with those of Blanchard et al. (2012) who identified that youth

mental health workers in Australia acknowledged e-mental health interventions could overcome some of the challenges such as stigma people experienced as the therapeutic modality provided for anonymity and privacy.

Research Question 2: What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

All staff involved in this study expressed a lack of confidence in the use of technology. Some had limited knowledge, whilst others had no knowledge of various functions available of the various technologies within the workplace. As a result, staff used some e-mental health resources for rudimentary or semi-relevant tasks other than they were intended. An example of this was services using the videoconferencing equipment to project minutes of meetings on-site. Because staff were unaware of the range of e-mental health resources and how to use them, their practice did not evolve. For example, participating in face-to-face meetings, rather than arranging videoconferencing or teleconferencing meetings. Research undertaken by Orlowski et al. (2016a) established that for some youth mental health staff with prior experience with technology, the use of technology translated into their clinical practice. However, there were also participants in their study, who used personal technology but did not in their professional roles.

Lack of education in relation to new technology and the application of technology was evident throughout most of the sites of this study. The necessity for staff education and training is evident in many studies. Blanchard et al. (2012), Kay-Lambkin et al. (2011), Clarke et al. (2017), Reynolds et al. (2015), Becker and Jensen-Doss (2013) identified the lack of training for clinicians as a barrier to implementation of e-mental health in clinical practice. Some clinical staff in this study had ad hoc exposure to e-mental health education through attending conference presentations and undertaking postgraduate studies in mental health nursing. However, engagement in either mental health conference presentations regarding e-mental health or learning about e-mental health through postgraduate studies did not appear to have been translated into their clinical practice. All staff who had ad hoc exposure had reiterated that their various learnings had not resulted in any implementation, neither temporarily nor permanently in their clinical practice. Rather, the staff who had learnt informally about e-mental health applications from their professional peers demonstrated a marginally greater uptake of e-mental health. A study by Fairburn and Patel (2017) identified that training of therapists working with individuals with mental health issues would be an important advancement in the barrier to e-mental health treatment and dissemination. Staff who were educated regarding the technology systems being introduced identified these occasions were

seamless. When the new commander telephone system was introduced at one site, staff were able to use all of the functions and were confident in doing so. The sites that had punctual information technology support found that any new technology processes and systems introduced were introduced in a seamless manner.

Some staff in this study learnt about the availability and how to use technology in their respective workplaces when the need arose to utilise resources. Commonly, they were informed about use of technology from peers or they self-taught. Staff, therefore, were unaware of the various functionality of the equipment including smartphones. They often reported they did not know what they did not know, as they would use technology as the situation required, and at times, fumbled with the technology or made alternative arrangements if they were not able to use it. Knowledge regarding e-mental health was identified as number two barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011). This is consistent with being the main contributing factors at all sites in relation to routinely implementing e-mental health. Government initiatives including those reported by Klein et al. (2014), Australian Government (2010) and Australian Department of Health and Human Services (2016) highlight and direct the importance of public mental health clinicians to being educated and trained in the adoption of technology to assist with public mental health service delivery. Such initiatives provide overarching expectation that services will embed education and training into services policy and practice.

The findings of this study established that clients and staff of all ages had the ability to use technology and had learnt how to use it; however younger clients and staff were generally more technologically able and confident. Generation Y people are referred to as 'digital natives' because of their familiarity with and reliance on technology. This generation is considered experiential learners, proficient to multi-task, dependent on technology for accessing information, and interacting with others (Bennett et al., 2008). However, research has established that despite Generation Y people being familiar with technology, their familiarity relates to use of technology for word processing, social media and 'surfing the net', (Bennett et al., 2008; Sackmann, & Winkler, 2013). Therefore, technology is not used in relation to purposeful research in relation to developing professional knowledge and seeking professional help and guidance. This is consistent with mental health nurses' experiences within the current study. This study established that mental health nurses and clients alike all had the capability of being competent in relation to the use of technology, however younger staff and clients were generally more adept in relation to the use of technology. Staff from sites who participated in the study identified that staff and clients of all ages had the potential capability to be competent in the use of technology. These findings were consistent with

the study conducted by Blanchard et al. (2012) who established that age was not a determinant of technology use by staff. The participants in the study were of varying ages of youth mental health clinicians and there was no evidence of the younger staff using technology more than the older mental health clinicians. Knowledge regarding e-mental health was identified as number two barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011), which is consistent with being the main contributing factor across all sites in relation to routinely implementing e-mental health.

The digital divide however, influencing the use of technology within this study, pertained to the digital divide of clients. Curtin (2001) reported that younger people under the age of 25 years living at home were slightly more likely to have Internet access at home; this is consistent with the findings of this study. Curtin (2001) also reported that individuals with lower incomes under $19000 per year, and having lower levels of education were also more less likely to have access to technology due to lack of awareness, inability to afford purchase and ongoing costs associated with technology. Curtin (2001) drew the conclusion that socioeconomic factors were an increased determinant of an individual's likelihood to have access to technology. These findings were consistent with the findings of this study. Of particular note is that some of the client group seen by the participants of this study had serious mental illnesses, which had resulted in them leaving school at early ages and due to their symptomatology, may not have been able to seek employment so relied on pensions.

Research Question 3: What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

Additional to the mental health nurses being expected to have assumed knowledge in relation to e-mental health availability and usage, clients at all sites were assumed to have the knowledge of the various technologies available. Clients with mental illness were identified to sometimes not have the knowledge or capacity to use the technology. Some clients chose not to have technology due to their symptomatology, including paranoia of the technology and concerns regarding levels of privacy and security with using technology. Other clients had not been exposed to technology as they had left school early due to development of mental illness during adolescent years. Some clients were unable to afford the purchase and ongoing costs associated with technology due to financial constraints being on pensions. Educating clients regarding the benefits of technology may assist with the uptake of technology and reducing barriers of trust. Research by Stjernsward and Hansson (2014) explored the use of technology to support carers of clients with depression. The findings of the study established that forums via

technology reduced stigma and social isolation by allowing individuals experiences to be validated, and to reduce mistrust of the healthcare system. Participants engaged in online forums and the level of stigma and social isolation significantly reduced during the study.

Staff at most sites instructed clients regarding the use of technology. This was in the capacity of what technology was, how to use it, how to access appropriate and reliable information on the Internet and appropriate use of technology. The scope of education provided by mental health nurses to clients was person-dependent and extended to the level of knowledge the mental health nurses had in relation to e-mental health and what the client needed to know in relation to e-mental health. The recommendation of the World Health Organisation (2011) arises from the established understanding that policy regarding e-mental health was identified as number four barrier to the routine implementation of e-mental health internationally.

Research by Dansky et al. (2006) found that some mental health professionals were concerned by the lack of physical presence with e-mental health modalities, that they considered crucial for therapeutic relationships to be developed and maintained. Consideration must be given to the age of this research as in more recent times, webinars and e-mental health interventions allow for concerns of body language to be overcome and addressed because of the visual capacity of some e-mental health modalities. Personalised feedback functions built into many e-mental health interventions address some issues of lack of personal contact which have been issues expressed by some mental health professionals (Schmidt & Wykes, 2012). Lack of personal physical contact may be a concern for some in relation to the therapeutic relationship, the privacy and anonymity technology provides encourages frankness of communication and expressions of information a patient may normally withhold, is significant within the therapeutic relationship and treatment regime, particularly in relation to stigma, which is often the reason people choose not to seek or engage in treatment (Emmelkamp et al., 2014). Hence, e-mental health improves possible patient outcomes of overcoming physical presence and stigma. This was reiterated with findings in this current study. Some mental health nurses identified that technology gave clients some control in relation to the treatment they received. Such control was in the context of the client being able to choose when they engaged and the duration of engagement, as they were able to terminate the session by disconnecting the connection during the session. Conversely, numerous researchers have commented that client privacy is achieved through the use of online therapies, and has resulted in clients being more willing to disclose information of a personal nature (Abbott et al., 2009; Burns et al., 2009; Elison et al., 2014; Furber et al., 2011; Musiat et al., 2014b; Stjernswärd & Hannson, 2014).

Research Question 4: What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

Staff at all of the sites in this study expressed interest in learning about e-mental health interventions. Clarke et al. (2017) reported that nearly 100% of the participants (that included education, health, and mental health professions engaging with youth) involve in their research, reported they would participate in education if offered regarding e-mental health, as the potential advantages to their clinical roles resonated with them. Most participants in the sample of this study were not knowledgeable regarding the use of e-mental health, therefore use and engagement with technology was minimal. Research conducted by May et al. (2001), exploring the potential of telepsychiatry as a means to organise routine psychiatric referrals by psychiatrists, also identified that lack of knowledge in relation to the use of telepsychiatry by professional staff may have contributed to staff reluctance in relation to the uptake of telepsychiatry in their clinical practice. The participants of the study who were able to troubleshoot were more confident, whilst other participants who encountered issues chose to resort to traditional clinical practice and disengage in telepsychiatry. More recent studies by Mora et al. (2008) and Wangberg et al. (2007) show that education and training regarding various technological platforms for e-mental health does not necessarily result in change of clinical practice and increased uptake in technological interventions in mental health**.** Consideration must be given to the research by Wangberg et al. (2007), where it was found that reluctance to engage in technological platforms may have been attributed to Norwegian data security regulations at the time of study prohibiting the use of email for communication with clients. Whilst, participants in the research by Mora et al. (2008) were reluctant to engage with technology for clinical interaction regardless of training as they were concerned regarding the lack of physical and verbal cues via technology as a medium for clinical interaction. However, with the introduction of policies and procedures, equal and necessary resources for all clinical staff and adequate technological infrastructure implemented, collectively there may be an increased uptake of e-mental health. These points were identified as the main barriers to the uptake of m-health (mobile health) internationally (World Health Organisation 2011). The study conducted by Becker and Jensen-Doss (2013) reported that computer access and computer competency were strong indicators of mental health professionals' willingness to use e-mental health interventions.

7.2.5   Technology is under-utilised in the workplace

Research Question 1: To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?

There was little evidence of any significant uptake of technology at any of the sites involved in this study. The amount of technology used was underwhelming, and if used, the use was secondary to face-face-interaction. Some clinical staff in this study expressed fear in relation to the use of technology indicating levels of technophobia and lacking in confidence regarding the skillset required for the various technology available. The fear of clinicians of being replaced by technology and being obsolete was expressed by several staff. Staff at all sites utilised technology to assist with their clinical role in some capacity. In one study, initial concerns of technology interfering with treatment processes at the detriment of the therapeutic relationship (White et al., 2014) was soon overcome when health care professionals acknowledged the benefits to be gained from e-mental health interventions, particularly in relation to the ability to obtain real-time monitoring of the patient and more accurate contemporaneous self-report (White et al., 2014). The clinicians in this study who had used evidence-based e-mental health acknowledged the benefits of technology to complement traditional face-to-face treatment. Despite the identified benefits by these clinicians, use of e-mental health was not routine practice due to it not being an expectation or endorsed by the sites. Accurate self-reporting assists with increased accuracy with diagnosis and inevitably treatment and management to assist the individual with their recovery.

This was despite the full potential of benefits which could have been gained with technology, and the possibility of enhancing clinical practice and productivity being barely noted. It was noted by all clinicians however, that technology could be beneficial as it allowed for prompt and timely communication between peers, clients and other service providers if there were no geographical black spots or connectivity issues.

Research Question 2: What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?

An example of the rudimentary use of technology available to staff within this study was in relation to use of the smartphone for individual professional use. They used the smartphone to make and receive telephone calls with clients, colleagues and emergency services including the police. They also utilised the smartphones to text message clients

and colleagues. None of the mental health nurses who participated in the study accessed the Internet or their calendar function on their smartphone, despite the smartphones having these capabilities available and were able to be synchronized. The rudimentary use of technology was consistent with recent findings regarding professionals' use of the Internet and computers (Clarke et al., 2017). Interestingly, more men and younger staff used computers, neither of these factors was evident in the findings of this current research.

They also expressed concerns regarding e-mental health being specific to their roles, so they could personalise treatment to the individual client's needs as being paramount to ensure the mental health service provision met the needs of the client. Research by Orlowski et al. (2016a) which included mental health nurses, social workers and managers of mental health services, reported that they believed technology-based treatment filtered information, which posed a challenge. The challenge they identified was that technology did not allow adequate verbal cues to be observed which they identified as being detrimental to the therapeutic relationship. This also impacted on participants in the study reporting that there was a risk that treatment would not be sufficiently robust to assist with clinical practice decisions. It was unclear in the study what technology the participants used in their clinical practice, which may have advised on concerns regarding the use of technology. The development and use of videoconferencing assisted with overcoming some of the identified concerns of lack of physical cues as identified in the research.

Research by Montero-Marin et al. (2015) found that mental health professionals and individuals with psychological issues identified similar benefits when either e-mental health interventions or face-to-face services were used. Preschl et al. (2012) offered that online interventions may be most useful as adjunct treatments with face-to-face therapeutic modalities. These findings aligned with earlier research undertaken by Wangberg et al. (2007) who surveyed psychologists regarding their attitudes towards e-therapy using email and SMS with their clients. The study findings indicated in favour of e-therapy via email and SMS. Consideration of these findings must include that e-therapy only included email and SMS, when in more recent years; e-therapy has included many more dimensions including webinars, teleconferencing, and web-based programs. However, favourable conclusions can be drawn in relation to the use of e-mental health, with consistent findings being supportive of e-mental health and e-mental health producing similar benefits to face-to-face treatment, in the above-mentioned research spanning over a decade. Yet, there remains minimal evidence in practice.

All sites utilised smartphones to send appointment reminders to clients in an attempt to increase appointment compliance. The mental health nurses who participated in the study were unsure if this strategy was beneficial in influencing appointment compliance. Because of ad hoc compliance with appointments, all services sent electronic appointment reminders in an attempt to increase compliance, and all sites utilised electronic texts to remind clients to attend appointments. Readiness to engage may be a potential barrier to participating in e-mental health interventions. However, consideration for non-compliance with treatment may be attributable to finding of research conducted by Tait et al. (2014) to establish the effectiveness of web-based interventions with individuals with co-morbidity drug use and mental illness. Initially, there were reasonable levels of engagement with participants; however, attrition rates were high with consecutive treatment sessions. Attrition rates may be indicative or participants no longer requiring intervention or reflective of dissatisfaction with a program or confirmation that e-mental health interventions may not be suitable for everyone. The attrition rate in their study may also relate to the drug and alcohol aspect of patient presentations, as individuals with such presentation are often challenging to engage with. Cleary et al. (2008) explored the advantages and disadvantages of e-technology, reporting disadvantages included the possibility of e-mental health interventions further contributing to isolation if the individual did not have regular access or access to quality technology for some programs within the e-mental health sphere. Cleary et al. (2008) also discussed the advantages of e-mental health programs, including the possible reduction in waiting time for individuals with psychological issues if a greater number of people could be seen and multiple patients received treatment simultaneously through e-mental health interventions.

Adherence to treatment is potentially increased with e-mental health interventions that have alerts and prompts to remind patients to participate in and complete programs (White et al., 2014), which assist with improved outcomes for patients via empowerment and nurturing and encouragement of self-management (Wetterlin et al., 2014). Crisp and Griffiths (2014) conducted a comparative study of characteristics between individuals who were interested in engaging and those who were unwilling to engage in online interventions for their mental health. Stigma was the only significant predictor of participating in online treatment.

All sites utilised electronic clinical records which staff reported expedited the process of gathering information and sharing information within the team. The electronic clinical records allowed staff in the different offices to all be able to easily access clients' clinical records. The World Health Organisation (2011) reported worldwide, approximately 50% of clinical services used e-mental health electronic files, whereas there was 100% usage

of electronic clinical files within the findings of this current study. The benefit of instant recording and storage of data was also noted by a number of researchers (Blanchard et al., 2012; Riper et al., 2010; White et al., 2014). The ability to engage with the patient at a convenient time (Perle et al., 2011) was identified as a positive factor considered to be most beneficial to mental health professionals in reducing associated clinical workload. These factors were also reported in this current study by the clinical staff.

Research by Stjernsward and Hansson (2014) identified potential benefits related to technology being used to overcome barriers for patients' including barriers of limited finance, stigma and mistrust of the healthcare system. Mental health practitioners using e-mental health interventions are better able to respond to patients' preferences. They can overcome perceived barriers by offering face-to-face and/or e-mental health interventions when they recommend treatment. It may be empowering for the patient to have a treatment choice, whilst being listened to in relation to potential concerns of receiving treatment.

Some mental health nurses in this study expressed reluctance to engage in technology use with clients because they were concerned about potential negative impact on therapeutic relationships. Previous research has drawn conclusions that staff are concerned in relation to the use of technology not facilitating clinicians' access to verbal cues and difficulty in establishing working relationships with the people with psychological problems (Dansky et al., 2006). Limitations of this research relate to the age of the research and the development over recent years of technology and e-mental health interventions. Through the development of webinars and e-mental health interventions that enable visualisation of body language addresses the concerns raised. Personalised feedback functions built into many e-mental health interventions address some issues of lack of personal contact, which have been issues expressed by some mental health professionals (Schmidt & Wykes, 2012).

Lack of personal physical contact may be a concern for some in relation to the therapeutic relationship. The privacy and anonymity, which encourages frankness of communication and expressions of information by a patient, may be withheld and is a significant concern within the therapeutic relationship and treatment regime, particularly in relation to stigma which is often the reason people choose not to seek or engage in treatment (Emmelkamp et al., 2014). Hence, e-mental health improves possible patient outcomes as a result of overcoming of physical presence and stigma. The necessity to have policies and procedures regarding e-mental health was identified as the number four barrier to routine implementation of e-mental health internationally (World Health

Organisation, 2011), which is consistent with being a significant contributing factor across all sites in relation to routinely implementing e-mental health.

Research Question 3: What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

In the current study, smartphones and videoconferencing facilities were not used to capacity. Staff at all sites had access to videoconferencing equipment, however no-one routinely used it. This was attributed to either lack of knowledge regarding how to use the equipment, or frustration from unreliable equipment and ongoing connectivity issues. The videoconferencing equipment was generally used to broadcast minutes of meetings held on-site in the room where the videoconferencing equipment was. Most staff at the various sites, who were not familiar with using the videoconferencing, did not have a perceived need or benefit which generated impetus to use the equipment. Some mental health nurses located at satellite offices were familiar with videoconferencing equipment. However, they opted to not use the equipment due to frustration of unreliable equipment and poor connectivity. Despite these identified barriers, mental health nurses expressed a desire to learn about potential benefits and applications of e-mental health with their clinical practice. These findings are consistent with findings by Clarke et al. (2017) who identified from their sample of professionals who worked with youth with mental health issues, a strong interest in adapting technology in their role to support youth clients.

Teleconferencing facilities were available at all of the sites, however these were seldom used. Few staff were aware of how to arrange teleconferencing and not all telephones had teleconferencing capacity. Some staff reported that select desk telephones had teleconferencing capabilities. The inequality of resources posed frustration for some staff, resulting in mental health nurses on occasions choosing not to participate in teleconferencing meetings if a telephone with teleconferencing capabilities was not available for use. The infrastructure regarding e-mental health was identified as number three barrier to the routine implementation of e-mental health internationally (World Health Organisation, 2011), which is consistent with being a contributing factor at all sites in relation to routinely implementing e-mental health.

Some of the technology at the various sites was shared between clinicians, which was not found to be effective. These technological devices were generally not used as staff forget unique passcodes when usage was irregular and therefore were unable to activate devices such as shared iPads and laptops. Staff were reluctant to use technology that did not have wireless capacity such as tablets and iPads irrespective of their portability

and other capabilities. All staff had individual desktop computers at their respective workplaces.

Irrespective of research confirming e-mental health resources are as effective as face-to-face modalities (Cavanagh & Millings, 2013; Elison et al., 2014; Australian Government, 2012), there was some reluctance by individuals in these studies with psychological issues to engage in e-mental health therapies. Research has identified that consumers who are not familiar with, or lack confidence using, technology and those who are not fluent English speakers may not engage in e-mental health interventions due to the acuity of illness, stigma, self-stigma (Rickwood, 2012; Tait et al., 2014). In this study, clients with acute symptomatology, severe and persistent mental illness symptoms were identified to be less likely to engage in technology, which is consistent with the above-mentioned research. Participants in this study also identified that clients who experienced symptoms which resulted in poor concentration were also less likely to engage in technology due to lack of awareness of technology and/or difficulty with concentration resulting in misplacing of technology.

The lack of service expectation regarding routine use of e-mental health as an adjunct to face-to-face treatment was a consistent theme identified as a barrier in this study. The lack of expectations to routinely embrace technology existed despite the use of such innovation being described and encouraged in the Australian Department of Health and Human Services (2016). Research conducted by Leonard-Barton and Deschamps (1988) and Carter and Zmud (2005) established that persons are more likely to accept new technologies when they perceive strong ongoing support from management for the innovation. The participants in the study by Blanchard et al. (2012) reported facing opposition from peers and management in relation to the integration of technology into their practice, as they were made to feel the use of technology was risky. The participants felt this was attributed to naivety of peers and management in the workplace regarding the benefits which could be gained from the uptake of technology in clinical practice. Research by Orlowski et al. (2016) established that organisational legitimacy with clear and detailed policies and procedure, structures to support and integrate useful technologies was imperative to embed and enhance the use of technology in youth mental health services.

Research Question 4: What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

When participants in this study used e-mental health, it was occasional and an ad hoc adjunct to face-to-face treatment. The few clinicians who engaged with e-mental health

did so for rudimentary text communication regarding appointments, telephone calls advising changes in appointment or the occasional evidence-based intervention. It was not clear at any of sites if there was a process, policy or procedure to support the decision to engage in evidence-based e-mental health interventions. The sites which embraced e-mental health had policy and procedures guiding clinical practice and use of e-mental health for service delivery. The mental health professionals who participated in the study by Clarke et al. (2017) reported the desire to have organisational systems and support to engage with technology for clinical practice.

7.3   *Chapter Summary*

This research established there were internal and external factors which impacted on the uptake and use of e-mental health interventions by mental health nurses in clinical practice. Mental health nurses employed at each sites were expected to have capacity and capability to utilise available technology, however the majority were unaware of e-mental health initiatives or were willing to adopt them. The lack of clinical and corporate leadership supporting the use of technology within the workplace culture across the sites was evident and consistent with existing literature that identified poor leadership as a barrier to the use of e-mental health. The final chapter of this thesis presents the findings, recommendations and limitations of this study.

Chapter Eight: Conclusions and Recommendations

8.1   Introduction

A number of research questions were posed to assist in understanding regional community mental health nurses' understandings and experiences of e-mental health interventions. The research questions that were explored are:

- o To what extent are regional Victorian community-based mental health nurses aware of e-mental health applications?
- o What are the experiences of regional Victorian community-based mental health nurses using e-mental health applications?
- o What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?
- o What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

From the data analysis it became clear that a number of factors were evident in relation to mental health nurses' understandings and experiences of e-mental health and influencing the use of e-mental health with clinical activity. These factors were intrinsic including staff knowledge, and extrinsic, including policy and procedures. Three major themes emerged and each of these had multiple sub-themes which were common across all five sites.

8.1.1   To what extent are regional Victorian community-based mental health nurses, aware of e-mental health applications?

- Staff reported knowing what e-mental health applications were, however had difficulty articulating their knowledge, which was unclear of articulating what e-mental health incorporated and were even less able to articulate the use of e-mental health in their roles. Their knowledge was broad and pertained to using the computer to research information. Overall, awareness of e-mental health applications by the mental health nurses was general and limited.

- Mental health nurses working with younger clients were motivated to engage with technology and were self-taught in an attempt to better engage with the younger clients, as it was acknowledged that youth in society use technology as their preferred medium for communication.

- Some mental health nurses were aware of the benefits which could be gained from embracing e-mental health both through postgraduate mental health nursing studies and conferences. However, exposure through postgraduate mental health nursing studies and conferences had not translated into clinical practice, nor enhanced the use of technology. Rather, mental health nurses who were more proficient in relation to the use of e-mental health were either self-taught or learnt from their peers.

- Most mental health nurses were able to identify the e-mental health in their workplace, however the use was rudimentary if at all. Both blackspot issues and wireless connectivity issues were significant frustrations for staff in this study and some expressed frustration with lack of leadership support to address the issues within their services.

8.1.2 What are the experiences of regional Victorian community-based mental health nurses, using e-mental health applications?

- The use of technology by mental health nurses was rudimentary. Smartphones were used to communicate, with the exception of locations which had geographical black spots and connectivity issues. Black spot mobile telephone coverage was an issue for mental health nurses in rural work locations and when working alone and after hours. Connectivity issues extended to wireless connectivity issues with laptop computers and videoconferencing equipment. As a result, mental health nurses changed their practice to overcome these issues.

- The inequality of technological resources posed a barrier and frustration for mental health nurses. As a result of all staff not having equivalent resources teleconferencing was not routinely used.

- E-mental health facilitates and expediates communication between colleagues, clients and other service providers, therefore, being a time-efficient strategy for staff. Use of technology enabled contact between scheduled face-to-face contact, and to complement face-to-face engagement. The use of technology to facilitate communication was rudimentary within this study and this is attributed to staff lack of knowledge and awareness of maximising use of technology, along with connectivity issues with technology.

- Technology enabled staff to educate themselves and clients. The information

shared during consultation could be validated and endorsed by educational content from technology such as via evidence-based web sites. The use of technology in this capacity was considered most beneficial to enhancing the therapeutic relationship.

- Organisations need to ensure adequate and reliable technology is available to mental health nurses to assist with these identified benefits of technology. Organisations need to have the necessary policy and procedures to facilitate the use of technology and support service delivery. Policies and procedures should provide guidance to assist employees with clinical decision making and guide use of technology in clinical practice.

- Security of technology was not a concern for the mental health nurses involved in this study, however some clients were reluctant to use technology. The client group of an organisation must be considered when organisations are enforcing use of technology in routine clinical practice. Technology use may not be appropriate for all client groups, and organisations must be cognisant of this.

8.1.3 What do regional Victorian community-based mental health nurses identify as barriers to the utilisation of e-mental health applications?

- The major barriers identified by the mental health nurses to using e-mental health applications in practice related to poor technology infrastructure, and their perceptions regarding clients' abilities to engage with e-mental health and their own capability and capacity to change usual models of practice.

- Despite adequate technology being available, the assumption that all mental health nurses were aware and knowledgeable in relation to the use of technology in the workplace was a significant barrier. Mental health nurses were self-taught or were taught by peers as the need arose, which posed a potential clinical risk as the clinician may not learn correct skills or maximise the technology available as the learning will be limited by the knowledge of the peer sharing their own often self-taught knowledge with them. Initial training on commencement in the workplace, and as new technology is introduced and refreshed, education would assist staff with being competent and confident to use the technology in the workplace.

- The assumption regarding awareness and knowledge of technology also

extended to clients.

- Specialist information technology support is an important factor which could enhance the uptake of technology. Collaboration with information technology staff was often absent at the sites, which resulted in staff frustration due to ongoing connectivity issues.

- Policies and procedures are necessary to guide practice and clinical decision making at the sites. The lack of policy and leadership were issues in relation to supporting the uptake and engagement with technology. Leadership deficits which were not responsive to staff needs; not acknowledging or addressing connectivity issues and inequitable distribution of resources, staff did not have equivalent resources which posed challenges.

- Fiscal considerations were significant barriers. Managers reported budget constraints determined the extent of technology available in the workplace.

8.1.4   What do regional Victorian community-based mental health nurses identify as facilitators to the utilisation of e-mental health applications?

- Despite the underuse of technology at the sites in this study, all participants and staff were keen to engage in and increase their use of technology. Staff were aware that technology could enhance service delivery by enabling them to engage with clients in a more timely manner and provide an alternative option for clients who were unable or not wanting to attend a consultation in person. Staff and clients alike of all ages had the ability to embrace technology. Despite the underuse of technology mental health nurses were keen to engage in and increase their use of technology.

8.2 Recommendations

8.2.1 Introduce funding to implement and support the use of e-mental health in mental health service delivery

To assist with implementing and supporting uptake and engagement with e-mental health, significant commitment through budget funding allocation needs to occur. Mental health funding is necessary in budgets to allow for adequate distribution of technological resources for mental health service delivery, along with funding to ensure the technology is adequately maintained. Due consideration is needed on how funding is distributed to ensure the maximum number of persons are reached and to facilitate the opportunity to provide mental health service delivery to the masses. The funding is imperative to ensure appropriate information technology infrastructure is equitable and available. Priority for funding should be supported by national policy, and a review to address geographical black spots and connectivity issues and ensure the necessary cabling is available.

Local budget allocation within services needs to be considered to ensure necessary technology is available for staff, considering nuances of their clinical roles and the clients they are involved with. Inequality of technology at all sites was evident, and to assist with pro-active engagement with e-mental health the equivalent resources being available to all staff, it is imperative for workplace culture to value and engage with technology to the full potential.

A budget which allows lending or gifting of technology may be a viable consideration given a service's client group. There are clients within public mental health who are mandated to engage with service delivery under relevant legislation such as the Victorian Mental Health Act (2014). Compliance and co-operation with mental health services can be difficult and services being able to avail technology to such clients may be most beneficial to assist with engagement. Many clients requiring access to mental health services with limited financial resources may benefit from access to loaned and/or gifted technology such as people who are acutely unwell and unable to engage in employment, clients who have left school due to adolescent onset of symptoms.

8.2.2 Ensure corporate and clinical leadership to support the routine use of e-mental health for service delivery

Corporate and clinical leadership in organisations is pivotal to workplace culture. The use of e-mental health requires strategic and operational commitment to be a service initiative priority. Good clinical governance and direction in the form of policies, procedures and clinical practice guidelines that most services in this study lacked. At times, staff were not aware nor familiar with policies. A clinical expectation needs to be driven by the organisational leadership team. Embedding e-mental health in public mental health service delivery is evident in national initiatives (Australian Government, 2015); however this was not a priority in the sites involved in the current study. National policy focuses on person-centred care and recovery, both of which are central to the use of e-mental health. Enabling clients to self-monitor and self-help are both significant gaps in current public mental health service delivery.

Leadership also entails being responsive to identified challenges and collaborating with clinicians and specialised information technology staff to address challenges cognisant of staff and client needs. Thoughtful consideration is required in this aspect due to the vast array of technologies available, particularly which clients may have access to which may or may not be compatible with technology used by services and their policies.

There was a need for organisational support which provides clinical and governance leadership, the necessary and reliable technology for service delivery. If and when blackspot issues are reported, organisations need to address these to have the ability to communicate as required and maintain staff safety. Wireless connectivity issues also need addressing to allow staff to be efficient and productive and not use alternative modes of undertaking their role.

8.2.3 Ensure adequate infrastructure is installed and maintained to support all e-mental health in organisations

The possibilities and benefits which could be achieved with embedding technology in routine clinical practice are clear. For this to be successful, there needs to be commitment to the establishment and maintenance of information technology infrastructure which allows and supports staff in all areas to confidently and routinely use technology. Technology black spots and wireless connectivity issues need to be overcome in a timely manner to support staff so they feel valued and to enhance their use of technology. National policy needs to support the necessary infrastructure to enable e-mental health to be an integral part of mental health services. Currently,

unreliable technology and geographical black spots result in staff having limited options in relation to conducting their clinical activities. The unstable technological infrastructure results in the inconsistent use of technology. Staff reported if these obstacles were addressed they would engage in technology. The availability of technology to facilitate mental health service delivery, and to enable the possibility and equal opportunity of service to clients who are geographically and socially isolated, is overwhelmingly positive. Technology assists with unnecessary face-to-face interaction and assists with time-efficiency by reducing time wasted with unnecessary travel.

8.2.4 Introduce education and training for all staff regarding the e-mental health interventions in organisations

National policy directives should ensure education and training is embedded in all mental health services to ensure the use of e-mental health is maximised to achieve the full potential which can be gained. It was evident at all sites that the majority of staff had rudimentary knowledge of e-mental health and were using technology for fundamental activities such as email on the computer and mobile telephone to make and receive calls and text messaging. To embrace routine use of technology in mental health service delivery, mental health nurses need to have the awareness, knowledge and confidence in available technological devices to support their clinical practice. Staff also need to be provided with equal e-mental health resources to their colleagues and their needs to be policies to support and guide the use of e-mental health in the workplace. Such policies will demonstrate the organisation's commitment to e-mental health and provide parameters and expectations of what is expected of staff. Given the vast array of technology available, thoughtful consideration should occur in relation to education and training to support the workforce with awareness and equip staff with the knowledge required to embed technology into their workplaces and associated clinical practice. The opportunity was ripe at the time of this study with all staff expressing desire to learn about e-mental health and how they could best use e-mental health to support their clinical practice to enable improved client outcomes.

Education and training needs to be embedded in the workplace, in conjunction with regular updates and refresher training regarding the workplace technology to ensure staff have the confidence to use the technology. As new technology is implemented in the workplace, appropriate education and training is required. The training should be guided by the policy of the organisation, and if needed, new policy developed to support the new technology. The functionality and reliability of technology will be imperative to introduce practice changes given staff at all sites reported lack of awareness and/or knowledge of the available technology given they had concerns as expressed earlier.

Consideration with the training needs to be cognisant of clinicians' roles, clients' needs and the reality that clinicians have traditionally practised in a face-to-face approach. The use of technology for clinical practice is not routinely part of undergraduate curricula. As new staff and graduates enter the profession there is an expectation that they have well developed information technology skills. It is crucial the current and future workplace world understand and utilize diverse range of therapeutic interventions with technology and this be embedded in curriculum. As identified in the thesis, there are concerns by some mental health professionals in relation to technology impacting on the therapeutic relationship, particularly in the ability for the clinician to detect the verbal and physical nuances of clients. Training needs to inform clinicians of approaches to overcome such concerns regarding impact on therapeutic relationships. Studies have shown that change in clinical staff practice use of technology has been positive, and technology allows services to have a greater reach to clients who services may not ordinarily be able to engage with due to social isolation, geographical isolation and stigma. The assumed knowledge of technology was not only a barrier for staff in this study, but clients also. Therefore, staff need to be supported to have the knowledge and capacity to educate their clients regarding what technology as available. It is imperative that clients are advised and educated regarding the technology available and how to use the available technology. There is also a need to establish if clients are interested and willing to use technology for their treatment and that technology is not mandated to be used with every client, and that clients have the opportunity to choose their preferred medium for treatment if that can be facilitated.

8.3   Limitations and Future Research

A number of limitations have been identified in relation to this study. Firstly, the study only involved mental health nurses who were part of a broader multi-professional workforce. Other health professionals such as psychologists, social workers, occupational therapists and psychiatrists provide mental health treatments and exploration of the various disciplines use of e-mental health would be insightful to assist with developing strategies to enhance the uptake of e-mental health in clinical mental health service delivery. Secondly, the time spent in the field for observation was a limitation, as not all staff clinical activity was able to be observed. A longer period of observation would have been beneficial to further explore the nuances of the clinical practice activity in the sites in relation to the use of e-mental health and what factors influenced the use of e-mental health. Thirdly, one of the sites involved in this study did not employ a mental health nurse, although they were trying to recruit one. Finally, this study involved one regional area, finding may have been different if the study involved other regional locations. Overall, the findings are not generalisable but assist with further understanding the nature of e-mental health and its challenges.

There are a number of research opportunities that emerge from this study. Clearly, an understanding of the use of e-mental health by the community-based mental health workforce more broadly is therefore warranted through a larger scale study. It would also be beneficial to understand metropolitan community-based mental health nurses' experiences with e-mental health.

The implementation of an education strategy for mental health nurses in relation to the availability and use of e-mental health and an evaluation of such strategy to establish if there is an increased uptake of e-mental health is warranted.

Endorsement nationally of the use of e-mental health needs to be evident in services policy and procedure. A clear demonstration of the support and guidance regarding the use of e-mental health in relation to safe and secure practices would be beneficial. An evaluation of such an initiative to establish if there is an increased uptake of e-mental health would be highly beneficial.

8.4   Chapter Summary

As the prevalence of mental health conditions in Australia, and around the world, continues to increase, it is clear that traditional mental health service delivery will not provide adequate service provision to everyone who requires mental health treatment. The findings from this study have uncovered some of the realities and practices facing community mental health nurses in regional Victoria and have revealed the breadth and depth of their experiences in using e-mental health. This study examined e-mental health from the perspective of community health nurses in five regional sites in Victoria, Australia. Overall, e-mental health enables self-monitoring and self-help, which is a significant gap in public mental health, service delivery. The opportunity, which is availed through e-mental health enabling clients to be supported to gain empowerment, is paramount, particularly in light of public mental health service delivery focus on person-centred care and recovery-oriented principles.

E-mental health affords the opportunity to provide a greater reach of mental health service delivery to the increasing number of individuals who will experience mental health during their lives.

It was evident in this study that the expediting of service delivery which occurs through the use of technology, enabling greater reach to clients who may ordinarily be difficult to engage with allows clinicians to have the opportunity and time to engage with an increased number of clients.

This study has revealed important issues which, if addressed could facilitate greater engagement with e-mental health for increased positive outcomes for those with mental health issues. Thoughtful consideration in relation to the use of technology needs to occur. Some clients will not wish to engage in technology due to symptomatology including paranoia, whilst other clients, will opt to not engage with technology by choice as reported in this study. This was attributed to staff reporting some clients choose to not be contactable to regain some order and control in their lives, particularly if they are mandated to engage with clinical services.

Corporate and clinical leadership is necessary to support the application of e-mental health in the workplace to ensure clinical staff are supported and guided to engage in the routine practice of e-mental health applications. The appropriate and necessary technology infrastructure is required and requires ongoing support to assist with embedding the use of e-mental health in mental health service delivery. Technology is currently underused in mental health service delivery workplaces and other contributing factors are community mental health nurses lacking the knowledge, working awareness and experience of e-mental health and financial considerations which are impinging on the availability and use of e-mental health in workplaces. This analysis might inspire other researchers to undertake further investigations that extend the study further. It is hoped that the findings of this study influence the uptake and use of e-mental health to benefit those with mental health issues.

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Appendix A – Literature Review Search Strategy

SEARCH STRATEGY NUMBER	SEARCH HISTORY	CINAHL	PsycINFO	OVID	COMMENTS
1	Psychological problems	3539	6690	16758	
2	Mental illness	20178	41495	59111	
3	Mental health problems	9855	13548	31605	
4	Traditional interventions	1106	134	658	
5	Traditional treatment	3811	646	5746	
6	E-mental health	88	163	168	
7	Digital platforms	295	114	265	
8	Digital technology	1733	998	2162	
9	Face to face treatment	227	130	448	
10	Mental health professionals	4499	14608	19035	
11	Mental health professional	4499	1982	6027	
12	Mental Health Nurse	426692	24942	37463	
13	1OR 2OR 3	32193	59958	95909	Terms Diagnosis /illnesses
14	4 OR 5 OR 6 OR 7 OR 8 OR 9	7127	2175	9335	Terms Treatment
15	10 OR 11 OR 12	430514	40738	392155	Terms Health Care professional
16	13 AND 14 AND 15	13	11	260	Combining all of above
17	Teleconference	1695	1186	5864	
18	Videoconference	1988	1494	3558	
19	Webinar	1288	77	2359	
20	Smartphone	5139	2302	9116	
21	Email	11540	3809	586324	

SEARCH STRATEGY NUMBER	SEARCH HISTORY	CINAHL	PsycINFO	OVID	COMMENTS
22	Internet	57544	53815	126424	
23	SMS OR text	26696	68247	410936	
24	17 OR 18 OR 19 OR 29 OR 21 OR 22 OR 23	99437	125543	1048178	Types of technology
25	16 AND 24	0	3	160	Combining Health Care Professional /Diagnosis and Treatment

Appendix B – PRISMA Chart

Identification

Electronic database searches;

Cinahl, psychInfo, ovid.

- Year 1980- 2019
- Full journal article
- Research based studies
- Written in English

(160 records)

Records after duplicates removed

(160 records)

Screening

Titles/Abstracts screened

(95 records)

Excluded:

- Self-help e-mental health treatment.
- Peer e-mental health treatment.

41 articles included.

Eligibility

Appendix C - Observation Template

<u>**OBSERVATION PROFORMA**</u>

Date:

Time:

Site:

<u>**USERS**</u>

Audience: STAFF   MANAGERS   OTHERS

Group Size: 1 2 3-6   6-12   12+

Staff Discipline: Mental health nurse   Occupational therapist   Psychiatrist
Social worker   psychologist GP

NOTES:

<u>**NATURE OF WORK**</u>

Team-Meeting   Phone Call   Consultation   Writing

Socialising   Discussion   With Patient   Meeting

Other

NOTES:

WORKPLACE RELATIONSHIPS

Tension   Respectful   Relaxed   Professional   Unprofessional   other

NOTES:

SPACE

Atmosphere: Formal   Informal   Versatile

Energy: Relaxed   Tension   Other

NOTES:

FURNITURE

Seating: in use   %   unused   %

Desk space :   in use%   unused%

Meeting Room: in use%   unused%

NOTES:

TECHNOLOGY

Computer: in use%   unused%

Telephone:

Landline: in use%   unused%

Mobile: in use%   unused%

Availability:

Printing   Copying   Scanning   Wi-Fi   Teleconferencing Education
resources

NOTES:

ENVIRONMENTAL QUALITY

Natural Light   Windows   Skylight   None

Acoustics   Noisy   Good   Too Quiet

SERVICE DELIVERY

Face to face in office   Face to face home visit   SMS   email   teleconference
webinar   other

NOTES:

MODEL OF CARE USED

NOTES:

NATURE OF WORK

Case management   Crisis intervention   Rehabilitation Support

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Consultation   Referral   Education

Other

NOTES:

MISC NOTES: Key stake holder/s

Appendix D – Interview Template

<u>**SEMI-STRUCTURED INTERVIEW PROFORMA**</u>

Date:

Time:

Site:

Role in service:

Length of employment at service:

Qualifications:

1. Could you please describe who you provide treatment to?

2. Have you heard of e-mental health? Could you please describe to me your understanding and or experience of e-mental health?

3. Could you please describe what is, and has been effective and or a barrier in your implementation of e-mental health and why?
    - Has there been an impact on your daily practice with the use of e-mental health?
    - Has there been an impact on the therapeutic relationship as a result of e-mental health?
    - Have you had any education and or training regarding e-mental health?

Appendix E – Document Review Template

DOCUMENT REVIEW PROFORMA

Date:

Time:

Site:

1.   Is there a policy for e-mental health:

Phone Counselling?

Text Communication?

Email?

Teleconferencing?

Web-Based Information?

2. Is there clinical practice guidelines for e-mental health:

Phone Counselling?

Text Communication?

Email?

Teleconferencing?

Web-Based Information?

3. Is there a procedure guiding use of e-mental health:

Phone Counselling?

Text Communication?

Email?

Teleconferencing?

Web-Based Information?

NOTES:

Appendix F – Ethics Approval of Sites

LA TROBE UNIVERSITY ResearchMaster

Human Ethics Application

Application ID :	S17-052
Application Title :	Regional Victorian community based mental health nurses understanding and experiences of e-mental health interventions: A multiple case study.
Date of Submission :	12/04/2017
Primary Investigator :	William McGuiness; Chief Investigator
Other Investigators :	Karen Francis; Associate Investigator
	Paula Duffy; Postgraduate Student
	Lisa McKenna; Associate Investigator

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Administration

Important Information

IMPORTANT INFORMATION FOR ALL APPLICANTS:

- La Trobe University abides by the National Statement on Ethical Conduct in Human Research (2007). The University Human Ethics Committee (UHEC) is a registered Human Research Ethics Committee (HREC) with the National Health and Medical Research Council (NHMRC). All Low Risk applications are reviewed by a College Human Ethics Sub-Committee (CHESC). The CHESC is composed of academics' from within the College.

- Research involving human participants (or their data or tissue) may not commence until written approval has been obtained from the UHEC or relevant CHESC.

- Most questions in this application are mandatory and must be completed before the application can be submitted. These questions are marked with a red asterisk (*).

- It is important that the application is written in lay language so that committee members not conversant in the discipline may fully comprehend and appreciate the proposal. Ensure all questions are appropriately answered in plain language with correct spelling and grammar.

- All applications must be sighted and approved by all members of the research team and any relevant parties. Applications will not be reviewed without appropriate authorisation.

- Please note that all applications must be submitted with the following supporting documentation, and you <u>must</u> use the templates provided on the La Trobe University Human Research Ethics website. *Additional required attachments will be identified in "Section 6 - Documents & Attachments".*
    - Participant Information Statement
    - Consent Form
    - Withdrawal of Consent Form
    - Other documents related to your project including advertisements, flyers, questionnaires, interview schedules etc.

- To avoid unnecessary delays, please ensure the application is submitted in full and all relevant guidelines have been followed.

THIS PROJECT MUST NOT COMMENCE WITHOUT PRIOR WRITTEN APPROVAL FROM THE UNIVERSITY HUMAN ETHICS COMMITTEE OR COLLEGE HUMAN ETHICS SUBCOMMITTEE
ONGOING APPROVAL REQUIRES SUBMISSION OF AN ANNUAL PROGRESS REPORT TO THE APPROVING COMMITTEE

Contact Details:

Human Ethics Approvals and Process
For assistance in completing the form, further information regarding clarification of any fields, specific content, or ethical conduct, please contact the relevant Ethics Officer for the committee reviewing your application.

- **Senior Human Ethics Officer**
  University Human Ethics Committee
  Phone: 9479 1443
  Email: humanethics@latrobe.edu.au

- **Human Ethics Officer**
  Arts, Social Sciences and Commerce
  College Human Ethics Sub-Committee
  Phone: 9479 6012
  Email: chesc.assc@latrobe.edu.au

- **Human Ethics Officer**
  Science, Health and Engineering
  College Human Ethics Sub-Committee
  Phone: 9479 3370
  Email: chesc.she@latrobe.edu.au

Technical help for eForm
For technical assistance including access and logging in to Research Master.

- **ResearchMaster Administrator**
  Phone: 9479 6843
  Email: ResearchMasterAdmin@latrobe.edu.au

Help and Resources

- La Trobe University Human Research Ethics website
- NHMRC: National Statement on Ethical Conduct in Human Research
- NHMRC: Australian Code for the Responsible Conduct of Research

Section 1 - General Details

Core Project Details
  Ethics Category

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Human

1.1. Project Title*

Regional Victorian community based mental health nurses understanding and experiences of e-mental health interventions: A multiple case study.

1.2. Primary Academic Organisational Unit (AOU)*

Nursing

1.3. Type of research project to be conducted*

○ Research by Academic Staff Member
○ Contract Research
○ Undergraduate Research
◉ Postgraduate Research

1.4. Project Summary
Provide a brief summary in lay terms of the research project as a whole. Outline the broad aims, background, design and approach of the project, with particular reference to who the participants will be and what they will be asked to do (maximum 100 words).

Aim is to establish regional Victorian community based mental health nurses understanding and experiences of e-mental health interventions. There is substantial evidence indicating web-based programs providing interventions for anxiety and depression realise comparable outcomes to face-to-face interventions. Methodology will be multiple case studies. Goal of the research will be to compare cases identifying similarities and differences. Four sites have been chosen because they represent public community based mental health services. A period of non-participant observation, individual interviews of mental health nurses and key stakeholders and document review will occur at the various sites.

1.5. Period for which ethical approval is sought*

◉ Immediately upon receiving ethical approval
○ Other date

1.6. Expected date for conclusion of project*

31/12/2018

Investigators

1.7. Will any students be involved in the conduct of this project?
This includes both student projects, where research is being undertaken for the degree in which the student is enrolled, and staff projects, where research is being undertaken by an Academic Staff Member that involves a student(s) carrying out some part of the project.*

◉ Yes
○ No

If yes, please include details of students in the table below and assign them the role **Postgraduate Student** or **Undergraduate Student** as applicable. *Do not assign an investigator role to a student researcher.*
You must also provide details of the role of the student in the project and detail their related experience.

1.8. Will any personnel who are not current staff members or students of La Trobe University be involved in the conduct of this project? *

◉ Yes
○ No

If yes, please include details of external personnel in the table below and assign them the role **External Investigator**.
Note that personnel who are not current staff members or students of La Trobe University do not have access to ResearchMaster. The procedure for obtaining declarations for external investigators is outlined in "Section 6 - Declarations".

1.9. List all investigators associated with this project.
Important: For the purposes of this application, the nominated Chief Investigator MUST be a staff member of La Trobe University (not any affiliated institute). You must assign only ONE person in the Chief Investigator role and this person MUST be listed as the Primary Contact on your application. For student projects, the Chief Investigator/Primary Contact MUST be the supervisor, not the student.*

1	System Information	
	Staff / Student ID Number	00010128
	Surname	McGuiness
	Given Name	William
	Full Name	William McGuiness
	College / Institute / Department	Off Nursing & Midwifery
	Personnel Type	Internal
	Email Address	W.McGuiness@latrobe.edu.au
	Application Information	

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	Position / Role in project	Chief Investigator
	Primary contact for application? *Students cannot be the primary contact for an ethics application.*	Yes
	Phone number	03 94795868
	Academic Title / Qualification *If student, provide details on level and course of study (PhD, Masters, Honours, etc.)*	Associate Professor
	Experience and/or skills relevant to the project.	Conducted a number of research projects, supervised 6 honours students, 15 masters students and 3PhD students.

2	System Information	
	Staff / Student ID Number	0000068372
	Surname	Francis
	Given Name	Karen
	Full Name	Karen Francis
	College / Institute / Department	
	Personnel Type	External
	Email Address	
	Application Information	
	Position / Role in project	Associate Investigator
	Primary contact for application? *Students cannot be the primary contact for an ethics application.*	No
	Phone number	0475831081
	Academic Title / Qualification *If student, provide details on level and course of study (PhD, Masters, Honours, etc.)*	Professor Karen Francis PhD, Med, MHlthSCPHC, GradCertUniTeach/Learn, BHlthSCNsg, DipHlthSCNsg.
	Experience and/or skills relevant to the project.	Successful supervision to completion of 29 PhD students, 4 Professional Doctorate candidates, 4 M Phil Candidates, 15 Master Disserations and 4 Bachelor of Nursing Honours Students.

3	System Information	
	Staff / Student ID Number	18783347
	Surname	Duffy
	Given Name	Paula
	Full Name	Paula Duffy
	College / Institute / Department	Nursing
	Personnel Type	Student
	Email Address	18783347@students.latrobe.edu.au
	Application Information	
	Position / Role in project	Postgraduate Student
	Primary contact for application? *Students cannot be the primary contact for an ethics application.*	No
	Phone number	00457904122
	Academic Title / Qualification *If student, provide details on level and course of study (PhD, Masters, Honours, etc.)*	Doctor of Nursing
	Experience and/or skills relevant to the project.	Mental health expertise Undertaken research subjects

4	System Information	
	Staff / Student ID Number	49629
	Surname	McKenna
	Given Name	Lisa
	Full Name	Lisa McKenna
	College / Institute / Department	Off Nursing & Midwifery
	Personnel Type	Internal
	Email Address	l.mckenna@latrobe.edu.au

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Application Information	
Position / Role in project	Associate Investigator
Primary contact for application? *Students cannot be the primary contact for an ethics application.*	No
Phone number	94795868
Academic Title / Qualification *If student, provide details on level and course of study (PhD, Masters, Honours, etc.)*	Professor, PhD
Experience and/or skills relevant to the project.	Lisa has extensive experience in nursing and midwifery research, across a range of methodologies including quantitative, qualitative and mixed methods. She has published extensively and led a number of research projects to successful completion. Lisa has successfully supervised 11 PhD, 20 Masters and 5 Honours students to successful completion.

Project Funding

1.10. **How will this project be funded?***

☐ External Grant

☐ La Trobe Internal Grant, e.g. RFA Funding

☐ Sponsored / Contract Research

☑ Unfunded (Supported by Department or Organisation)

1.11. **Have you submitted an online Project Request application through ResearchMaster that is linked to this project?** E.g. RAS or RFA funding application*

○ Yes

◉ No

Note: All funded research conducted at La Trobe University requires approval through the RAS. Please ensure a RAS is completed through the projects module as soon as possible.

External Involvement

1.12. **Is the research a collaborative effort with another organisation?***

○ Yes

◉ No

1.13. **Will any part of the research be conducted in a location other than a La Trobe University campus?** (e.g. clinic, school, hospital, support centre, etc.)*

◉ Yes

○ No

1.13.a. If yes, provide details.
Attach evidence of approval for use of location from external organisation/institution in "Section 6 - Documents & Attachments".
*

> Copies of signed approved 'in principal' letters from all four proposed sites has been obtained (Appendices A, B, C,D), agreeing to be contacted to support and participate in the study following ethics approval from La Trobe University. All of the organisations below have been contacted by the researcher, and they will not process the HREC application until La Trobe University have approved the HREC for the proposed research.
>
> The sites for case study will also be services which provide public community mental health service delivery to individuals. The selection criteria will be:
> • Current public service providing community based public mental health service delivery.
> • Willingness to participate in research project
> • Be able to give informed consent
> • Active caseload of patients with mental illness
> • Located in ARIA Category B.
>
> Sites identified for the study are:
>
> ████████████████████████

Please note that the Department of Education and Training must approve all proposals to conduct research in Victorian government schools or early childhood settings *before* researchers approach principals or centre directors.

1.14. **Does this research require formal approval or permission to be obtained by an external HREC, institution or authority?** (e.g. Department of Education and Training)*

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○ Yes
○ No

If you already have approval by an external HREC you may be eligible to submit as an Externally Approved Project. Please contact an Ethics Officer to discuss your project before you proceed with the application.

This question is not answered.

1.14.a. Indicate the status of the application for approval*

○ Approval has been granted

○ Application for approval has been submitted

◉ Application for approval has not yet been submitted

1.14.b. Name(s) of collaborating institution/ethics committee/authority*

[redacted]

1.14.c. Provide details of the approval process at the collaborating organisation.*

All of the organisations have been contacted and and approved in principal agreement to participatein the study (see Appendices A,B,C,D). They will not process the HREC application until La Trobe University have approved the HREC for the proposed research.

1.14.d. Estimate when approval is likely to be obtained from the collaborating organisation.*

August 2017

Attach evidence of approval (or application for approval) from external HREC or relevant institution in "Section 6 - Documents & Attachments".

Section 2 - Project Overview

Project Description

2.1. Aims
*Provide a concise statement of the aims and significance of the project in plain language.**

Aim is to establish regional Victorian community based mental health nurses understanding and experiences of e-mental health interventions. The research has the potential to raise registered mental health nurses awareness of e-mental health as a tool to compliment their work and enhance access to services by consumers.

2.2. Background and Rationale
*Briefly describe the relevant background and rationale for the project in plain language. Outline the relevant research and literature review, and provide a justification as to why this research should proceed.**

There is now substantial evidence indicating web programs providing interventions for anxiety and depression and give comparable outcomes to face-to-face interventions, and evidence for efficacy of programs for other problems is rapidly growing (Bradford & Shneiderman, 2007; Cuijpers, Donker, van Straten, Li, & Andersson, 2010; Curry, 2007). E-Mental Health interventions can also be used as an adjunct to traditional mental health service provision (Preschl et al, 2012); therefore offering or utilizing hybrid approaches to mental health interventions can result in more specialised support for anxiety disorders and may increase the impact of face-to-face treatment (Cavanagh & Millings, 2013; Das & Faxvaag, 2014; Slade, 2009).

Evidence indicates that due to their mental illness, some people are reluctant to access treatment for psychological distress and mental disorders because there tends to be associated stigma, and experience isolation as a result (Slade, 2009). E-mental Health interventions support patient self-management. Using an e-mental health intervention can improve access, particularly for those patients who wish to remain anonymous, whilst also allowing for engagement at times in a place that is appropriate for the patient. Therefore, potentially reducing these barriers to patients seeking help. Many e-Mental Health programs and services also provide 24-hour access, allowing users to obtain immediate support whenever and wherever it is required (Christenson, 2006; Curry, 2007; Klein, Meyer, Austin, & Kyrios, 2011). E-Mental Health allows delivery of support while patients are on a waiting list for treatment or can be routinely delivered as an initial step before commencing face-to-face care. Immediate treatment provided by e-Mental Health interventions, readily enters the individual's everyday world furthermore providing cues for functional coping and reinforces what has already been learned in face-to-face sessions.

To date there has been extensive research evaluating effectiveness of e-Mental Health interventions for the individuals with psychological issues (Al-Asadi, Klein, & Meyer, 2014; Andrews et al, 2010; Curry, 2007; Geraedts, Kleiboer, Wiezer, van Mechelen, & Cuijpers, 2013; Montero-Marin, 2015; Riper et al., 2008; van Straten, Cuijpers, & Smits, 2008), however there is a dearth of research examining factors that influence the implementation of e-mental health intervention by mental health practitioners. The E-Mental Health Strategy 2012 (Department of Health and Ageing) identifies the crucial importance of enlisting support of mental health practitioners in the uptake of e-Mental Health interventions.

2.3. Detailed Procedures
*Include all details relating to the methodology, recruitment strategy, data collection techniques, the tasks participants will be asked to do, an estimate of the time commitment involved, and methods of data analysis.**

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Methodology - Multiple case studies.
Selection criteria will be:
1 Community public based mental health service delivery within ARIA Category B (48,000 to 249,999 persons) and;
2 Community based mental health nurses (MHN's) including registered nurses (RN), enrolled nurses (EN) and enrolled endorsed nurses (EEN), and;
3 Community based MHN's willingness to participate, and:
4 Community based MHN's being able to give informed consent, and;
5 Community based MHN's having an active caseload of patients.

Recruitment Strategy
University Human Ethics Committee and ethics approval permission to access each service/case will be sought.
Researcher will contact divisional director of each site (see Appendice E: External Organisation Formal Invite) and offer to present an overview of the research study.
Recruitment advertisements will be provided to each site and flyers inviting community based MHN's to participate (see Appendice F: Staff recruitment advertisement).
The researchers contact details will be included on the information. The participants who express an interest in participating in the study will be provided with Participant information statements (see Appendice G: Participant information statement). Consent (see Appendice H: Consent form) will be gained for the researcher to undertake up to 38 hours of observation in each site.
Data collection strategies will be observation (see Appendice I: Observation template), interviews (see Appendice J: Interview template) and document review (see Appendice K: Document review template), and occur over one week at each site.
Observation: will be undertaken, with the researcher being inactive and known. Observation of the work environment is undertaken to explore the role e-mh has within the model of care, service delivery and ways of working within the centre. No patient contact will be observed. An observer template (see Appendice I: Observation template) will be utilised as a prompt and to ensure consistency with each site. Key stakeholders will be sought as is appropriate, to identify and clarify information gathered during observation. The report will be transcribed to a word document.

Interviews: will take no longer than 90 minutes. An interview guide (see Appendice J: Interview template) will be used to assist with focus on issues central to the research question and to ensure consistency with each interview. The interviews will be digitally recorded. Data collected from interviews will include noting of body language.

Document Review: will focus on organisational policy including clinical practice guidelines and procedures that guide clinician's decision making, approaches to interaction with patients and their choice of therapeutic interventions. A document review template(see Appendice K: Document review template) will be used to assist with data collection and to ensure consistency with each site.

2.3.a. *Use this textbox if additional room is required for Detailed Procedures.*

DATA ANALYSIS
Analysis of data will commence during data collection and continuously throughout the project.
Document analysis will involve coding and identification of emerging themes of each site. Analysis of observation data involves coding and identification of emerging themes of each site in context of data analysis from document analysis at the site. Data analysis of interviews will present opportunity coding and identification of emerging themes of each participant in relation to coding and emerging themes from document analysis and observation analysis. Data collected from each site will be analysed individually, then further analysis of cross-case synthesis technique will be used to compare and contrast data collected and analysed from all the cases across all sites. Themes of commonality and themes of differences are important to examine the phenomena and to answer the research question. Nvivo software will be used to assist with coding data and to ensure timely processing of data collected from all data collection methods.

Type of Project

2.4. **Does the research only include the collection of anonymous and non-sensitive data (e.g. online survey, observational data) that poses no foreseeable risks or discomfort to participants?** In this case, any foreseeable risk must be no more than inconvenience.
Only answer 'Yes' if there will be no other forms of data will be used throughout this project.*

☉ Yes
○ No

2.4.
If yes, please contact an Ethics Officer to discuss the nature of your research project. Such applications may not require full Committee review.

2.5. **Does the research only include the use of non-identifiable and non-sensitive data from an existing database? (e.g., data mining).**
Such data should pose no foreseeable risks or discomfort to individuals whose information is contained in the database, or to individuals/organisations responsible for the database.
Only answer 'Yes' if there will be no other forms of data used throughout this project.*

○ Yes
☉ No

2.6. **Is this project part of a larger project?***

○ Yes
☉ No

Target Population

This section contains questions specifically relating to the National Statement on Ethical Conduct in Human Research, Section 4: Ethical Considerations Specific to Participants. Please click the Help icons next to the questions for a link to the relevant section of the Statement.

2.7. **Does the research involve pregnant women and/or the human foetus?***

○ Yes
☉ No

2.8. Does the research involve children and/or young people under the age of 18 years?*

○ Yes
◉ No

2.9. Will the research potentially involve any participants in dependent or unequal relationships with any of the members of the research team or people involved in recruitment?
For example, teacher/student, doctor/patient, student/lecturer, client/counsellor, employer/employee. Such relationships may compromise a participant's ability to give consent which is free from any form of pressure, real or implied. *

○ Yes
◉ No

2.10. Does the research involve people highly dependent on medical care who may be unable to give consent?*

○ Yes
◉ No

2.11. Does the research involve people with a cognitive impairment, intellectual disability or mental illness?*

○ Yes
◉ No

2.12. Does the research involve people who may be involved in illegal activities?*

○ Yes
◉ No

2.13. Does the research involve Aboriginal and/or Torres Strait Islander peoples?*

○ Yes
◉ No

2.14. Does the research involve people in other countries?*

○ Yes
◉ No

Research Methodology

2.15. Does the research involve interventions, therapies or innovations (either non-clinical or clinical)?*

○ Yes
◉ No

2.16. Does the research involve the collection of human biospecimens (i.e. tissue or fluid samples, etc.) directly from participants?*

○ Yes
◉ No

2.17. Will the research involve the use of human biospecimens (i.e. tissue or fluid samples, etc.) which will be provided by an institution or organisation?*

○ Yes
◉ No

2.18.Does the project involve human genetic research?*

○ Yes
◉ No

2.19.Will the research discover or generate health information of potential importance to the future of participants, their blood relatives or their community?*

○ Yes
◉ No

2.20.Does the research involve the use of ionising radiation?*

○ Yes
◉ No

Privacy & Disclosure

2.21. Will participants be photographed, video recorded or audio recorded at any time? *

☐ Photographed
☐ Video Recorded
☑ Audio Recorded
☐ N/A

2.21.a. Will the identification of participants, either directly or indirectly, be made available in the public domain at any time during or after the research? e.g. In the reporting of research or in any display/presentation (audio or visual) of the research.*

○ Yes
◉ No

2.22. Will any form of deception, concealment or covert observation be used at any time?*

○ Yes
◉ No

2.23.Is it possible that a conflict of interest issue could arise in relation to this research?
This includes any circumstance which might represent a **perceived, potential** or **actual** conflict of interest, and may relate to any type of financial, personal or other affiliated benefit for the researchers or organisations involved in this project.*

○ Yes
◉ No

2.24. Will participants be informed of funding source(s)?*

○ Yes
◉ No

2.24.a. If no, explain why participants will not be informed.*

Participants will not need to be informed as this study is not funded.

2.25. Does the research involve the collection, use or disclosure of identifiable or re-identifiable information from sources other than the individual(s) to whom the information relates, without the consent of those individuals?
Note that access to identifiable records for the purpose of extracting non-identifiable data constitutes 'use' and 'disclosure' of identifiable data even if such data will not be 'collected'. *

○ Yes
◉ No

Section 3 - Participants

Participant Details

3.1. Total number of participants required for project*

10

3.2. Is there likely to be an imbalance between the number of males and females participating?*

○ Yes
◉ No

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3.3. Age range of all participants*

20-65

3.4. Rationale for total participant number
*Outline the analysis undertaken to determine the need for the specific number of participants for this study, explaining how this sample size will allow the aims of the study to be achieved.**

This study involves qualitative data collection from multiple case study with various site selections, chosen based on the premise that registered community based mental health nurses are employed by the organisations and volunteer to participate in the study. All registered community based mental health nurses employed within the organisations are eligible to participate in the study. The phenomena of regional community based mental health nurses understanding and experience of e-mental health will be examined with the aim of achieving the context of the experience and understanding in the context of individuals registered community based mental health nurses experience and understanding of e-mental health in the organisation they work. As well as examining the context of similiarities in data obtained and discrete data to answer the research question.

3.5. Will participants be split into two or more groups for the purpose of conducting the research?*

○ Yes
◉ No

Participant Selection

3.6. What are the inclusion and exclusion criteria for your study? Please also include justification for each criterion.*

Criteria for sites is:
The sites will be a range of services, which employ community based mental health nurses in community based public mental health services in ARIA Category B (48,000 to 249,999 persons). The ARIA Category B identifies regional locations. Sites will be accessed which are located within the ARIA Category B and the sites will be chosen to allow data collection to provide data, which illustrates similarities and differences and adequate interactivity between programs of the various case sites.
The sites for case study will also be services which provide public community based mental health service delivery to individuals. The selection criteria will be:
1 Current public services providing community based public mental health service delivery, and,
2 Community based mental health nurses including Registered nurses (RN), enrolled nurses (EN), and enrolled endorsed nurses (EEN), and,
2 Willingness of participants to participate in the research project, and,
3 Participants being able to give informed consent, and,
4 Participants having an active caseload of patients with mental illness, and,
5 Located in ARIA Category B.

3.7. Does the research involve a participant population whose principal language is not English?*

○ Yes
◉ No

3.8. Are any of the participants La Trobe University students?*

○ Yes
◉ No

Recruitment

3.9. Where will participants be approached or recruited?
Note: Where participants are recruited from schools, hospitals, prisons or other institutions, permission/approval from the institution or appropriate authority must be sought *(see "Section 1 - External Involvement").**

The researcher will contact the divisional director (see Appendice E: External organisation formal invite) of each site of the organisations which offer public community based mental health service delivery in ARIA Category B, and offer to present an overview to all staff of the research study. Advertising material (see Appendice F:Staff recruitment advertisement) inviting registered community based mental health nurses to participate in the study will be circulated to each organisation. Interested registered community based mental health nurses will be provided with Participant Information Statements (see Appendice G: Participant information statement) prior to consent (see Appendice H: Consent form) being obtained.

3.10. How will potential participants be approached and informed about the research and how will they notify the investigators of their interest in participating?
Attach the proposed Participant Information Statement and any flyers or other advertising material to be used in the research in "Section 6 - Documents & Attachments".
*

The researcher will contact the divisional director (see Appendice E: External organisation formal invite) of each site and offer to present an overview to all staff of the research study. Staff recruitment advertising flyers (see Appendice F:Staff recruitment advertisement), inviting registered community based mental health nurses to participate in the study will be circulated at each organisation.
Potential participants who contact the researcher via email or telephone expressing an interest to be involved will be informed about the study, their role and the expected outcomes of the study. Once participants have agreed to be involved a time and place to speak with them will be organised to arrange further discussion of the study. At the meeting with the researcher, the interested registered mental health nurses at the organisation will be provided with Participant Information Statements (see Appendice G: Participant Information Statement), and the participant will have an opportunity to ask questions and consent to be involved in the research or choose to not become involved in the study. If the participant agrees to become involved, then the researcher will obtain informed consent from all participants (see Appendice H: Consent form) .

3.11. Will you use an existing database to obtain names and contact details of potential participants? *

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○ Yes
◉ No

3.12. Will any personnel other than the members of the research team listed in "Section 1 - Investigators" above (e.g. independent contractors), be involved in the recruitment of participants, or approach potential participants to seek their participation?*

○ Yes
◉ No

3.13. Will participants be offered any type of financial incentive or other compensation?*

○ Yes
◉ No

Informed Consent

3.14. How will consent be obtained?*

◉ Participants will be required to sign an informed consent form
○ Consent will be implied e.g. by return of completed questionnaire
○ Verbal consent will be obtained and recorded (audio, visual or electronic)
○ Other
○ Consent will not be obtained

If consent will be obtained:

3.14.a. Specify the type of consent that will be obtained:

◉ Specific: limited to the specific project under consideration
○ Extended: given for the use of data or tissue in future closely related research projects
○ Unspecified: given for the use of data or tissue in any future research

3.14.b. Explain in detail how consent will be obtained and recorded.
Attach the proposed Consent Form in "Section 6 - Documents & Attachments".
*

> The researcher will contact the divisional director of each site (see Appendice External organisation formal invite) to offer to present an overview of the study to all staff. All of the organisations will have eligible participants of registered community based mental health nurses employed. A recruitment flyer (see Appendice F: Staff recruitment advertisement) will be distributed regarding the study at each organisation. Interested registered community based mental health nurses will be able to contact the researcher by email or telephone to further discuss the study and to ask questions and to decide if they are willing to participate in the study. The registered community based mental health nurses will be provided with a Participant Information Statement (see Appendice G: Participant information statement) from the researcher and have the opportunity to ask questions regarding the study. The registered community based mental health nurses who agree to participate in the study will sign and date the consent form (see Appendice H:Consent form). The consent form will be scanned to a digital file which will be password protected and kept in the researchers locked office. The consent form will be kept separate from other data collected during the study.

3.15. Will there be any participants who do <u>not</u> have the capacity to give voluntary and informed consent?*

○ Yes
◉ No

3.16. Will potential participants be given time to consider and discuss their involvement in the project with others (e.g. family) before being requested to provide consent? *

◉ Yes
○ No

3.17. How will competence to give consent be determined and who will make this determination?
Describe procedures to determine competence to give consent.*

> Eligible participants will be provided with a Participant Information Statement (see Appendice G: Participant information statement) including a consent to participate form. The eligible participants will meet with the researcher and receive a Participant Information Statement and have an opportunity to ask the researcher questions prior to the signing and dating the consent (see Appendice H: Consent form) to participate in the study form. All participants will be registered community based mental health nurses who are currently employed in one of the organisations. Therefore informed consent will involve a signed and dated consent to participate form.

3.18. Will the participant's capacity to provide voluntary and informed consent be reviewed while research is in progress?*

○ Yes
◉ No

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3.18.a. If no, provide reasons why this is not necessary for this research.*

The study involves participants to be interviewed on one occasion for the study. Therefore the signed and dated consent (see Appendice H: Consent form) to participate form will be adequate to ensure participants capacity to provide voluntary and informed consent for the study.

3.19. **Will participants be informed of their right to withdraw from participating in the study at any time?***

◉ Yes
○ No

3.19.a. If yes, describe how participants will be able to withdraw their consent to participate in the study.
Attach the proposed Withdrawal of Consent Form in "Section 6 - Documents & Attachments".
*

When participants initially meet with the researcher to discuss the possibility of participating in the study, the researcher will explain that the participants will be able to withdraw consent (see Appendice L: Withdrawal of consent form) up until data analysis, as detailed in the Participant Information Statement (see Appendice G: Participant information statement) and the consent to participate form (see Appendice H: Consent form). Participants will complete the Withdrawal of Consentfor use of data form (see Appendice L: Withdrawal of consent form).

3.20. **Will the participants be informed of their right to withdraw their consent for their data to be used in the study, including time limitations to this?***

◉ Yes
○ No

3.20.a. If yes, describe how participants will be able to withdraw their consent for their data to be used in the study and detail any restrictions to this.*

Participants will be informed of their ability to withdraw consent up until data analysis, as detailed in the Participant Information Statement (see Appendice G: Participant information statement) and the Consent to Participate Form (see Appendice H: Consent form) . Participants will be advised to complete the Withdrawal of Consent for use of data form (see Appendice L: Withdrawal of consent form).

Section 4 - Risks

Risk & Safety

You must consider any and all risks (no matter how unlikely), in both the short and long term.

Psychological Risks

4.1. **Is there any risk of psychological, emotional or social harm to the participants or research team?**
This includes any circumstance which may be experienced as stressful, noxious, aversive or unpleasant during or after the research procedures.*

○ Yes
◉ No

4.2. **Is there any risk of participants being asked to perform any acts or make any statements which might diminish their self-esteem or cause them to experience embarrassment or regret?***

○ Yes
◉ No

Legal Risks

4.3. **Is there any risk of legal harm or liability to the participants, the research team, and/or the University?***

○ Yes
◉ No

Financial Risks

4.4. **Is there any risk of financial harm or liability to the participants, the research team, and/or the University?***

○ Yes
◉ No

Physical Risks and Safety

4.5. **Does the research involve any potential physical risks or harm to the participants and/or researchers?** *

○ Yes
◉ No

4.6. Does the research involve any special equipment, apparatus, plant or machinery?*
○ Yes
◉ No

Potential Benefits

4.7. Detail any and all potential benefits this research project may provide to the individual participants.*

The research has the potential to raise mental health nurses awareness of e-mental health as a tool to compliment their work, and to enhance access to services by people with mental health disorders.

4.8. Detail any and all potential benefits this research project may provide to the community and humanity in general.*

Currently there is not adequate public mental health service providers for people experiencing mental health issues and there is a reluctance by some individuals with mental health disorders to not seek mental health treatment. The application and use of e-mental health interventions in clinical practice will potentially address these issues, whilst also addressing some of the reasons why people do not seek mental health treatment, which include reasons such as stigma and isolation.

Section 5 - Data & Records

Data Collection

5.1. Indicate the type of information that will be collected: *
☐ Personal information
☐ Sensitive information
☐ Health information
☑ Other

5.2. Indicate which of the following will be collected during the course of the research:*
☐ Written questionnaires/survey responses
☑ Individual interview responses/notes
☐ Archival data
☐ Other data
☑ Group interview or focus group responses/notes
☑ Participant observations
☐ Direct electronic data entry
☐ Blood or tissue samples
☐ Physiological measures
☐ Biomechanical measures
☐ Accessed health/medical records or data
☐ Accessed student academic records or data

Attach copies of all proposed interview schedules (including those that are published or commercially available) in "Section 6 - Documents & Attachments".

Attach copies of all proposed focus group interview schedules (including those that are published or commercially available) in "Section 6 - Documents & Attachments".

5.3. Will any personnel other than the members of the research team listed in "Section 1 - Investigators" (e.g. independent contractors), be involved in the collection of any data? *
○ Yes
◉ No

5.4. Will any personnel other than the members of the research team listed in "Section 1 - Investigators" (e.g. independent contractors), have access to any data collected? *
○ Yes
◉ No

5.5. Where will the data be collected? Give details for all types of data collected and all locations.***

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Data will be collected at all of the sites.
Document review will occur within the various sites using the Document review template (see Appendice K: Document review template).
Document review data will be utilised to guide the observation and interview data collection. Data collection of the documents will focus on organisational policy including clinical practice guidelines and procedures.
Observation will occur within the various sites using the Observation template (see Appendice I : Observation template). Data collected will be, to assist the researcher to understand what is happening in relation to the phenomena at each site and to guide the researcher to who should be spoken to in the environment by the researcher.
Interviews may occur at sites or a mutually convenient location for the participants. The interviews will be guided by the interview template (see Appendice J: Interview template), to collect data to identify and gather information about the mental health nurses understanding and experiences regarding e-mental health interventions within their organisation.

5.6. How will the data be analysed? Give details for all types of data collected.*

Data collected from the document analysis template (see Appendice K: Document review template) will be transcribed verbatim to a word document and thematic analysis will be used to analyse the data.
Data collected from the observation will be guided by the observation template (see Appendice I: Observation template). The notes from the data collection will be transcribed verbatim to a word document and thematic analysis will be used to analyse the data.
Data collected from the interview template (see Appendice J: Interview template) will be transcribed verbatim to a word document and thematic analysis will be used to analyse the data.
The discrete data collected from each site will then be looked at collectively for similiarities and differences to describe the case and to answer the research question of the study.

5.7.Indicate the projects the data collected in this project is intended to be used for. *This includes all data, tissues, specimens and other samples.**

◉ This project only

○ Future projects specifically related to this project

○ Any future research

Data Storage & Security

During the course of the study:

5.8. Indicate how the data, materials and records will be kept:*

○ All data will be entirely non-identifiable

◉ Data may be potentially identifiable (e.g. coded)

○ Data will be wholly identifiable

5.9. Indicate how the security of project documentation will be maintained.
Project documentation should be stored in secure, lockable locations, preferably on campus. Computer files should be password protected.
The Research Data File Storage - http://www.latrobe.edu.au/research-infrastructure/digital-research/data/data-storage*

☐ Use of the Research Data File Storage

☑ Codes and data kept separately

☑ Lockable filing cabinets

☑ Locked room

☑ Digital password protection

☐ Other

5.10. Specify the precise location of the storage place(s). (Room number, etc.)*

The researchers home office (which is locked); 16 Victoria Avenue, Lake Wendouree, Victoria, 3350.

Following completion of the study:

5.11. Indicate how the data, materials and records will be stored:*

○ All data will be entirely non-identifiable

◉ Data may be potentially identifiable (e.g. coded)

○ Data will be wholly identifiable

5.12. Describe how the security of project documentation will be preserved and specify the precise location of the final storage place(s).*

All demographic and personal information will be deindentified from all of the data collected. All transcripts of data collected will be coded and the researcher will keep a separate file with all of the participant transcripts and data from the various sites. Participant transcripts will be password protected and kept at a separate location from other data from the study.

5.13. Indicate the minimum period for which data will be retained.
*Research data and records should be kept for as long as they are of continuing value to the researcher and as long as record keeping requirements exist (such as patent requirements, legislative and other regulatory requirements). The minimum retention period for research data and records is five years after publication/public release of the work (or 15 years for clinical trials). See help for definitions. **

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O Indefinitely

◉ 5 years post publication

O 7 years post publication

O 15 years post publication

O 25 years after date of birth of participants

O Other

5.14. Will you transfer your data or materials to a managed archive or repository during the project, after the project, or after the retention period? If so, indicate which discipline specific or institutional archives will be considered.
Note that some funding agencies and publishers may require lodgement with an archive or repository. Contact ICT about the Research Data Store, or contact the Library for more information about the La Trobe University Research Repository (Research Online).*

After the project, publications and the thesis will be transferred to the Research Online: La Trobe University's Institutional Repository.

5.15. If you specify to participants that you will destroy the data collected, what methods of appropriate disposal or destruction will be employed?
When further retention of data and materials is no longer required, responsible disposal methods should be adopted. Disposal software should also be adopted if digital software, computer hardware, disks or storage media are reused or retired.

Hard copy data will be scanned and stored on the researcher's password protected computer. Once copied the hard copy will be destroyed.
Digital files will be kept for 5 years.
Raw data will be shredded and placed in secure document disposal bins.
Digital files will be kept for 5 years.

Publication & Dissemination

5.16. Indicate how the results of this research will be reported or published:*

☑ Thesis

☑ Journal article(s)

☑ Book

☑ Research report to collaborating organisations

☑ Conference presentation(s)

☑ Recorded performance

☑ Other

5.16.a. If other, specify type of publication.*

Potential local seminar presentations to participating sites if they are interested and want to.

5.17. Will participants be informed that results of the study may appear in the publication method(s) described above? *

◉ Yes

O No

5.17.a. If yes, provide details.
Note that this information should be included in the Participant Information Statement and given to participants prior to obtaining informed consent.*

The Participant Information Statement (see Appendice G) and the Consent to Participate Form (see Appendice H) states that the participants privacy and confidentiality will be maintained and any publications arising from the study will have their identity protected by deidentification.

5.18. Will results from the study be available to participants on request? *

O Yes

◉ No

5.18.a. If no, explain and justify.*

Participants will not be able to access results from the study on request. The results will be provided in an executive summary. At completion of the study, each organisation will be emailed a copy of the executive summary and the organisation will be asked to disseminate the executive summary to all staff.

5.19. Will participants be informed that their personal data collected in the course of the research will be available to them on request? *

O Yes

◉ No

5.19.a. If no, explain and justify.*

Participants will not be able to access their personal data collected in the course of the research. The participants will be interviewed on one occasion and to increase accuracy of the data, the researcher does not want the participant to be able to revisit and potentially alter the data they provide. The participant will be able to withdraw their consent up until data analysis as advised in the Participate Information Statement and the Consent to Participate Form.

Section 6 - Finalise Application

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Documents & Attachments

The following documentation must be attached to your application:

Scanned copy of the signed Declaration Form for External Investigators

Copy of proposed Participant Information Statement(s) *(use the templates provided on the La Trobe University Human Research Ethics website)*

Copy of proposed Consent Form(s) *(use the templates provided on the La Trobe University Human Research Ethics website)*

Copy of proposed Withdrawal of Consent Form(s) *(use the templates provided on the La Trobe University Human Research Ethics website)*

Copy of proposed recruitment advertisements, flyers, advertising materials, etc.

Copy of proposed interview schedules

Copy of proposed group interview schedules

Copy of funding application(s)

Evidence of approval from external HREC or relevant institution

Evidence of approval from external institution for use of location

6.1. Attach each of the items specifically listed above, as well as any other supporting documentation to the table below. *

Description	Reference	Soft copy	Hard copy
Participant Information Statement	Appendice G Participant Information Statement.docx	✓	
Consent Form	Appendice H Consent Form.docx	✓	
Appendice E External Organisation Invite 2 6 17	Appendice E External Organisation Formal Invite 2 6 17.docx	✓	
Appendice F Staff Recruitment Flyer 2 6 17	Appendice F Staff Recruitment Flyer 2 6 17.docx	✓	
Appendice G Participant Information Statement 2 6 17	Appendice G Participant Information Statement 2 6 17.docx	✓	
Appendice H Consent Form 2 6 17	Appendice H Consent Form 2 6 17.docx	✓	
Appendice I Observation template	Appendice I Observation Template-19 june.docx	✓	
Appendice J Interview template	Appendice J Interview Template.docx	✓	
Appendice K Document review template	Appendice K Document review template.docx	✓	
Withdrawal of Consent Form	Appendice L Withdrawal of Consent Form.docx	✓	
Declaration Form for External Investigators	Latrobe Uni Ethics external supervisor Form KF .pdf	✓	
Reference List	Reference list.docx	✓	
Advertising Material (flyers etc.)	Appendice F Staff recruitment advertisement.docx	✓	
Appendice A	███████████████████████████	✓	
Appendice B	███████████████████████████	✓	
Appendice C	███████████████████████████	✓	
Appendice D	███████████████████████████	✓	

Committee/Risk Assessment

If any statements appear below, this application must be reviewed by the University Human Ethics Committee.
These statements relate to projects considered to be Above Low Risk, or involve groups identified by the National Statement.

If any statements appear below, this application may require review by the University Human Ethics Committee.
These statements relate to projects considered to be Above Low Risk in certain circumstances.

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If any statements appear below, this application may be considered as Negligible Risk.
Such applications may not require formal review, please contact an Ethics Officer to discuss your application before submission.

Question 2.4. Does the research only include the collection of anonymous and non-sensitive data (e.g. online survey, observational data) that poses no foreseeable risks or discomfort to participants? In this case, any foreseeable risk must be no more than inconvenience.
You answered 'Yes'.

If no statements have appeared above, this application should be submitted to the relevant College Human Ethics Sub-Committee to be reviewed as Low Risk.

6.2. Considering the information above, which Committee do you wish to submit this application to?
Please note that the risk level will determine who reviews this application and will not necessarily influence the length of the review process. The Ethics Officer will assess your submission, then formally accept your application on behalf of the appropriate Committee.*

○ University Human Ethics Committee

○ Arts, Social Sciences & Commerce College Human Ethics Sub-Committee

◉ Science, Health & Engineering College Human Ethics Sub-Committee

6.2.a. Provide a short justification why you have chosen this committee to review your application based on the risks involved.*

This application should be reviewed by he College Human Ethics Sub-Committee as advised above as it is considered Low Risk.

Declaration

Investigator Declaration

In preparing this application I/we, the undersigned, declare that I/we:

- have read and agree to abide by the La Trobe University Human Research Ethics Guidelines;

- have read and agree to abide by the conditions and constraints of the National Statement on Ethical Conduct in Human Research (2007) and any other relevant University and/or statutory requirements;

- accept responsibility for the accuracy of the information provided in this application and for the conduct of this research, in accordance with the principles contained in the NHMRC Guidelines and any other conditions specified by the University Human Ethics Committee;

- will ensure that the qualifications and / or experience of all personnel involved with the project are appropriate to the procedures performed;

- will ensure that appropriate permits from relevant external organisations, or State or Federal agencies will be obtained, that copies will be lodged with the UHEC and that any imposed conditions will be observed;

- understand that the information contained in this application is given on the basis that it remains confidential in accordance with relevant University and statutory requirements;

- abide by the terms and conditions set by the University Human Ethics Committee;

- certify that the information contained in this application is true and accurate;

- will seek approval for modifications to the research prior to their implementation.

6.3. Declaration Table*

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1	Staff/Student ID	00010128
	Full Name	William McGuiness
	Role in Research Project	Chief Investigator
	Personnel Type	Internal
	Sign Declaration? By clicking the checkbox below, you are agreeing to conduct the research project in accordance with the above declaration.	Yes
	Date Signed	12/04/2017
2	Staff/Student ID	0000068372
	Full Name	Karen Francis
	Role in Research Project	Associate Investigator
	Personnel Type	External
	Declaration supplied on behalf of External Investigator? By clicking the checkbox below, you are agreeing that you have supplied the External Investigator with a copy of this full application form as well as the "Declaration Form for External Investigators" document, and that you have attached this completed document in the Documents & Attachments section above.	Yes
	Date Supplied	12/04/2017
	Supplied by	William McGuiness
3	Staff/Student ID	18783347
	Full Name	Paula Duffy
	Role in Research Project	Postgraduate Student
	Personnel Type	Student
	Sign Declaration? By clicking the checkbox below, you are agreeing to conduct the research project in accordance with the above declaration.	Yes
	Date Signed	06/08/2017
4	Staff/Student ID	49629
	Full Name	Lisa McKenna
	Role in Research Project	Associate Investigator
	Personnel Type	Internal
	Sign Declaration? By clicking the checkbox below, you are agreeing to conduct the research project in accordance with the above declaration.	Yes
	Date Signed	07/08/2017

Submission Details

Reminders

- All applications must be sighted and approved by all members of the research team and any relevant parties. Please ensure each member of the research team has completed their declaration in "Section 6 - Declaration" above, including any declaration forms supplied on behalf of External Investigators. *Applications will not be reviewed without appropriate authorisation.*

- It is strongly recommended that you save a PDF version of your application before submitting as you will lose access to the electronic record while it undergoes formal review.

- All investigators will receive a confirmation email once this application has been successfully submitted.

- You can check on the progress of this application at any time by viewing the "Process Status" information on the My Applications page.

- *Note: Only a Chief Investigator is able to submit an application for ethical approval. The Chief Investigator who is marked as the primary contact for this application is:*

William McGuiness

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You are reminded that your project may not commence without formal written approval from the University Human Ethics Committee (UHEC) or College Human Ethics Sub-Committee (CHESC).

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7 March 2017

To Whom It May Concern,

My name is Paula Duffy and I am a phd student at La Trobe University. I am conducting a study to establish regional Victorian regulated nurses understanding and experiences of e-mental health.

I would like to conduct a document review in relation to policies, procedures and clinical practice guidelines as they relate to the research question (excluding clinical files). A short period (up to one week) of observation in the workplace as it relates to the research question and an interview with regulated nurses within your organisation that are willing to provide informed consent and participate in the study. It is anticipated that this will be up to one week duration at your organisation.

Prior to ethics application from La Trobe University I would like to gain in principal approval from your division to be contacted to participate in the study.

It would be greatly appreciated if you could sign and return the below in principal support for the study by your organisation of the study at your earliest convenience, if possible by COB Monday 20 March 2016 would be greatly appreciated.

Regards

Paula Duffy

HDR student La Trobe University

In Principal ███████████████████████████████ (name of your organisation) supports being contacted to participate in the study to be conducted by Paula Duffy HDR student at La Trobe University to establish regulated Victorian mental health nurses understanding and experiences of e-mental health.

███████████████████████

Signature of representative of organisation

███████████████████████

....

Printed name of representative of organisation

15 · 3 · 17 ....Date

7 March 2017

To Whom It May Concern,

My name is Paula Duffy and I am a phd student at La Trobe University. I am conducting a study to establish regional Victorian regulated nurses understanding and experiences of e-mental health.

I would like to conduct a document review in relation to policies, procedures and clinical practice guidelines as they relate to the research question (excluding clinical files). A short period (up to one week) of observation in the workplace as it relates to the research question and an interview with regulated nurses within your organisation that are willing to provide informed consent and participate in the study. It is anticipated that this will be up to one week duration at your organisation.

Prior to ethics application from La Trobe University I would like to gain in principal approval from your division to be contacted to participate in the study.

It would be greatly appreciated if you could sign and return the below in principal support for the study by your organisation of the study at your earliest convenience, if possible by COB Monday 20 March 2016 would be greatly appreciated.

Regards

Paula Duffy

HDR student La Trobe University

In Principal, ███████████████████ supports being contacted to participate in the study to be conducted by Paula Duffy HDR student at La Trobe University to establish regulated Victorian mental health nurses understanding and experiences of e-mental health.

███████████████████

Signature of representative of organisation

███████████████████

20 March 2017

7 March 2017

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███████████████████

Signature of representative of organisation

███████████████████

20 March 2017 .Date

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██
██████████████████████████████████████

....
Signature of representative of organisation

████████████████████████████████

Printed name of representative of organisation

15/03/17

....Date

Site One

Full time equivalent staff	7
Female	3
Male	4
Mental Health Nurse	Yes
Psychologist	Yes
Social worker	Yes
Occupational therapist	No
Location of site	Central business area: numerous offices in regional area
Site: building	Old 1940's house recently renovated 6 months ago Single level dwelling
Services at site	Mental health services Alcohol and other drugs services
Service provided: On site	Yes
Service provided: Outreach	Yes
Hours of business	Monday to Friday 9-5. Except public holidays
Geographical region	All of region
Client engage with service voluntarily	Yes
Client engage with service mandated	Yes
Client age group	16-25
Client diagnosis	Depression Anxiety Post-traumatic stress disorder Paranoia Alcohol and other drug use
Caseload	20
Security for site	Yes. Independently employed to visit site
Access to site	Key access
Individual security devices	Used for individual consultation with clients
Clinical office space	Individual staff offices

Location of client consultation on site	Staff office
Commercial photocopier/printer	Open space near clinical offices: open area which only staff access
Secure print	No
Passcode protection to access technology	Yes
Tablet Available	Yes. All clinicians have them
Tablet Use	Hardly used. No explanation why not used
Laptop Available	Yes. All clinicians have them
Laptop Used	Yes. Routinely
Videoconference Available	Not available on site, but elsewhere within service
Videoconference Used	Not applicable
Teleconference Available	Yes
Teleconference Used	No. Staff reported they did not know how to use it
Desktop Use	Single and dual screens: staff choice
Information technology assistance	Excellent
Wireless connectivity	Excellent
Landline telephone	Commander phone
Smartphone available for clinical staff	Yes
Smartphone use	Text Make and receive calls

Site Two

Full time equivalent staff	7
Female	2
Male	5
Mental Health Nurse	Yes
Psychologist	Yes
Social worker	Yes
Occupational therapist	Yes
Location of site	Central regional business area
Site: building	Shop front, single level
Services at site	Mental health Youth worker General practitioner Centrelink assistance Practice mental health nurse
Service provided: On site	Yes
Service provided: Outreach	No
Hours of business	Monday to Friday 9-5. Except public holidays. Extended hours 2 evenings per week
Geographical region	State-wide service
Client engage with service voluntarily	Yes
Client engage with service mandated	No
Client age group	16-25
Client Diagnosis	Stress, depression Anxiety Relationship issues Personality disorder
Caseload	60-70
Security for site	Yes. Independently employed to visit site
Access to site	Key access
Individual security devices	In some offices
Clinical office space	open office space
Location of client consultation on site	Staff book consultation room
Commercial photocopier/printer	Private room near clinical offices: only staff access

Secure print	No
Passcode protection to access technology	Yes
Tablet available	Yes: Two shared between all staff
Tablet used	Administration Staff: Used for pre and post consultation questionnaire
Laptop available	Yes. Shared laptops available between clinicians
Laptop used	No. Due to poor wireless connection.
Videoconference available	Available
Videoconference used	Not used. Staff did not know how to use it. Television monitor used to project minutes for meeting
Teleconference available	Yes
Teleconference used	Not know how to use it
Desktop use	Single screen for clinical staff. Dual screens for administration and manager
Information technology assistance	Poor and unresponsive
Wireless connection	Very poor and unreliable, therefore staff prefer not to access
Landline telephone	Commander phone
Knowledge of use of functions of landline telephone	Limited. Make and receive telephone calls Receptionist knew full functions
Smartphone available for clinical staff	No
Smartphone use	Text to make appointment reminders. Unable to make and receive calls

Site Three

	MAIN OFFICE	**SMALL OFFICE**
Full time equivalent staff	100	25
Female	70	15
Male	30	10
Mental Health Nurse	Yes	Yes
Psychologist	Yes	Yes
Social worker	No	No
Occupational therapist	No	No
Location of site	Residential HUB next to large shopping complex in a regional centre. Central business area	Central business area, in a small rural centre
Site: building	Easily located. Custom built site 5 years ago	Difficult to locate (entrance at rear of building). Old 1940's commercial building 3 levels
Services at site	Mental health Alcohol and other drugs Physiotherapist Youth worker General practitioner Diabetes education Dietitian Podiatry	Mental health Alcohol and other drugs Physiotherapist Youth worker General practitioner Diabetes education Dietitian Podiatry
Service provided: On site	Yes	Yes
Service provided: Outreach	Yes	Yes
Hours of business	Monday to Friday 9-5 Except public holidays	Monday to Friday 9-5 Except public holidays
Geographical region	Region allocated for offices : regional area	Region allocated for offices : rural area

Client engage with service voluntarily	Yes	Yes
Client engage with service mandated	No	No
Client age group	25-65	25-65
Client diagnosis	Severe and persistent mental illness Paranoia Psychosis Depression Anxiety Personality disorders	Severe and persistent mental illness Paranoia Psychosis Depression Anxiety Personality disorders
Caseload	6-7	6-7
Security for site	Yes	Yes
Access to site	Key access	Key and swipe access
Individual security devices	NA	NA
Clinical office space	Open office space	Open office space
Location of client consultation on site	Staff book consultation room	Staff book consultation room
Commercial photocopier/printer	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access
Secure print	Yes	No
Passcode protection to access technology	Yes	Yes
Tablet available	Yes. All clinicians have them	Yes. All clinicians have them
Tablet used	Hardly used. Change in role	Hardly used. Change in role
Laptop available	Yes. Clinicians have them	Yes. Clinicians have them
Laptop used	Yes. Routinely	Yes. Routinely
Videoconference available	Available	Available
Videoconference used	Not used. Staff do not know how to use it Television monitor used to project minutes for meeting	Not used. Staff do not know how to use it Television monitor used to project minutes for meeting

Teleconference available	Yes	Yes
Teleconference used	Not used as some sites don't have it	Not used as some sites don't have t
Desktop use	Dual screens. All staff	Dual screens. All staff
Information technology assistance	Excellent	Excellent
Wireless connectivity	Good	Good
Landline telephone	Commander phone	Commander phone
Knowledge of use of functions of landline telephone	Limited. Make and receive telephone calls Receptionist knew full functions	Limited. Make and receive telephone calls Receptionist knew full functions
Smartphone available for clinical staff	Yes	Yes
Smartphone use	Text Make and receive calls	Text Make and receive calls

Site Four

	MAIN OFFICE	MEDIUM OFFICE	SMALL OFFICE
Full time equivalent staff	36	11	11
Female	28	1	7
Male	8	10	4
Mental Health Nurse	Yes	Yes	Yes
Psychologist	Yes	No	Yes
Social worker	Yes	No	No
Occupational therapist	Yes	No	No
Location at site	Central business area. Co-located with regional health service	Co-located with rural health service	Co-located with rural health service
Site: building	Easily located; 1920's Victorian building 2 levels building co-located with hospital	1970's office building co-located with hospital	Custom built office 10 years ago building co-located with hospital
Services at site	Adult community mental health	Lifespan community mental health service	Lifespan community mental health service
Service provided: On site	Yes	Yes	Yes
Service provided: Outreach	Yes	Yes	Yes
Hours of business	24 hour day service

Staff on site on duty

Service provided 24 hours day | Monday to Friday. 9-5

Adult client clinicians on call after hours for all clients of lifespan

Service provided 24 hours day | Monday to Friday. 9-5

Adult client clinicians on call after hours for all clients of lifespan
Service provided 24 hours day |

Geographical region	Region allocated for offices: geography: regional area, and age groups	Region allocated for offices: geography: rural area	Region allocated for offices: geography: rural area
Client engage with service voluntarily	Yes	Yes	Yes
Client engage with service mandated	Yes	Yes	yes
Client age group	26-65	25-55	25-65
Client diagnosis	Depression Anxiety Post-traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use	Depression Anxiety Post-traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use	Depression Anxiety Post-traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use
Caseload	6-10	15-20	8
Security for site	Yes	Yes	Yes
Access to site	Keypad entry	Keypad entry	Keypad entry
Individual security devices	Use for individual consultation with clients on site	Use for individual consultation with clients on site	Use for individual consultation with clients on site
Clinical office space	Open office space	Individual staff offices	Open office space
Location of client consultation on site	Staff book consultation room	Staff office Staff book separate consultation room with 2 doors to exit if safety concerns	Staff book consultation room

Commercial photocopier/printer	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access
Secure print	Yes	No	No
Passcode protection to access technology	Yes	Yes	Yes
Tablet available	Yes. Shared between clinicians	Yes. Shared between clinicians	Yes. Shared between clinician
Tablet used	Never used: No wireless capability Unsure passcode	Never used: No wireless capability Unsure passcode	Never used: No wireless capability Unsure passcode
Laptop available	Yes. Shared between clinicians	Yes. Shared between clinicians	Yes
Laptop used	Yes. Record meeting minutes	Yes. Record meeting minutes	Yes. Record meeting minutes
Videoconference available	Available	Available	Available
Videoconference used	Not used Staff did not know how to use it TV used to project minutes for meeting	Not used Not know how to use it Poor connectivity and unreliable equipment	Not used Not know how to use it Poor connectivity and unreliable equipment
Teleconference available	Yes	Yes	Yes
Teleconference used	No	No	No
Desktop use	Single screen	Single screen	Single screen

| Information technology assistance | Information technology support varied better support in largest site | Information technology support poor. They are located at another location

Insufficient support and issues not resolved unless staff take technology to large site | Information technology support poor. They are located at another location

Insufficient support and issues not resolved unless staff take technology to large site |
|---|---|---|---|
| **Wireless connectivity** | Good | Poor | poor |
| **Landline telephone** | Commander phone | Commander phone | Commander phone |
| **Knowledge of Use of functions of landline telephone** | Limited. Staff use to make and receive telephone calls

Receptionist knew full functions | Limited. Staff use to make and receive telephone calls

Receptionist knew full functions | Limited. Staff use to make and receive telephone calls

Receptionist knew full functions |
| **Smartphone available for clinical staff** | Yes | Yes | Yes |
| **Smartphone use** | Text Make and receive calls | Text Make and receive calls | Text Make and receive calls |

Full time equivalent staff	6
Female	6
Male	0
Mental Health Nurse	No
Psychologist	Yes
Social worker	Yes
Occupational therapist	No
Location of site	Central business area
Site: building	Easily located. 1920's Victorian building single level building co-located with hospital
Services at site	Adult mental health post natal presentations Other counselling services co-located at site
Service provided: On site	Yes
Service provided: Outreach	No
Hours of business	Monday to Friday. 9-5. Except public holidays
Geographical region	All of region
Client engage with service voluntarily	Yes
Client engage with service mandated	No
Client age group	16-65
Client diagnosis	Post natal period mental health Drug induced psychosis Depression Bipolar affective disorder Schizophrenia Anxiety Relationship issues
Caseload	30
Security for site	Yes
Access to site	Key access Key access
Individual security devices	N/A
Clinical office space	Individual staff offices
Location of client consultation on site	Staff office

Commercial photocopier/printer	Open space near clinical offices: open area which only staff access
Secure print	No
Passcode protection to access technology	Yes
Tablet available	No
Tablet used	N/A
Laptop available	No
Laptop used	N/A
Videoconference available	Available
Videoconference used	Not used. Staff do not know how to use it TV used to project minutes for meeting
Teleconference available	No
Teleconference used	NA
Desktop use	Clinical staff single screens except administration dual screens
Information technology assistance	Excellent
Wireless connectivity	Good
Landline telephone	Commander phone
Knowledge of Use of functions of landline telephone	Excellent Instruction manual Taught all the function Receptionist knew full functions
Smartphone available for clinical staff	No
Smartphone use	NA

Appendix H – Mental Health Nurse Participant Details

Interviews	Margo	David	Nigel	Grace	Peter	Jan	Alison	Tiffany	Dean	Jess
Site	1	1	2	3 (Main)	3(Small)	4(Main)	4(Main)	4(Main)	4 (Medium)	4(Small)
Sex	Female	Male	Male	Female	Male	Female	Female	Female	Male	Female
Age Range	51-60	41-50	41-50	51-60	51-60	61-70	41-50	51-60	51-60	30-40
Qualification	Hospital trained RN, AOD BN, NP	BN	BN	Hospital trained RN Cert IV WAT	Hospital trained RN	Hospital trained RN midwife	BN PG:MH	Hospital trained RN	Hospital trained RN	BN PG:MH
Diary	E-form	Paper	Paper	E-form	Paper	E- form	E- form	Paper	E-form	E-form
Smartphone	NA	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Use of Smartphone	N/A	Text Make and receive calls	Shared one used to send text for appointments	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls
Issues with Smartphone	Nil	N/A	Poor wifi	Black spot	Black spot	Black spot	Black spot	Black spot	Black spot	Black spot

Interviews	Margo	David	Nigel	Grace	Peter	Jan	Alison	Tiffany	Dean	Jess
Video-conferencing	Not available on site	Not available on site	Never Lack knowledge how to use it	Never Other sites don't have it	Never Other sites don't have it	Never Lack knowledge how to use it	Never Lack knowledge how to use it	Never Lack knowledge how to use it	Yes but seldom Connectivity issues	Yes but seldom Connectivity issues
Webinars	Yes	No	No	Yes	Yes	No	No	No	Yes	Yes
Knowledge e-mental health	Yes PG studies Peers	Yes Unable to elaborate	Yes peers	Yes Peers	Yes Peers	Yes Read about it	Yes Conference	No	Yes peers	Yes peers
Interested in learning about e-mental health	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Benefits to use e-mh										
Clients savvy with technology	Youth					All ages Especially youth	All ages			
Educate client	Yes			Yes		Yes		Yes		
Prompt communication client	Yes	Yes				Yes				

Interviews	Margo	David	Nigel	Grace	Peter	Jan	Alison	Tiffany	Dean	Jess
Prompt communication Other services	Yes	Yes	Yes	Yes		Yes				Yes
Empower client with current information	Yes		Yes			Yes				
Connect with other services		Yes								
Access online education				Yes						Yes
Added benefits	'tool kit' for staff					Applications: 'smily minds'		Podcast for anxiety Mood applications		Rapport Relate to younger clients
Barrier to use e-mh										
Nil patient access to technology	Lose items And not afford IT	Lose items	Cost Exceeded data plan	Cost	Cost			Cost		Cost Lack knowledge how to use technology
Black spot	Yes	Yes								

Interviews	Margo	David	Nigel	Grace	Peter	Jan	Alison	Tiffany	Dean	Jess
Mental illness factors							Paranoid	Paranoid Chronic presentation : use of technology may damage therapeutic relationship		
Technology outage						Yes	Yes	Yes		Yes
Faulty equipment										Video-conferencing
Lack equipment										Nil tele-conferencing
Client not know how to use technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Staff not know how to use some technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes

Appendix I – Site Demographics Details of Clients

SAMPLE	5 SITES
Located CBD	62.5%
Custom built offices	12.5%
Mental health only service provided from the office	37.5%
Alcohol and other drugs services offered on site	37.5%
Face to face on site clinical service provided	100%
Outreach clinical services provided	75%
Mental health nurse employed	87.5%
Operates business hours 9-5pm	62.5%
Clinical staff available 24 hours per day 7 days per week	37.5%
Client mandated to engage with service	50%
Clients voluntarily engage with service	100%
Cases with clients 16-25 years of age	12.5%
Cases with clients 25-65 years of age	62.5%
Cases with clients 16-65 years of age	25%
Geographical region : N/A	25%
Geographical region : Statewide	12.5%
Geographical region : Boundaries	62.5%
Client Diagnosis: Depression	100%
Client Diagnosis: Anxiety	100%
Client Diagnosis: Post Traumatic Stress Disorder	50%
Client Diagnosis: Paranoia/Psychosis	87.5%
Client Diagnosis: Personality Disorder	50%
Client Diagnosis: Stress	12.5%
Client Diagnosis: Situational Crisis	37.5%
Client Diagnosis: Relationship Issues	12.5%
Client Diagnosis: Bipolar Affective Disorder	50%
Client Diagnosis: Alcohol and Other Drugs	50%
Client Diagnosis: Severe and Persistent Mental Illness	25%
Client Diagnosis: Perinatal Mental Health Issues	12.5%
Caseload: less than 10	50%
Caseload: 10 to 30	37.5%

SAMPLE	5 SITES
Caseload: more than 30	12.5%
Cases with individual office space	37.5%
Cases with open office space	62.5%
Shared commercial photocopier	100%
Secure print for photocopier	25%
Tablet for staff to use	87.5%
Tablet used if available	50%
Laptop available	87.5%
Laptop used if available	86%
Videoconferencing available	87.5%

Appendix J –Site Demographics

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Equivalent full time staff at site	7	7	100	25	36	11	11	6
Female	43%	28%	70%	60%	78%	9%	64%	100%
Male	57%	72%	30%	40%	22%	91%	36%	0%
Average years for mental health nurse in role	3.75	7	4.5	4.5	13.75	15	6	NA
Mental Health Nurse	Yes	Yes	Yes	Yes	Yes	Yes	Yes	no
Psychologist	Yes	Yes	Yes	Yes	Yes	No	Yes	yes
Social worker	Yes	Yes	No	No	Yes	No	No	yes
Occupational therapist	No	Yes	No	No	Yes	No	No	no
Location of site	Central business area	Central business area	Residential HUB next to large shopping complex Central business area	Central business area	Central business area	Residential /business area	Residential /business area	Central business area
Site: building	Old 1940's house recently	Shop single level	Custom built site 5 years ago	Old 1940's commercial building	1920's Victorian building 2 levels building co-	1970's office building co-	Custom built office 10 years ago building co-	1920's Victorian building single level building co-

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
	renovated 6/12 ago Single level			3 levels	located with hospital	located with hospital	located with hospital	located with hospital
Service provided: **On Site**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service provided: **Outreach**	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Services at site	Mental health Alcohol and other drugs	Mental health Youth worker General practitioner Centrelink Practice mental health nurse	Mental health Alcohol and other drugs Physiotherapist Youth worker General practitioner Diabetes education Dietitian Podiatry	Mental health Alcohol and other drugs Physiotherapist Youth worker General practitioner Diabetes education Dietitian Podiatry	Adult community mental health	Lifespan community mental health service	Lifespan community mental health service	Adult mental health perinatal presentations Other counselling services co-located

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	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Service provided: On Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Service provided: Outreach	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Hours of business	Monday to Friday 9-5	Monday to Friday 9-5	Monday to Friday 9-5	Monday to Friday 9-5	24 hour day service	Monday to Friday 9-5 Adult client clinicians on call after hours	Monday to Friday 9-5 Adult client clinicians on call after hours	Monday to Friday 9-5
Geographical region	All of region	Statewide	Region allocated for offices : regional area	Region allocated for offices : rural area	Region allocated for offices: geography : regional area, and age groups	Region allocated for offices: geography : rural area	Region allocated for offices: geography : rural area	All of region
Client engage with service Voluntarily	yes	Yes	Yes	Yes	Yes	Yes	Yes	yes

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Client engage with service mandated	Yes				Yes	Yes	yes	
Client age group	16-65	16-25	25-65	25-65	26-65	25-55	25-65	16-65
Client Diagnosis	Depression Anxiety Post traumatic stress disorder Paranoia Alcohol and other drug use	Stress, depression, anxiety, Relationship issues Personality disorder	Severe and persistent mental illness Paranoia Psychosis Depression anxiety Personality disorders	Severe and persistent mental illness Paranoia Psychosis Depression anxiety Personality disorders	Depression Anxiety Post traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use	Depression Anxiety Post traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use	Depression Anxiety Post traumatic stress disorder Paranoia Bipolar affective disorder Situational crisis Alcohol and other drug use	Post natal period mental health Drug induced psychosis Depression Bipolar affective disorder Schizophrenia Anxiety Relationship issues
Caseload	20	60-70	6-7	6-7	6-10	15-20	8	30
Security for site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clinical office space	individual staff offices	open office space	Open office space	Open office space	Open office space	Individual staff offices	Open office space	Individual staff offices

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Location of client consultation on site	Staff office	Staff book consultation room	Staff book consultation room	Staff book consultation room	Staff book consultation room	Staff office. Staff book separate consultation room with 2 doors to exit if safety concerns	Staff book consultation room	Staff office
commercial photocopier	Open space near clinical offices: open area which only staff access	Private room near clinical offices: only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access	Open space near clinical offices: open area which only staff access
Use of photocopier	Use all functions	Use all functions	Use all functions	Use all functions	Use all functions	Use all functions	Use all functions	Use all functions
Secure print	No	No	Yes	No	Yes	No	No	No
Tablet Available	Yes: Clinicians have them	Yes: Two shared between all staff	Yes: Clinicians have them	Yes: Clinicians have them	Yes: Shared between clinicians	Yes: Shared between clinicians	Yes: Shared between clinician	No

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Tablet Used	Hardly used: No explanation	Pre and post consultation questionnaire	Hardly used: Change in role	Hardly used: Change in role	Never used: No wifi Unsure passcode	Never used: No wifi Unsure passcode	Never used: No wifi Unsure passcode	N/A
Laptop Available	Yes: Clinicians have them	Yes: Shared between clinicians	Yes: Clinicians have them	Yes: Clinicians have them	Yes: Shared between clinicians	Yes: Shared between clinicians	Yes	No
Laptop Used	Yes; Routinely	No: Poor wifi	Yes: Routinely	Yes: Routinely	Yes; Record meeting minutes	Yes: Record meeting minutes	Yes: Record meeting minutes	N/A
Videoconference Available	Not available on site	Available	Available	Available	Available	Available	Available	Available
Videoconference Used	Not applicable	Not used No know how to use it TV used to project minutes for meeting	Not used No know how to use it TV used to project minutes for meeting	Not used No know how to use it TV used to project minutes for meeting	Not used Not know how to use it TV used to project minutes for meeting	Not used Not know how to use it Poor connectivity	Not used Not know how to use it Poor connectivity	Not used No know how to use it TV used to project minutes for meeting
Teleconference	Yes	Yes	Yes	Yes	No	No	No	No

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
Available								
Teleconference Used	Not know how to use it	Not know how to use it	Not used as some sites don't have it	Not used as some sites don't have it				
Desktop computer Single and dual screens	Single and dual screens: staff choice	Single screen for clinical staff and dual screens : admin and manager	dual screens	Dual screens	Single screen	Single screen	Single screen	Single screens except Admin dual screens
IT HELP	Excellent	Poor	Excellent	Excellent	Information Technology support varied better support in largest site	Information Technology support poor: remote	Information Technology support poor: remote	Excellent
Landline telephone	Commander phone	Commander phone	Commander phone	Commander phone	Commander phone	Commander phone	Commander phone	Commander phone
Knowledge of Use of functions of landline telephone	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Excellent: Instruction manual

	Site 1	Site 2	Site 3:Main	Site 2:Small	Site 4: Main	Site 4: Medium	Site 4: Small	Site 5
								Taught all the functions
Smartphone available for clinical staff	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Smartphone use	Text Make and receive calls		Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	Text Make and receive calls	
Mobile telephone coverage	Good	NA	Poor	Very poor	Poor	Very poor	Very poor	NA
Wireless connectivity	Very good	Very poor and unreliable	Adequate	Adequate	Adequate	Adequate	Adequate	NA

Appendix K – Site Details

Site location	%	Services provided	%
Located CBD	62.5%	Mental health only service provided from the office	37.5%
Custom built offices	12.5%	Alcohol and other drugs services offered on site	37.5%
Hours Of Operation		Face to face on site clinical service provided	100%
Operates business hours 9-5pm	62.5%	Outreach clinical services provided	75%
Clinical staff available 24 hours per day 7 days per week	37.5%		
		Caseload	
Geographical area serviced		Caseload: less than 10	50%
Geographical region : N/A	25%	Caseload: 10 to 30	37.5%
Geographical region : Statewide	12.5%	Caseload: more than 30	12.5%
Geographical region : Boundaries	62.5%		
		Percentage MHN employed	
Office Space		Mental health nurse employed	87.5%
Cases with individual office space	37.5%		
Cases with open office space	62.5%	**Client demographics**	
		Client mandated to engage with service	50%
Technology Available and Use		Clients voluntarily engage with service	100%
Shared commercial photocopier	100%	Cases with clients 16-25 years of age	12.5%
Secure print for photocopier	25%	Cases with clients 25-65 years of age	62.5%
Tablet for staff to use	87.5%	Cases with clients 16-65 years of age	25%
Tablet used if available	50%		
Laptop available	87.5%	**Client Diagnosis**	
Laptop used if available	86%	Client Diagnosis: Depression	100%
Videoconferencing available	87.5%	Client Diagnosis: Anxiety	100%

Videoconferencing used if available	0%	Client Diagnosis: Post Traumatic Stress Disorder	50%
Teleconference available	50%	Client Diagnosis: Paranoia/Psychosis	87.5%
Teleconference used if available	0%	Client Diagnosis: Personality Disorder	50%
Single computer monitors in offices	75%	Client Diagnosis: Stress	12.5%
Dual computer monitor screens in offices	50%	Client Diagnosis: Situational Crisis	37.5%
Information technology poor	37.5%	Client Diagnosis :Relationship Issues	12.5%
Information technology support more than adequate	62.5%	Client Diagnosis: Bipolar Affective Disorder	50%
Commander landline telephone	100%	Client Diagnosis: Alcohol and Other Drugs	50%
Staff provided with smartphone for their roles	75%	Client Diagnosis: Severe and Persistent Mental Illness	25%
Staff aware of use of various functions of commander landline telephone	12.5%	Client Diagnosis: Perinatal Mental Health Issues	12.5%
Staff who report mobile phone coverage reliable	0%		

Videoconferencing used if available	0%
Teleconference available	50%
Teleconference used if available	0%
Single computer monitors in offices	75%
Dual computer monitor screens in offices	50%
Information technology poor	37.5%
Information technology support more than adequate	62.5%
Commander landline telephone	100%
Staff aware of use of various functions of commander landline telephone	12.5%
Staff provided with smartphone for their roles	75%
Staff who report mobile phone coverage reliable	0%

Appendix L – Mental Health Nurse Use of Technology

SAMPLE	11 MENTAL HEALTH NURSES
Female mental health nurses	64 %
Male mental health nurses	36 %
Length registered as mental health nurse	29 years
Length in current role	9 years
Hospital trained Registration	55%
Completed Mental Health Post graduate studies	27%
Use electric diary	64%
Use paper diary	36%
Use of smartphone	81%
Smartphone not provided for role	19%
Staff provided with Smartphone used to make and receive calls	100%
Staff provided with Smartphone used to communicate via text	91%
Staff provided with Smartphone used to email	0%
Staff provided with Smartphone used to access internet	0%
Mobile phone black spot issues	72%
Mobile phone black spot issues N/A	18%
Wifi issues for technology	9%
Videoconferencing available	84%
Videoconferencing available and used	18%
Connectivity issues with technology other than smartphone	64%

Appendix M – Data Analysis of Codes

Major Theme One: Mental Health Nurses' Workplace Environment	Codes
Affordability of Technology	Limited data plan Financial cost Socio-demographics Client financially poor: NOT able to afford technology
Service Characteristics	Funding for organisation eg Commonwealth/State funding Referrals: self Region serviced Streamlined service & navigate healthcare systems for healthcare professional Work office locations: multiple sites Qualifications: mental health nurse Mental Health Nurse years in role Employment status: part-time or full-time Years nursing Type of mental health nurse training : hospital based/university Consortium: Association of several companies Personal information technology issues: fat fingers/ slow to type /case load/caseload size Dinosaur Interpersonal Skills Patient changes plans Geographic location: barrier Compliance Mental health nurse technically challenged Hand write points then enter to client file Younger staff :information technology savvy Traditional stationary: paper stationary/ paper

	Open plan office/Private office space
	Model of care
	Private consult rooms
	Paper diary/paper clinical resources
	Varied hours role/work (shift work)
	Psychologists use mobile applications
Client Group	Rapport
	Isolation
	Stigma
	Suspicious/paranoid
	Client age group
	Forget appointment
	Living circumstances
	Client Control/empowerment
	Social isolation
	Client NOT answer phone
	Client lack education/intelligence
	Trust of information technology
	Security of information technology
	Confidentiality of information technology
	Teach information technology use to client
	Client loses information technology
	Client family/friends have information technology
	Client cautious regarding information technology use not due to mental illness but privacy/client privacy
	Youth information technology savvy
	All aged information technology savvy
	Client VOLUNTARY engage
	Client INVOLUNTARY engage
	Share i-pad
	Client not know how to use information technology
	Duration in client care
	Client gender

Major Theme Two: Mental Health Nurses' Practice

Major Theme Two: Mental Health Nurses Practice	Codes
Education and Training of Mental Health Nurses	E-mental health: heard of it
	E-mental health: NOT heard of it
	Engaged in online learning
	Period of time they have known about e-mental health
	Assumed knowledge of information technology
	Technologically savvy
	Teach information technology use
	Staff education re electronic file
	Staff education regarding database
	Know what e-mental health is
	Client shown online applications by mental health nurse
	E-mental health nil education regarding applications
	Staff self- taught
	Staff know how to use information technology
	Staff keen to formally learn e-mental health
	Online training boring
	Received training regarding e-mental health
	Face-to-face staff training
	Proposed e-mental health training
	Psychiatrist and e-mental health & e
	Conference had e-mental health
	Awareness possible benefits e-mental health

Mental Health Community Nurses Caseload	Mental health nurse get difficult/chronic client
	Client in crisis
	Homeless
	Workload extremely busy
	Lack client engagement
	Client open to technology

Mental Health Nurse Role Focus	Role information/communication regarding Mental health nurse role/function: eg assertive outreach, triage, case management / Education to client/Co-ordinate care
	Role: administration
	Referrals : external agencies
	Face- to- face
	Outreach: mutual client meeting place
	Assessment
	Drop in
	Therapeutic relationship

Major Theme Three: The Mental Health Nurse being Supported by Information Technology in Clinical Practice

Major Theme Three: The Mental Health Nurse being Supported By Information Technology in Clinical Practice	Codes
Availability of Technology	Telephone
	Emails
	Smartphone
	Tablet/ipad
	Desktop computer
	Dual screen computer
	Teleconferencing
	Text
	Voicemail
	Webforms
	Organisation database
	Electronic files / scripts/ electronic client management system/ online Assessment forms
	Similar technology resources with peers
	Provide mobile phone to client
	Provide tablet/ipad to client
	Provide information technology to client Online

	Information technology hindrance
	Information technology security: log in /password
	Instant information
	Electronic diary
	Zoom/skype
	Different information technology resources within the organisation
	Different resources (NOT information technology) between sites eg reception
	Videoconferencing
	Information technology equipment used for alternative reasons
	Laptop
	Internet
	Wireless connectivity / hot spotting
	Old information technology
	Lack information technology resources
	Mouse
	Software
	Photocopier
	Secure print
	Overhead projector
	Information technology resources proven to be good
	Environmentally friendly information technology.
	Code yellow
	Service provider: Optus, Telstra
	Podcast
	Up to date information
Use of Technology	Note writing
	Efficiency
	Virtual team
	Communication
	Text on phone
	Phone calls
	Make appointment time

Research information

Efficient communication with other services/connect with other services

Online courses: mandatory

Online courses: optional

Information technology helps mental health nurse access broad range information

Poor information sources: eg sexting Us of technology is unacceptable to client

Information re staff education /client care

Information technology necessary tool

Time on the computer

Consistency staff practice

Education/share knowledge

Staff know how to use landline

Unsure if client got text message

Mental Health nurse using applications

Appropriate use of Information technology

SPAM: unsolicited messaged received on internet

Facetime

Flexibility client treatment

Education video for client

Personal use Information technology

Work related Information technology use

Appropriate use Information technology

Java : computer software program

Client not using e-mental health applications

Toolkit

Roster on (electronic time-sheet)

Client not have the staff number

Research medication and treatment

Webinars

Paper letters to doctors

Information technology used to gain client information from peers

Liaise with peers: case-manager/
psychiatrist
Online database

Appendix N – Site Description

Site One

The organisational mission statement of working together to inspire people and to enliven communities and confront injustice was consistent with the organisation practice and physical infrastructure. A variety of health care disciplines were employed at this site, inclusive of a mental health nurse practitioner. Most staff provided clinical consultation with clients off and on site. The mental health nurse practitioner maximised the number of clinical appointments by seeing clients only face- to-face in her office, as the mental health nurse practitioner roles included prescribing of medications which required a face- to- face consultation.

The building had sheer viscose curtains over all windows to keep internal spaces well lit while providing privacy from outside. The building frontage was close to a busy street in a central business location, with a lot of pedestrian and car traffic. Staff, visitors and clients were provided with off street parking and visitors and clients could access the building through front door entry which was very visible from the street. There was a ramp entry for wheelchair access into the front of the premises.

On entering the building, the atmosphere was calm and tranquil, with soft music playing from the local radio station in the background. The room temperature was very comfortable and there was adequate lighting. The recently renovated premises were clean and well equipped for staff need with most staff having individual offices, except for one office space which catered for four staff, two permanent and two students at any given time. There were some dirty coffee mugs at individual staff desks. All staff were attending to their roles, either in clinical consultation in private rooms, working on their computers, and one staff member was on his smartphone speaking, attending to a client in crisis.

There were ample seats in the waiting room, without being overcrowded and impersonal. There were two living plants which were healthy in the waiting room and recent magazines, tissues and a wall clock. The reception was as I entered the building, and the waiting room was to the left as I entered the reception area and office space was to the right of reception. Whilst sitting in the waiting room, I was not able to see who left the office space that enhanced client privacy. The receptionist sat at a desk with a high petition, so clients were unable to see documents or the computer screen of the receptionist. However, the receptionist was able to observe any activity in the waiting

room. The office space was easy to navigate one's way around, even when they were not familiar with the environment.

Visible staff were at their desks using dual screen computers, which had ergonomic chairs and whiteboards in their office space and mostly minimal stationary on the desk. Some staff were not visible as they were behind closed doors in consultation with clients. Computer activity involved, entering information in a clinical file and researching on the internet. Staff reported that they generally used the computer for email communication and Google as a search engine. As a result of staff changes with the organisational restructure, some staff had their computers and associated software upgraded whilst others had not. Therefore, technology compatibility issues had been the main concern since the office relocation. All staff in the office reported information technology assistance was very responsive to information technology issues logged by staff and all staff reported confidence with the technology in the workplaces.

There was a workstation for the receptionist, in the individual offices and four work stations in the shared office space. All five clinical staff work spaces had a coffee table and two or three chairs for staff to sit at for meetings or for staff to sit with clients during consultations. All four individual clinical offices had locked filing cabinets and solid timber doors to their office. Staff in these offices were able to have private consultations with clients in these spaces, whereas staff who worked in shared office space went to the client for consultation.

The drug and alcohol mental health nurse had an A4 paper diary, A4 note pads and an abundance of stationary compared to other staff. After the mental health nurse completed a consultation with a patient, I entered the office noting that neither of the computer screens was turned on. All staff (except the mental health nurse practitioner) had smartphones and some staff had a personal mobile phone sitting on their desk. Staff reported they had never been educated regarding how to utilise all the functions of the smartphone. One mental health nurse reported using Face time to communicate with clients. All staff had access to Skype, however no-one utilised this platform. No-one was able to say why this was the case.

All staff had identical technological resources except the receptionist who had three computer screens and the mental health nurse practitioner who chose to have a laptop and a specialised printer in her office for printing medication scripts. The mental health nurse practitioner also chose not to have a smartphone as all of her work was face- to-face in the office.

Some staff who were approximately 30 years of age were female and male and were all actively utilising technology for clinical work, as did a 60 year old female mental health nurse. One of the 30 year old clinical staff reported using technology all the time for resources, and that they were aware of evidence-based practice resources.

The males were aged between 48 and 55 years of age, did not have their computers turned on and had ample stationary on their desk including open paper diaries. The older mental health nurse practitioner was female and 60 years of age and was aware of e-mental health interventions from her mental health nurse practitioner studies, as they could provide a 'tool-kit', however never used any. She used a computer to print medication prescriptions, and her computer for electronic diary, access to clinical files, research information and to educate her clients. The mental health nurse was aware that youth clients were technology aware and able, and that technology facilitated prompt communication which was current, therefore empowering the client, and reduced potential barriers for the client with stigma and miscommunication. The mental health nurse practitioner identified a barrier to the use of technology was the risk of clients accessing poor sources such as doctor google.

The male mental health nurse who was 48 years of age stated he knew what e-mental health interventions were but was unable to elaborate. He used a paper diary and technology was never active during periods of observation at the site. He reported he using technology regularly, and particularly liked the dual screen monitors, however was not sure where the I-pad was and was unable to state what technology he used. This mental health nurse identified that e-mental health interventions allowed for prompt communication and the ability to connect with others, however only participated in face-to-face meetings with others. The mental health nurse identified potential barriers with technology being consistent with Internet connectivity and that some clients when unwell misplaced or sold the technology, or may not be able to afford the technology in the first instance. The mental health nurse preferred face- to-face for the initial consultation to build rapport. Neither mental health nurse had received any formal education regrading e-mental health interventions, however they were interested in learning more. There were no policies or clinical guidelines in relation to e-mental health interventions at this site.

Site Two

The vision of the organisation was to improve young people's mental, social and emotional wellbeing through the provision of high quality, integrated services when and where they were needed The building frontage was close to a busy street in a central

business location, with a lot of pedestrian and car traffic. Visitors and clients were required to park at the front of the premises with limited car parking available despite all treatment was provided on site. It was difficult for someone to discretely access the premises, due to its busy location.

The building atmosphere was calm and tranquil, with the audio of the local radio station in the background. The room temperature was comfortable and there was adequate lighting. The premises were clean and well equipped with technology for all the individual staff. The office space was open planned except for the manager's office and the individual consultation rooms. There were some dirty coffee mugs at individual staff desks. All staff were happily attending to their clinical roles; the atmosphere was pleasant, relaxed and professional.

There were ample seats in the waiting room, without being overcrowded and impersonal. The openness of the waiting room did not allow for privacy, as everyone could see each other. The receptionist's desk had a high petition. Clients were unable to see documents or the receptionist's computer screen. The receptionist had full visibility of the waiting room and was able to observe all the activity in the waiting room. The office space consisted of multiple individual consultation rooms which were behind every door. Staffs were either in the consultation rooms providing face- to-face treatment or undertaking administration work at their desk in the clinical open space. The manager and the receptionist were both actively utilising the dual screens. All consultation rooms had hard-wired computers because wireless connectivity on the premise was poor. Despite the age group of the clients, wireless connectivity was an on-going issue and information technology support was very poor. Wireless access was password protected which clients obtained from the receptionist on arrival to the service.

Client participation with the surveys was voluntary, and if the client agreed, the receptionist activated the appropriate survey; either a pre or post consultation survey. The survey was evaluating client satisfaction with service delivery pre and post consultation. All staff reported using technology for their work. Staff mostly used their computers for electronic client file, email and research information for their clients.

The mental health nurse was male, was university educated, had been nursing for over 27 years and had been in this role for seven years. He had heard of e-mental health from his peers, however did not know what it entailed. A mobile application which he used was 'smily minds'. He had received positive client feedback and outcomes from this application. He was interested in education and training regarding e-mental health interventions for his clinical work. He identified the benefits of technology in his role, as

being: able to ensure clients attended appointments with the text reminder of their appointments, and the immediacy of current information which could be shared with the client at the time of consultation. He identified challenges with technology in his role, as being the assumption that teenagers and clients had access to technology. Approximately 20% of his clients had inadequate data because of the cost, therefore some clients had limitations with being able to access the information suggested and discussed at the consultation. Not all clients had smartphones and therefore did not have access to data for the Internet and mobile phone applications. Some clients had wireless connectivity limitations at home, therefore limited access on smartphone and/or computer. Some clients were homeless therefore no access to wireless connectivity and financially unable to afford technology. He used technology with these clients at the time of consultation as the client would otherwise not use technology to assist with their treatment.

For clients who were reluctant to engage for treatment, technology would have no impact on improving the likelihood of engagement. Some clients had issues with accessing inappropriate Internet sites, therefore they accessed unreliable information. Emotionally immature clients sometimes reportedly inappropriately used technology for sexting and were not cognisant of security parameters of their technology use and the account they may have. This may have resulted in unsafe Internet use.

Staff were unsure of the model of care. The nature of work was consultation, referral, education and crisis intervention. There were no policies` or clinical guidelines in relation to e-mental health interventions at this site.

Site Three

The aim of the organisation was to support people with severe and persistent mental illnesses with complex needs to be involved with supports in a collaborative, coordinated and integrated way. The large site was a busy workplace, with many staff and clients engaged in the large number of services. The satellite service was much quieter with the reception unattended, and there was a bell to ring on visiting the site for reception assistance.

There was limited car parking at both sites for staff, visitors and clients, despite client treatment being delivered by outreach and on site. At both sites, privacy was maintained as there were a large number of services; therefore other clients would not be aware of why a client was presenting.

The large site was very busy with a lot of activity; the satellite site was quiet. Upon arrival at reception there was a waiting area in the large site which had a large flow of visitors to the centre. The satellite site waiting area, due to reception being unattended, had a bell requiring ringing for receptionist attention. The large site's environment was appealing with colour co-ordinated and matching décor, light filled environment and a comfortable temperature. The office space was open floorplan. The satellite site was dark and cold, lacking atmosphere. Furniture was mismatched and tired. The staff in the mental health program all shared an office. The mental health nurse was unsure what programs the other staff provided. Other staff at both sites were warm and friendly when engaged, otherwise kept to themselves.

Staff at both sites booked private consulting rooms when they met with clients at the office. They found the dual screen monitors were beneficial; for Internet searching on one screen, and typing on a word document on the other. The mental health nurses used the Internet for electronic client files, search information and email. The organisation had a policy outlining appropriate use of email ensuring privacy and confidentiality and the possibility of the organisation auditing a staff member's email account for appropriateness of use/content with their email. The mental health nurse at the large site who was female used an electronic diary, whilst the mental health nurse at the small site was male and used a paper diary. Both mental health nurses were of similar age, over 55 years of age. They were both hospital trained mental health nurses and had worked in mental health for approximately 40 years respectively. They had both been in their current roles for approximately seven years. A tablet was mostly used by staff for remote access because of large geographical area they covered. The mental health nurses at both sites preferred to use the tablet rather than desktop computer, for ease of access and speed of access. Staff were able to use Skype for their role, however there had been a change in consortium agencies recently, resulting in conflicting understanding and expectations in relation to the use of Skype. As a result staff at both sites stated they did not use Skype because of this.

Historically information technology support had been very poor, as there were different support depending on which program was delivered within the site. This resulted in confusion and delays with support. Staff at both sites reported information technology assistance as being very good in recent times and there were general server issues. Administration staff and peers generally provided information technology assistance and education as required.

Clinical staff used the landline predominantly for telephone communication as the organisation policy reiterated this requirement. Staff were provided with limited data packages with their smartphones and were expected to use the smartphone only as required and that the majority of their business should occur via the landline. The limited data package posed an issue at times for staff as they provided outreach services in a large geographical region and therefore did not have access to the landline at all times. Due to the restrictions of the data package, they utilised the smartphone predominantly to text messages. Neither staff member had been taught the functions of the smartphone; they both reported it was assumed knowledge. The geographic region also posed issues with consistency with Internet connectivity resulting in difficulty communication via mobile phone at times.

The mental health nurses at both sites reported being aware of e-mental health interventions and had used this to complete mandatory training required in their roles for fire safety and hand washing. Neither was able to elaborate regarding other examples of e-mental health interventions used.

Both mental health nurses identified that some of the potential benefits of e-mental health interventions were the immediacy and efficiency of communication. Staff and clients could respond at the time which was convenient and private. Text communication allowed for confirmation of appointments which reduced likelihood of time being wasted. Internet allowed for increased amount of information to be readily available for client and mental health nurse, which could be immediately accessed at the time of meeting and verify discussions held during the consultation.

Challenges with use of technology identified by mental health nurses of both sites were that clients might be paranoid and unwilling to engage with technology, and a client may not trust email and text communication. There was the assumption that everyone was able to access and could afford technology. There were clients who could not afford technology, were unable to access technology because of geographical consistency with Internet connectivity, and some clients who intellectually were unable to learn how to use technology. The male mental health nurse reported being a 'dinosaur' and preferred face-to-face interaction with clients.

All team meetings across the region were held face- to- face, resulting in staff potentially travelling two hours each way to attend a meeting.

Site Four

The large site was easily located, as it was on the regional health services main site and was well sign posted to the public. The office space was open plan and very cluttered, noisy and messy. Desk space for each clinician was small with a part petition wall between desk space which accommodated a computer monitor and keyboard and a commander land telephone. Staff booked private consultation rooms on site, to see clients. Alternatively they had a car pool arrangement and booked a car to do the outreach treatment with staff visiting clients and meeting them at an off-site location to provide face-to-face treatment. This site had security cameras and there were personal security devices available for staff to utilise during clinical consultations. Staff accessed the building with a swipe card.

The medium sized site employed only mental health nurses. One participant in the study was male and he had approximately 30 years of clinical experience and was hospital trained. The small sized satellite site employed various disciplines and a female mental health nurse who was university educated with post-graduate mental health qualifications and seven years clinical experience, volunteered to participate in the study.
The small satellite site, was more rural and the staff at this site covered larger and sparser geographical locations than the medium satellite site and the main site. The staff at the small satellite site had an average caseload of approximately eight clients each. The large site was a busy workplace with the number of staff and the shared open-plan office space. Both of the satellite sites were much quieter with fewer clinicians present and office space more generous in both locations. One satellite site had individual offices for each clinician and they provided clinical consultation into their office unless there were concerns of safety. Several clinicians at the other site shared office spaces with very generous room for maximum of three clinical staff at any given time. This site had individual consultation rooms for clinical activity. This site did not have personal security devices available or security cameras; there was currently a grant in process for these resources for this site.

At the site where clinicians consulted clients in their office, the printer was located and there was no secure access print. Secure print access allows documents to be printed but only by the individual who has requested them. The secure print is linked to an individual's unique log-in to access the printing. At the other satellite office the printer was located in the reception which was toggle access. Staff at the large site, finger swiped on, for an electronic recording of staff attendance at the workplace. This was in lieu of paper-based timesheets. The two satellite sites did not have this facility for electronic recording of staff attendance at the workplace, but rather they continued to use paper-based timesheets. Rationale provided by the managers at both satellite sites was the cost to purchase and install the electronic program for a smaller staffing group. The

satellite sites did not have this process at the time of the researcher being present. Most staff used the computer for electronic clinical files, research of client medications on Google, obtaining pathology results and email. Only one mental health nurse from all three sites reported accessing MIMS online for pharmacological information. All sites had laptops to share with the teams and they were used on all sites to record minutes from team meetings which were then automatically saved to the large organisations shared drive. There was videoconferencing at all the sites, with varying uptake by clinical staff. The large site used videoconferencing, however only the reception staff were able to activate this. Staff reported the equipment was quite old and audio and visibility poor, especially when requiring assessing a client by this means. All sites used a television screen for videoconferencing, to project the minutes for business meetings.

All sites reported daily contact with information technology services as the organisation wrongly assumed staff were able to adequately utilise technology. This was reported at all sites; despite there being varying ages of staff from 20 to 60 years of age. A couple of staff across all three sites utilised the smartphone for Internet or diary. Predominantly, their smartphone was used to contact the office for client details and directions. All staff interviewed reported the smartphone as being unnecessary and not beneficial to their clinical role. No clinical staff member on any of the sites had engaged in webinars or Skype. Staff who had undertaken post graduate studies in mental health were aware of e-mental health. All mental health nurses interviewed reporting never having used e-mental health interventions, however they had used MHPOD, an e-mental health intervention endorsed by the organisation.

All mental health nurses identified benefits relating to the use of technology; with time efficiency in obtaining results, and accessing clinical files. Technology allowed clients to empower themselves with information if they were aware of available appropriate sites. The Internet allowed information to be accessed which was up-to-date. One mental health nurse identified benefits of technology for clients of all ages, not just 'the young'. Despite staff not using e-mental health interventions, two staff members reported using 'smiley minds' and they were both staff who had heard of e-mental health interventions in their respective post graduate studies. One mental health nurse reported a psychiatrist approximately 45 years of age utilised applications on smartphones with his current clients, and a psychologist mentioned the smartphone applications they used with their clients, however this was not common practice. Two mental health nurses reported the Internet enhanced rapport development, as information on the Internet could validate the clinical consultation content. Both mental health nurses identified that some of the potential benefits of e-mental health interventions were the immediacy and efficiency of

communication. Staff and clients could respond at times which were convenient and private. Text communication allowed for confirmation of appointments which reduced likelihood of time being wasted. Internet allowed for increased amount of information to be readily available for the client and mental health nurse, which could be immediately accessed at the time of meeting and verify discussions held during the consultation.

Obstacles to the use of technology at the various sites, as reported by clinical staff and the reasons why a client may not use technology included paranoia regarding technology in relation to email and text communication, and not all clients having access to technology. However if they had a next of kin, they generally did have technology. Some clients were unable to navigate the use of technology. On average, the mental health nurses reported only approximately 25 per cent of clients had access to technology because of associated costs, and/or not being interested in using technology. Consistency with connectivity in rural and regional locations posed an issue at all sites.

The organisation had a policy outlining the appropriate use of email ensuring privacy and confidentiality and possibility of a staff members email account being audited for appropriateness of use/content.

Internet and email access for all staff was password protected. The organisation also had a policy regarding an information technology framework to guide policy and procedure development and to guide internal and external communications. However, there were only two policies available other than the framework policy for the large service provider.

Site Five

The values of the organisation were in the behaviours of demonstrating hospitality to all, compassionate, respect, justice and excellence in care provided. The reception was attended by two receptionists, one for each service offered at the site.

There were no mental health nurses employed by the service. There was currently a vacancy and staff reported having difficulty recruiting to the service, particularly mental health nurses. All clients voluntarily engaged with service delivery. Generally they were 25 to 40 years of age and mainly women.

There was limited car parking at the site, as it was co-located with a large private healthcare service which had extensive clinical activity with numerous staff and patients accessing the larger site which this service was physically located. Client privacy was limited as the waiting room was large, and there was shared access by clients of both

services located on the premises. The site did not have security cameras, however personal alarm devices were available for staff in their office, for use during clinical consultation.

The site was calm, tranquil and respectful with limited activity. The environment was appealing with colour co-ordinated and matching décor, and the environment was light filled and the temperature was comfortable. There were ample seats in the waiting room, without being overcrowded and impersonal. There were three living plants in the waiting room.

 All offices were minimalist, with bare stationary available to staff. Staff had a single screen monitor which they reported to be adequate for their roles. They utilised the monitor to educate clients with educational videos and resources. The computer was used for their electronic diary, email, electronic file and research also. There was one smartphone, which was shared with staff of the service and utilised when they are off site for meetings, which was rare. Most meetings were conducted face- to- face with peers on site or via landline telephone. Wireless connection was available for clients, and there was varied reliability. There were no electronic tablets available for staff.

Staff reported being aware of e-mental health interventions, and that they had used them in the past, but not in this role. This was attributed to the services model of care not endorsing the use of them. Staff reported a poor uptake of technology by clients, which was not related to cost of technology or having access, but rather was due to clients' perinatal concerns, which included concerns related to pregnancy or new-born parenthood, the period before and after birth, which related to the lack of time to access technology. Staff reported clients intended to engage in technology and look at information communicated during the consultation, however most clients reported not following up with this because of distraction of young families or busy lifestyles at home.

The service had comprehensive information technology policy and procedures. They had a framework regarding technology and as a basis for the technological infrastructure as well as future information technology being considered. There was a framework regarding information systems access and security, and identified strategic behaviour and decision making in relation to information technology. It stated that staff had password access for their own accounts which staff informed the researcher about. There was a policy reiterating internet usage which supported staff reporting of Internet usage for their clinical roles. There was an email usage policy reiterating appropriate usage of email, solely for work purposes. This was all evidenced on the site.

The information technology governance identified that information technology was valued, whilst reducing risk to the organisation, and meeting client needs and Australian

Standards of care. This was evidenced in the site with staff maximising use of all available technological resources except the videoconferencing services. Most staff were unsure what their model of care was, response was they were client-centred, provided expert consultation, and educated clients. The nature of work was case management and the model of care was under review at the time.

Appendix O – Summary of Themes and Sub-themes

(i) Mental Health Nurses Workplace Environment

Affordability of technology

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│ Major Theme: The Mental Health  │
│ Nurses Workplace Environment    │
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┌─────────────────────────────────┐
│ Affordability Of Technology     │
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Commonalities:	Diversities:
All sites provided with adequate technology for their clinical role	Site 1: some clients would sell their technology to support purchased of alcohol and other drugs
All sites had clients who had capacity to access technology	Site 2: parents often provide technology and data required to use of technology
All sites had clients who had the capacity to NOT own technology for various reasons	Site 3: clients were gifted mobile telephones from service funds
Site 3 and 5: financial considerations regarding provision of technology	Site 4: some clients did not own technology due to paranoia or not trusting technology security
	Site 5: clients could afford technology however were time poor to access and use technology being a parent of a baby or infant.

Service Characteristics

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┌─────────────────────────────────┐
│ Major theme: Mental Health Nurses│
│ Workplace Environment            │
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│ Subtheme: Service Characteristics│
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Commonalities:

All sites provide face to face clinical consultation

Sites 3 and 4 provide outreach clinical consultation

Sites 2 and 5 ONLY provide face to face clinical consultation

Sites 1, 3 and 4 all provide face to face and outreach clinical consultation

Sites 2, 3 and 4 have issues with black spot, which posed issues for communication for staff and staff safety.

All 5 sites have clients voluntarily engage with the service

Site 1 and 4 had clients who are mandated to attend

Site 1 and 4 have clients who are not compliant with treatment: usually the mandated clients

All 5 sites send appointment reminders to their clients

Sites 3 and 4 had satellite offices

Site1, 2, 3 and 4: clients were ad hoc attending appointments

Site 1, 2, 4 and 5 had consistent leadership and models of care

Diversities:

Site 2: provides ONLY face to face clinical consultation and technology connectivity is an on-going issue and challenge for CLIENTS because they rely on accessing wireless connection and they are generally not able to

Site 4: has technology connectivity is an on-going issue and challenge for STAFF which resulted in staff changing their practices as they could not rely on equipment such as videoconferencing.

Site 3: consortium provided different technology therefore issue with communication and differences in clinical practice between offices and other service of consortium

Site 4: technical connectivity issues posed issues with offices communicating, therefore staff changed their practice as a result

Site 3: had change in leadership within the consortium which resulted in discrepancies with service provision between the various service providers

Client Group

Major theme: Mental Health Nurses Workplace

Subtheme: Client group

Commonalities:

All cases engaged with male and female clients

Case 1, 2 and 5: youngest clients were 16 years of age

Case 3: youngest clients were 25 years of age

Cases 1 and 3: age limit was 65 years of age

All cases identify youth clients and staff are most technically savvy

All case acknowledged all age groups of staff and clients can be technically competent

All 5 cases: staff reported that ALL clients could access technology in some capacity

Diversities:

Case 4: clients were across the lifespan

Case 2: age limit was 25 years of age

Case 5: due to the perinatal mental health issues of clients the age limit was 45 years of age.

Case 1: some clients sell technology to support their alcohol and drug use

Case 3: some clients gifted mobile telephone from the service as clients had severe and persistent mental illness and would not normally be able to afford the technology

Case 2: clients often inappropriately used technology

The Education and Training of Mental Health Nurses

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│ Major theme: Mental Health Nurses    │
│ Education                            │
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│ Subtheme: The education and          │
│ training of Mental Health Nurses     │
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Commonalities:	Diversities:
All 5 cases: staff reported use of technology is assumed knowledge	Case 5: new commander telephones and ALL staff educated regarding functions
All 5 cases: staff wanted to learn about e-mental health	Case 4: staff had learnt about e-mental health at mental health conference
Case 1 and 4: staff had heard of e-mental health with post graduate studies in mental health	Case 3 educate clients regarding what technology was and how to use it
All 5 cases: staff use technology to educate themselves and their clients regarding illnesses	Case 2: educate clients about safe and appropriate use of technology
	Case 3: staff are educated by information technology staff regarding the use of various platforms

Mental Health Community Nurse Caseload

Major theme: Mental Health Nurses Education

Subtheme: Mental Health Community Nurse Caseload

Commonalities:

Cases 1, 3, 4 and 5: send appointment reminders to clients in an attempt to increase client compliance with appointments

All cases: staff report it is assumed that everyone has access to technology

All cases: staff report all clients generally know someone who owns technology (staff or friends which they can access)

Cases 1,3 and 4: issues with connectivity and mobile telephone coverage, issue because of outreach nature of work

Case 1, 3 and 4: some clients unwilling to use technology because of paranoia

Case 1 and 3: clients given technology

All cases: younger tech savvy

All cases: across lifespan tech savvy

All cases: different client criterion

Diversities:

Case 2: some clients had their technology removed by their parents.

Case 5: clients had technology available, barrier was time to access and use the technology

Case 2: connectivity issues , because provide face to face on site and clients rely on accessing wireless connection

Case 3: some clients wouldn't answer mobile telephone as they liked to have some control regarding clinical interaction

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Mental Health Nurse Role Focus

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        │ Major theme: Mental Health Nurses│
        │ Education                        │
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        ┌─────────────────────────────────┐
        │ Subtheme: Mental Health Nurse   │
        │ Role Focus                      │
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Commonalities:

All cases: case management and use electronic clinical file

All cases: use technology to educate clients

All cases: technology for communication

All cases: electronic forms

Cases 1 and 3: some staff prefer paper forms

All cases: referrals, client, family, friends and other service providers

Cases 1, 3 and 4: provide clinical outreach and rely on technology, however it is unreliable with connectivity issues

Diversities:

(iii)   <u>The Mental Health Nurse Being Supported By Information Technology In Clinical Practice</u>

The Availability of Technology

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│ Major theme: The Mental Health │
│ Nurse Being Supported By     │
│ Information Technology In Clinical │
│ Practice                     │
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┌─────────────────────────────┐
│ Subtheme: the availability of │
│ technology                   │
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Commonalities:

All 5 cases: unique passcodes to access technology

All 5 cases commercial photocopier shared

All 5 cases: desktop computers

Cases 2 and 5: shared mobile telephone used to text appointment reminders

Case 1, 3 and 4: staff have individual smart phones

All cases: teleconferencing available but not with all phones

All cases: access to videoconferencing equipment

All cases: wireless connectivity available
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Diversities:

Case 1: custom printer used by nurse practitioner to write prescriptions

Case 4: shared technology: tablet and laptop

Case 3: have restriction with mobile phone usage $30 per month

Case 2: significant issues with wireless connectivity

Case 4: Unreliable teleconferencing equipment
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The Use of Technology

Major theme: The Mental Health Nurse Being Supported By Information Technology In Clinical Practice

Subtheme: Use of technology

Commonalities:

All cases: technology used to educate self and clients

Case 1 ,2 and 4 : spoke re availability of webinars but difficulty participating

All cases: technology expediates communication

All cases : electronic clinical files

Diversities:

Case 2: educate clients appropriate sites and use of technology

Case 2: pre and post consultation surveys

Case 3: staff diligent completing mandatory on line competencies

Case 1: nil Governing documents regarding use of technology

Case 2: staff frustrated regarding unreliable technological platform

Case 3: have restriction with mobile phone usage $30 per month