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Attitudes of mental health care professionals toward the provision of tobacco dependence treatment in the transition to a smoke-free mental health unit: An exploratory mixed method study.

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Attitudes of mental health care professionals toward the provision of tobacco dependence treatment in the transition to a smoke-free mental health unit: An exploratory mixed method study.

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Declaration of Authorship

This thesis is the work of Jane Chambers and contains no materials which has been accepted for the award of any other degree or diploma in any university or other institution.

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Abstract

Smoking rates among people with a mental illness have not declined and remain a significant and preventable risk factor contributing to increased morbidity and reduced life expectancy. This study aimed to measure commitment, thus underlying attitude of mental health professionals towards provision of tobacco dependence treatment and enablers and barriers to implementing routine tobacco dependence treatment and smoke-free policy in an acute inpatient mental health setting.

A convenience sample of health professionals from an acute inpatient mental health unit were surveyed. This exploratory mixed method study included the Tobacco Treatment Commitment Scale (TTCS), smoking status, the Fagerstrom Test for Nicotine Dependence (FTND) and open-ended questions. Group differences were tested using t tests, ANOVA, chi square or the non-parametric alternative and relationships explored using the General Lineal Model (GLM). Open-ended questions of barriers and enablers to routine treatment of tobacco dependence and operating within smoke-free policy complete ban were thematically coded.

Mental health professionals were ambivalent (TTCS) with males scoring higher (t=3.03, p=.003) than females, and current smokers scoring higher (t=2.70, p=.008) than non-smokers (M=2.66, SD=0.62). Major barriers were related to mental health acuity and choice of patients to quit smoking, and staff belief that the smoke-free policy should have a partial ban (exemption). Education and training resources was the main enabler theme with additional themes of smoke-free policy (complete ban) and tobacco specialist nurses.

The implementation of smoke-free policy (partial ban) was seen by majority respondents as an enabler for patient care, but in practice is a barrier to smoke free-policy (complete ban) implementation. Mental Health professionals need empirical evidence on tobacco dependence treatment benefits and smoke-free facilities to empower them to take a leading role in shifting long-standing cultural norms around smoking.

Key words: mental illness; psychiatric settings; smoke-free policy; tobacco dependence; Tobacco Treatment Commitment Scale (TTCS)

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Glossary

Addiction: (Refer to dependence below).

Ambivalence was defined as reasons for and against a behaviour, and included both costs and benefits that required a decisional balance to change and was when a person saw both costs and benefits of behaviour change at the same time (McEvoy & Nathan, 2007; W. Miller & Rollnick, 2013). Miller and Rollnick (2013) describe ambivalence as a perennial and normal part of the change process and is "simultaneously wanting and not wanting something, or wanting both of two incompatible things" (p6).

Dependence: The terms 'addiction' and 'dependence' within the field of substance misuse and the wider discipline of psychiatry and mental health, are used interchangeably (2006; Lawn & Campion, 2013; McEwen, Hajek, McRobbie, & West, 2006). In relation to this study the term **dependence** will be used to describe these phenomena because the term tobacco dependence is commonly used in contemporary literature around smoking tobacco. The Oxford Handbook of Psychiatry (2013) defines dependence being a lack of control of the use of substance to which one is addicted. Further, the dependence syndrome includes when a person is preoccupied with the addictive substance, a lack of control with the substance, particularly when consumption has started, using the substance to avoid withdrawals and an increased tolerance to the effects of the substance.

Environmental Tobacco Smoke (ETS) and second-hand smoke, are interchangeable terms that refer to the inhalation of side-stream smoke that comes from the burning tip of the cigarette and the mainstream smoke that has been inhaled and exhaled by the smoker (Besaratinia & Pfeifer, 2008; Department of Health Western Australia, 1997).

Mental illness is a common and broad term used in mental health, psychiatry and addictions. The following source definitions were used:
Mental illness is a diagnosable disorder that profoundly impacts on a person's thinking, emotional or social capacity. Such illnesses included mood, psychotic, eating, personality and substance use disorders as categorised in the DSM (5) (American Psychiatric Association, 2013).

Severe mental illness refers to people with schizophrenia and related psychotic illnesses or bipolar disorder (Mental Health Commission, 2016)

Motivational Interviewing (MI) is a counselling model used to assist people change health behaviours and included principles of person-centred, non-judgemental, empowering counsellor style that facilitated change talk (Lawn, 2009; W. Miller & Rollnick, 2013).

Nicotine Replacement Therapy refers to the pharmacological medications used to alleviate nicotine withdrawals. This includes nicotine transdermal patch, gum, inhaler, lozenges and spray (Wynn, Stroman, Almgren, & Clark, 2012).

People with a mental illness were included in a subset often described in the literature as *vulnerable, marginalised* and/or *stigmatised* (Cancer Council Australia, 2015; World Health Organisation, 2014b). *Vulnerable* related to a person who was at risk of exploitation based on a range of demographic, social, or economic situations (Pyer & Campbell, 2012). *Marginalised* is defined by Cruvys et al. (2013) as a "state in which individuals are living on the fringes of society because of their compromised or severely limited access to the resources and opportunities needed to fully participate in society and to live a decent life. Marginalised people experience a complex, mutually reinforcing mix of economic, social, health and early-life disadvantage, as well as stigma" (p 4).

Stigmatised in relation to smoking as meaning that smoking negatively affected relationships and social interactions and that there was a stigma to smoking, such as the person who smoked being considered disgusting, or smelly' (World Health Organisation, 2015).

Recovery: A broad term widely cited in contemporary studies and guidelines for evidenced based care for people with a mental illness. Recovery was defined as being person-centred, including themes of hopefulness, personal insight, personal autonomy, meaning and purpose in life and with positive self-efficacy. Furthermore, recovery referred to both internal conditions of hope, healing, empowerment and connection, and external conditions that assisted recovery, such as, human rights, positive healing culture and Recovery-orientated services (Mental Health Commission, 2016).

Second-hand smoke: refer to Environmental Tobacco Smoke above.

Smoking cessation: refer to Tobacco dependence treatment below.

Tobacco dependence treatment and **smoking cessation** are interchangeable terms. Within literature on mental health, patients and smoking tobacco dependence treatment is often used. The use of tobacco dependence treatment incorporates reduction in cigarettes as well as smoking cessation. In primary care literature the term smoking cessation is often used. The term tobacco dependence treatment was predominantly used in this study.

Tobacco epidemic: The global use of tobacco smoking was referred to by the World Health Organisation (2015) as a tobacco epidemic. This term was thus used in this thesis for consistency because the World Health Organisation categorise reports and information around tobacco use as a tobacco epidemic in relation to its wide global prevalence and global harms that are deemed preventable.

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Introduction

Tobacco dependence in people with a mental illness continues to be a complex and neglected area with smoking rates two to four fold that of the general population in Western societies (Olivier, Lubman, & Fraser, 2007; Sohal, Huddlestone, & Ratschen, 2016). Though smoking prevalence reductions in the general population have been significant, this is not the case when compared with people who have a mental illness. It was estimated that in the United Kingdom (UK), the United States (US) and Australia, over 40 percent of tobacco was smoked by people with a mental illness (Lawn & Campion, 2013). People with a mental illness have significantly higher rates of smoking than the general population and though this group of people were not necessarily represented to the same degree within inpatient mental health settings, research shows that smoking rates for people with a mental illness who are treated in inpatient mental health settings remain high (Lawrence, Lawn, et al., 2011). Despite these high rates of smoking for patients with a mental illness and the related harms, mental health services continue to lag behind other health services to provide routine tobacco dependence treatment and smoke-free environments. This neglect continued despite the plethora of research, which had identified the morbidity and mortality impacts due to tobacco use and the harm of carcinogenic environmental tobacco smoke (Prochaska, Hall, Delucchi, & Hall, 2014; Wye et al., 2010). This lag in implementation of policy and practice around routine tobacco dependence treatment and smoke-free policy within mental health settings continues to be a priority for leaders and senior clinicians of these services to problem solve and change. This is because smoking is a significant and modifiable risk factor to morbidity and earlier mortality, and to maintain the long-standing status quo of entrenched permissiveness of smoking and inadequate tobacco dependence treatment is unacceptable when compared to mainstream health. Furthermore, there is growing contemporary evidence which support integrated and routine treatment of tobacco dependence for mental health inpatients and provide smoke-free services.

Mental health inpatient settings have high rates of patients who smoke, and these services have long standing entrenched social and cultural norms of permissive smoking that have sustained this status quo. In order to address the high smoking rates and the entrenched culture of smoking with the lack of tobacco dependence treatment requires acknowledgement of the complex and long-standing influencing factors. Studies supported evidence-based practice principles where multi-pronged, comprehensive interventions were more effective

than singular interventions (Pearson, Wiechula, & Lockwood, 2005). Contemporary research supports this notion of multi versus singular intervention in relation to patients with tobacco dependence by highlighting increased effectiveness when comprehensive strategies to affect positive health behaviour changes to reduce smoking rates were used (Gilbody et al., 2015; Parker, McNeill, & Ratschen, 2012). Inpatient mental health facilities provide opportunistic and treatable moments to address this imperative to treat tobacco dependence, provide healthy role modelling and smoke-free environments (Feigenbaum Cooke, 2010; Lawrence, Considine, Mitrou, & Zubrick, 2010; Metse et al., 2014; Stockings et al., 2014).

Tobacco dependence treatment advocates such as Glover et al. (2014) suggested specialist targeting was required for people with mental illness who smoked. The cessation rates were significantly lower and tobacco dependence often higher. These researchers further proposed that facilities needed to challenge staff attitudes that were a barrier to provide tobacco dependence treatment and a smoke-free environment within their services. Such sentiments were widely reflected in local, national and international published literature and included the imperative to challenge mental health professional's attitudes and mental health facilities to be smoke-free in order to provide a healthy environment and promote smoking cessation (Rowley, Lawn, & Coveney, 2016; Paula Wye et al., 2014).

Significance of Study

Smoking continues to be contentious and neglected area within mental health settings (Lawn & Campion, 2013; Sohal et al., 2016; Zabeen, Tsourtos, Campion, & Lawn, 2015). This is despite the high rates of tobacco dependence in people with a mental illness and the poorer physical health outcomes and premature mortality (Keizer, Fabry-Gex, Bruegger, Croquette, & Nawaz Khan, 2014; Parker et al., 2012). How best to meet this challenge to overcome barriers which includes long standing pro-smoking culture, negative attitudes and struggles within mental health services to routinely address tobacco dependence and provide smoke-free environments continues to be debated (Rowley et al., 2016). Consistently clear within contemporary literature is the imperative to keep the problematic issue of high smoking rates for people with a mental illness firmly in the public health and mental health sector spotlight in order to address this problem (Cope, 2014; Rowley et al., 2016; Stockings et al., 2014). The present mixed method study explored attitudes of mental health professionals to provide tobacco dependence treatment; staff smoking status and enablers and

barriers to routine tobacco dependence treatment operating within a smoke-free policy (complete ban).

Both nationally and internationally, smoke-free policies had been introduced in the last ten years and included complete and partial bans. Similarly, in Western Australia (WA), the Smoke Free WA Health System Policy (Department of Health Western Australia, 2009, 2013b) stated that all WA health grounds including hospitals were to be completely smoke free. This policy was to protect staff, visitors, contractors and patients from exposure to tobacco smoke. However, after extensive lobbying by consumer representation groups an amendment (Department of Health Western Australia, 2013a) was made to include a smoke-free policy partial ban, i.e. an exemption for involuntary adult mental health inpatients. This type of partial ban in a mental health setting was reported in international literature (Prochaska et al., 2014). The smoke-free policy partial ban (i.e. exemption) meant that involuntary patients admitted under the Mental Health Act (2014) who smoked could continue to smoke during their admission. It is important to consider that the WA Smoke-free policy (partial ban) outlined that a patient who smoked should be encouraged and supported to quit. Furthermore, tobacco dependence treatment should be offered throughout their hospitalisation (Department of Health Western Australia, 2013a). This was a notable consideration because the practice around the smoke-free policy partial exemption differed considerably. The gap between policy to practice was seen in mental health services both nationally and internationally where services often struggled to abide by smoke-free policy (complete or partial ban) and continued to have permissive smoking culture where many inpatients (voluntary and involuntary) continued to smoke at high rates (Hehir, Indig, Prosser, & Archer, 2013 Parker et al., 2012).

An increasingly emergent reality of the continued high rates of smoking of people with a mental illness was the widening disparity between general population smoking rates and marginalised groups. Furthermore, as smoking was increasingly de-normalised within general society then vulnerable groups, such as people with a mental illness who smoked faced further marginalisation, stigma and disadvantage (Campion et al., 2008; Lawn & Campion, 2013). This widening gap of disadvantage added to the imperative and priority of mental health settings to provide evidence-based tobacco dependence treatment and smoke-free treatment settings (Passey & Bonevski, 2014).

The mental health unit for this study was situated within a large metropolitan general hospital governed by WA Smoke-free policy (Department of Health Western Australia, 2009). This 36 bed mental health unit had, prior to transition been an open ward for voluntary mental health inpatients and operated under a smoke-free policy exemption (Department of Health Western Australia, 2013a) that predominantly translated to a permissive smoking culture. Historically, this inpatient mental health unit struggled with implementation of the smoke-free policy and had an unofficial smoking area in outside courtyards. This meant that high rates of patients, voluntary and involuntary smoked. Therefore, staff, visitors, and non-smoking patients were regularly subjected to environmental tobacco smoke in these outside areas. Furthermore, smoke-drift affected nearby corridors and upper storey offices because patients smoked near air vents that were connected to these areas. The smoke-free policy partial exemption that came into effect in 2013 effectively meant this permissive smoking environment continued because the service struggled to be smoke-free with a partial ban. Although the exemption meant only patients who were under the mental health act could smoke, this translated to a whole unit permissive smoking culture as described above.

The present study was timely since the mental health unit involved in the study (which operated within smoke-free policy partial ban but had a permissive smoking culture) was moving to a new mental health unit site which continued to be governed by the Smoke Free WA Health System Policy (2009). The new mental health unit was relocated to a site within the grounds of the larger hospital and transitioned to an authorised mental health facility which had a secure section where patients being treated under the Mental Health Act (2014) were unable to leave the unit and an open section, where patients were predominantly voluntary and thus able to leave this unit during the day. This change of location and type of mental health unit meant a number of significant changes occurred. Firstly, the Trust owners of the land at the new site wanted the smoke-free policy (complete ban) to apply and secondly, the number of patients this mental health unit would receive who were involuntary under the Mental Health Act (2014) increased. It was expected that the new mental health unit adopt the smoke-free policy (complete ban).

Research Questions

This study explored the following research questions within the context of the mental health unit:

1. What is the level of commitment of staff to provide treatment of tobacco dependence?
2. Does the level of commitment vary between doctors, nurses and allied health staff?
3. Is there a relationship between staff tobacco use and level of commitment to tobacco dependence treatment?
4. What factors do the staff identify as either barriers or enablers to the support of for tobacco dependence treatment?
5. What factors do the staff identify as either barriers or enablers to the implementation of smoke-free policy complete ban?

Research questions 1, 4 and 5 were explored descriptively in this study. Research questions 2 and 3 were explored by hypothesis testing.

Hypothesis

The hypothesis for research questions 2 and 3 were:

Research Question 2.

H_0: There is no difference in the level of commitment between doctors, nurses and allied health staff.

H_1: There is a difference in the level of commitment between doctors, nurses and allied health staff.

Research Question 3.

H_0: There is no relationship between staff tobacco use and level of commitment to tobacco dependence treatment.

H_1: There is a relationship between staff tobacco use and level of commitment to tobacco dependence treatment.

Literature Review

This literature review aims to present an overview of a complex mix of components and themes around the issue of smoking tobacco, which is identified as a global epidemic by the World Health Organisation (2009), policies and treatments that were recommended in the health care setting, and narrowed down to mental health inpatient services. This includes an overview of what was recommended in the research literature and includes gaps and problems in practice within mental health inpatient setting. A historical context to smoking tobacco which related to people with a mental illness who smoked tobacco and within the mental health setting will endeavour to illustrate the disparity between general health care population and vulnerable groups (such as those with a mental illness). The global and historical context of smoking provides an important reference point because evidence suggests it is an ongoing contemporary problem, both nationally and internationally within mental health sectors which is still unresolved. This problem shows people with a mental illness have continued high smoking rates which is a major and preventable contributor to increased morbidity and earlier mortality. Mental health services who care for people with a mental illness who smoked have a role to play in patient's recovery and this includes support for tobacco dependence. The comparison between general health and mental health provides a juxtaposition of disparity around treating tobacco dependence and smoke-free policy implementation. An understanding of the tobacco industry and its relationship to mental health and research is considered important because it has shaped and normalised attitudes and behaviours around smoking for many years and this industry has unabated motivation to expand sales of tobacco, which some tobacco control experts argue continues to be directed toward vulnerable groups in societies around the world. Finally the Theory of Reasoned Action and Trans-Theoretical Model of behaviour change are explored as the theoretical framework for this study.

Smoking Tobacco Prevalence

The World Health Organisation (2015) reported that although smoking rates had declined in developed countries, smoking tobacco continued to be the leading cause of preventable cancers and premature death. The World Health Organisation Director General in a keynote address (Chan, 2013) discussed that current smoking trends would cause one

billion deaths in the 21st Century. Furthermore, the tobacco industry continued to challenge science and distort findings or fund their own research with a predictable bias. Chan (2013) also reported that in wealthier countries tobacco control measures and changed social norms had resulted in a decrease in smoking rates by half. However, for people in low socioeconomic groups the rates remained high. The World Health Organisation (2015) refer to the global high rates of tobacco as a tobacco epidemic and the Tobacco Free Initiative (TFI) is part of the Non-communicable Diseases and Mental Health section of World Health Organisation that manage all aspects of tobacco control and other economic policies related to reducing the global harm from tobacco. The term tobacco epidemic is thus used throughout this thesis.

Prevalence rates in the general population have been widely reported to vary between regions, countries and gender (French, Jang, Tait, & Anstey, 2013). The World Health Organisation (2015) reported on the global tobacco epidemic and listed prevalence rates for a wide range of countries. Australian smoking prevalence was 17.8 percent for males, 14.3 percent for females, compared to the United States of America (USA) where smoking prevalence was 20.3 and 15.9 percent respectively, and the United Kingdom (UK) and Ireland males where smoking rates was 21.1 and 19.5 percent respectively. Included in this World Health Organisation report (2014), and in stark contrast to the above cited Western countries, male and female prevalence rates in the United Arab Emirates (UAE) was 28.1 and 2.4 percent, Indonesia 47.5 and 1.1 percent, Thailand 39 and 2.1 percent; South Africa was 29.4 and 8.2 percent, while in India 24.3 and 2.9 percent.

These statistics provide evidence for success with reducing smoking tobacco rates for developed countries such as US, UK and Australia, but also highlight the disparity between countries. Australia had the lowest smoking prevalence rates which reflected this country's advanced and effective smoke-free campaigns and policy implementation. Countries such as UAE, India and Thailand showed a marked disparity between male and female smoking prevalence which matched their cultural norms of smoking being a male dominated behaviour and culturally unacceptable for females to smoke tobacco.

At an Australian national level the first results from the Australian Health Survey (Australian Government, 2012) identified that approximately 2.8 million Australians smoked (16 percent) and that smoking continued to be one of the significant risk factors for chronic

disease and premature mortality. The chronic disease from smoking tobacco causes years of living with disabling health conditions. An economic report conducted by SANE Australia (Access Economics, 2007), who are a national charity that help Australians with a mental illness, approximated that the economic cost of Australian smokers was $33 billion dollars (AU) per year. This report also identified that urgent action was needed to help people with a mental illness, who smoked tobacco, to stop smoking.

At a local level, within Western Australia (WA), the WA Department of Health (2010) estimated between 2004 and 2005, tobacco was responsible for over 67,000 hospital bed days and cost the WA community more than 2.4 billion dollars (AUS). Further, the importance of monitoring high rates of smoking and related behaviour patterns in high-risk groups was identified. These identified high-risk groups included people with mental illness, indigenous and the homeless, whom continued to be high risk and vulnerable in relation to smoking tobacco and its related harms. The social costs of smoking between 2009 and 2010 continued to rise with estimated costs to be three billion dollars (AU). This report identified that this cost more than justified the continued public policy measures to reduce smoking tobacco prevalence and that tobacco remained our largest preventable cause of death (Collins & Laplsey, 2014).

In summary, general population rates varied between countries and those countries that had advanced tobacco control measures tended to have lower general population smoking rates. Australia fitted into this lowered smoking rate category. The disparity of smoking rates between nations was pertinent in relation to multiculturalism of staff in the health sector. Australian national and local economic and health costs incurred because of smoking tobacco continued to be high and thus justified the money spent on public policy measures to reduce the rate of smoking. Notably reported was that vulnerable groups which included people with a mental illness continued to have high rates of smoking and needed prioritising in order to reduce these smoking rates.

People with a Mental Illness Who Smoke

Mental illness is associated with both greater nicotine dependence and a higher prevalence of smoking (Khanna, Clifton, Banks, & Tosh, 2016; Lawrence, Mitrou, &

Zubrick, 2009). The high prevalence rate of smoking furthermore varied between diagnostic categories of mental illness and historically had been neglected in the mental health sector (Rowley et al., 2016; Stubbs, Vancampfort, De Hert, & Mitchell, 2015). People with a mental illness were often described in the literature as being within a 'vulnerable' and 'marginalised' group who faced stigma and gaps in receiving health care, which included receiving tobacco dependence treatment. (Lawn, 2008; Ragg, Gordon, Ahmed, & Allan, 2013). Lawn (2008) suggested an aspect of this vulnerability related to social disparity and disproportionate financial burden and these were both important reasons to provide tobacco dependence treatment strategies for this group. However, it is also argued that tobacco dependence treatment for general population groups is not effective for people with a mental illness in relation to engaging and reducing smoking rates (Lawrence, Lawn, et al., 2011; Stubbs et al., 2015).

The high prevalence of the comorbidity of tobacco dependence and mental illness was widely described in the literature as complex with significant discrepancies between rates of smoking in the general population as compared to vulnerable groups and the urgency to address this continues to be debated (Grant, Oliffe, Johnson, & Bottorff, 2014; Lawn & Condon, 2006; Sohal et al., 2016). In a systematic review of the effects of smoking cessation for people with a serious mental illness, Khanna et al. (2016) reported that this group had an increased likelihood of greater nicotine dependence, higher smoking prevalence with a multifactorial aetiology. Furthermore, the health and financial burden to both the individual and the greater community were important reasons to address this problem and that there was a lack of robust studies to determine the most effective way to do this. Studies reported that smoking rates for people with a mental illness have hardly changed since tobacco control initiatives commenced and that perhaps general population strategies to reduce smoking rates might be ineffective or not understood clearly enough, to benefit this group (Cope, 2014; Lawrence, Lawn, et al., 2011), Lawn (2008) similarly supports this notion that tobacco control measures for vulnerable groups were ineffective, by identifying public health tobacco control measures in the UK, Australia and US had significantly reduced rates of smoking tobacco in the general population but in stark contrast it was estimated that 83 percent of prisoners and 90 percent of homeless persons smoked (both groups had high rates of mental illness). Furthermore, 40 percent of Australian smokers had a mental illness, and in the USA over 45 percent of all cigarettes were smoked by people with a mental illness.

Both International and national studies highlighted general population rates of smoking being lower and a large and widening disparity between vulnerable groups remained with evidence to suggest that this group did not receive adequate treatment for tobacco dependence. Lawrence et al. (2009) results from population surveys in both US and Australia found higher rates and widening disparity of health outcomes which they believed had public health significance and that population health-based mental health and tobacco control efforts should be implemented. Likewise, an Australian survey that reviewed smoking among people living with psychotic illness reported high smoking prevalence and associated negative health consequences people with severe mental illness. However, they believed that targeted strategies should be implemented for this group to improve health outcomes and reduce smoking rates (Cooper et al., 2012). Prochaska (2014) however believes that significant contributors to people with a mental illness high prevalence and high rate of tobacco dependence were because of poor access to tobacco dependence treatment however her research supported tailored interventions that matched the needs of people with a mental illness. A US systematic review and meta-analysis on whether people with a mental illness received adequate tobacco dependence treatment by Mitchell et al. (2015) supported this ongoing evidence of a widening health and morbidity gap between general population and people with a mental illness and that the latter required a more tobacco dependence interventions.

Although smoking rates in countries like US and Australia had reduced to around 16 percent, rates among people with a mental illness ranged from 30 to 90 percent, and smoking tobacco remained the leading preventable cause of death for people with a mental illness (Cancer Council Australia, 2015). The range of smoking prevalence between mental illness diagnostic groups warrants further discussion because the range was large and an understanding of this range provided rationale for the importance of targeting treatment especially towards people with a mental illness from the higher range, such as those with severe mental illness such as psychotic disorders. The range and rate of smoking among people with a mental illness additionally often correlated to the person's type of mental illness, co-morbidities such as substance use disorder, and being from a marginalised group (such as the homeless or low socio-economic) (Ashton, Rigby, & Galletly, 2013; Ferron, Brunette, Xiaofei, McHugo, & Drake, 2011; Metse et al., 2014; Ragg et al., 2013). The highest rate of smoking reported is for people with a psychotic disorder and this high rate remains unchanged from the 1970's (Cooper et al., 2012). Studies suggested people with

mental illness were less likely to quit, had higher tobacco dependence and rate (with the associated physical, social and psychological morbidities) (Lawrence, Mitrou, & Zubrick, 2011; Malone, 2009; Mendelsohn, Kirby, & Castle, 2015; Stockings et al., 2013). These researchers all supported the belief that the factors that drove tobacco dependence were complex and unclear but tobacco treatment was warranted and could have therapeutic and beneficial outcomes.

In summary, current research reports high smoking tobacco prevalence for people with a mental illness compared to the general population, and the widening disparity between general populations was a continuing problem that required strategies for change. The health and financial burden continues to disproportionately affect such vulnerable groups. Smoking prevalence rates for people with a mental illness had not reduced since public health campaigns around reducing the harms from tobacco were commenced although successful reductions have occurred in the general population. People with a mental illness who smoked had greater tobacco dependence and this was because of multiple factors which had an unclear aetiology. Researchers argued for both population health based and targeted interventions to decrease smoking prevalence and improve health outcomes for people with a mental illness.

Health Professionals Who Smoke

The smoking status of health professionals is relevant because routine tobacco dependence treatment and successful smoke-free policy implementation is negatively impacted on by health professional's own smoking behaviour and was widely reported in the literature as a barrier (Berkelmans, Burton, Page, & Worrall-Carter, 2011; Bloor, Meeson, & Crome, 2006; Hunt, Gajewski, Jiang, Cupertino, & Richter, 2013). Furthermore, in the context of health professional's public health role and role modelling, health professionals have the opportunity to motivate and assist people who smoke tobacco to quit, and this is considered a vital role in treatment settings (Miller & Wood, 2003; World Health Organisation, 2008). Health professionals were well placed to motivate and assist their patients to quit smoking (M. Miller & Wood, 2003; Shahbazi, Arif, Portwood, & Thompson, 2014; Tremblay, Couroyer, & O'Loughlin, 2009), however, those who smoke are cited as a barrier to effective intervention (Burgess, Ford, & Kendal, 2015; Dwyer, Bradshaw, & Happell, 2009; Glover et al., 2014; Sarna, Bialous, Rice, & Wewers, 2009) Doctors who

smoked were reported to understate to their patients the health hazards associated with smoking tobacco (Zellweger et al., 2005), while nurses who smoked were less likely to endorse smoke-free policies or provide tobacco dependence interventions (G. L. Dickens, Stubbs.J, Popham, & Haw, 2005; Ratschen et al., 2009).

In an international comparison of doctors who smoked, Smith and Leggatt (2007) reported that doctors' smoking prevalence rates varied between countries and regions and were not uniformly low from an international perspective. They found that in developed countries there had been a significant decline in doctors smoking rates since the 1950's and this coincided with the increasing understanding of the harms from smoking tobacco and public health campaigns. This report cited US, Australian and New Zealand and British doctor's prevalence of smoking at between two and five percent, in contrast to Italian and French doctors who had a smoking prevalence rate of between 25 and 39 percent. Other countries were reported to have an increasing rate of doctors smoking such as in Greece (49%); India (48 %); China (45%); Japan (43 %). When compared with nurses however, doctors smoking rates were consistently lower. However there were cultural factors impacting on this this trend. In contrast, an Italian study reported smoking rates among doctors and nurses were similar (42 and 43 percent respectively), and reflective of general population smoking rates in their country (Marani et al 2015).

Since the 1970s, smoking among the nursing profession had been recognised as a serious concern. Data from the Nurses' Health study in the USA found one third of nurses smoked with mortality double compared to non-smokers, with recent evidence suggesting the smoking rate has decreased to between eight and ten percent (Sarna et al., 2008). In contrast, McKenna (2003) reported a high prevalence smoking rate for nurses (25.8%) in their study of 1078 Irish nurses, although this was below the general population rate for female smokers in Ireland. These researchers identified multifactorial reasons for continued smoking among nurses, which included work pressure and stress, in addition to work specialty (Berkelmans et al., 2011; La Torre, 2013). Higher smoking prevalence of nurses who worked specifically in the specialty areas of emergency and psychiatric nursing was argued to be due to higher stress, shift work and level of empowerment (La Torre, 2013) which appeared to be unchanged when compared to the earlier work of Sarna et al. (2010). A higher smoking prevalence of psychiatric nurses in New Zealand was reported in a 2006 census (26 % males and 30 % females) by Glover et al. (2013) who suggested that staff who smoked tobacco

were more likely to support a permissive smoking culture. Nationally, an Australian study by (Berkelmans et al., 2011) further supported higher rates of smoking by nurses who worked in emergency (18.3%) or psychiatric nursing (21.7%) and that smoking rates for other nurses (11%) were below general population rates. They concluded that targeted strategies to reduce smoking rates needed to be sensitive to the intrapersonal-professional struggle with personal tobacco dependence which was at odds with their health promotion role.

Smoking prevalence rates of medical and nursing students warranted discussion because these students would be future doctors and nurses who had an important public health role providing tobacco dependence treatment and promoting smoking cessation (Fernandez & Bayle, 2003; Smith, 2007). Smoking prevalence rates among medical students varied between countries and tended to be lower than nursing students, however, as discussed previously, there was disparity between regions and countries in relation to smoking prevalence of health professionals. Research suggested that nursing students' smoking often commenced prior to training, with stress and peer pressure a role in continued smoking. Therefore an important imperative was to offer both education around tobacco dependence in the curricula and also provide smoking cessation support (Durkin, 2007; Sarna et al., 2009; Walsh, Cholowski, Tzelpis, & Stojanovski, 2012). Sarna et al. (2009) suggested that the estimated 17.3 million nursing students worldwide had great potential to address tobacco dependence, however student nurse smoking behaviour was reported as one of several key barriers. Furthermore, the rate of smoking prevalence was higher than medical students and mirrored socio economic status and cultural norms. A systematic review by Smith (2007) identified nursing students commonly smoked and that this was a public health issue considering they were the largest health professional group. A more recent study (Ordaz et al., 2015) conducted on Spanish nursing students showed a reduction in smoking rates similar trend to general population rates, however they reported nursing students had attitudinal barriers to provide tobacco dependence treatment and promote smoking cessation.

Though nurses and midwives make up the majority of the health care work force (Flodgren, Rojas-Reyes, Cole, & Foxcroft, 2012) Allied health professionals, such as clinical psychologists, social workers and occupational therapists are an important part of a multi-disciplinary health care team to provide tobacco dependence treatment. In relation to smoking status of Allied health professionals limited studies were found. However among these

studies, they report very low prevalence of smoking tobacco (Kleinfelder, Price, Dake, Jordan, & Price, 2013; Shahbazi et al., 2014; Tremblay et al., 2009).

In summary, health professionals are key players to intervene effectively in the tobacco epidemic in a public health role, which includes role modelling healthy behaviours, tobacco dependence treatment and advocating smoking cessation. Health professionals who smoked were consistently reported in studies as barrier to public health interventions around tobacco dependence. Doctors and nurses were the largest group, though involvement by other health professionals in tobacco dependence treatment was additionally considered important because possession of relevant and complementary skill set particular to their profession. Smoking prevalence was lowest with doctors as compared to nurses, however, differences did exist between countries and within different professional sub-specialities. Medical and nursing students played an important future public health role as health professionals but smoking by this group was identified as a barrier to implementing measures to combat tobacco dependence in their patients.

Historical Context and Tobacco Industry

The World Health Organisation (2013) described tobacco use as one of the biggest public health threats the world had ever faced, killing nearly six million people every year. A keynote address in 2013 by the World Health Organisation Director General (Chan, 2013) reported that in the 20th century approximately 100 million people died due to tobacco related disease and by the end of the 21st century one billion deaths were predicted from tobacco use. Tobacco use continues to be one of the leading causes of preventable premature death and disease around the world and World Health Organisation suggests that if the harms caused by tobacco were known when these products were first used, then approval as *safe for human consumption* would have never been approved (World Health Organisation, 2014a).

An account of the historical context of tobacco industry and smoking was an important juxtaposition to people with a mental illness. Smoking was normalised and glamorised for many years before the subsequent decline in smoking rates that followed public health measures. Evidence suggests that vulnerable groups, which includes people with mental illness, have shown no decrease in smoking rates. The historical account of the tobacco industry and smoking provides a window into the social and cultural norms that

tobacco control experts and health leaders argued continued as a barrier to mental health service culture change (Malone, 2009; Rowley et al., 2016). The tobacco industry is described as powerful and immensely funded and it is argued this industry endeavoured to increase tobacco initiation, subsequent nicotine addiction, thwart smoking cessation and target vulnerable groups (Hirshbein, 2011; Ling, Glantz, & Stanton, 2002). The tobacco industry is described as a multibillion dollar global industry that is so effective in selling its product that smoking tobacco continued to be in global epidemic proportions (World Health Organisation, 2015). The tobacco industry has historically invested heavily in research and marketing around potential customers who have mental illness (Hirshbein, 2015) and this continues to be debated as a negative impact on culture change around smoking (Rowley et al., 2016).

The shift in the social norm of smoking over the past century has radically changed both within society and general health care to being increasingly de-normalised within Western society (Chapman & Freeman, 2008). However, it is a reminder of the extent of the normalcy around smoking in the past. Howells (2011) described tobacco being viewed as an unhealthy and odorous pastime from the 1600s to a predominantly moral issue in the 1800s and safe in moderation. In a historical account of cigarette smoking, Brandt (2007) described tobacco shifting from a stigmatised and little-used product of the early 1900s, to being increasingly fashionable and highly prevalent from the 1940s on, with smoking permitted in shops, cinemas, restaurants and hospitals. Furthermore it totally penetrated American and English culture. The tobacco industry prolifically advertised in medical journals, with many doctors smoking and these doctors affirmed that smoking was psychologically beneficial. Furthermore, many doctors subscribed to notions of its harmlessness until firm scientific evidence was found to the contrary (Fee, Brown, Lazarus, & Theerman, 2002). In Western countries, smoking peaked during the 1940s and 1950s with three quarters of men and a third of women smoking (Latt, Conigrave, Saunders, Marshall, & Nutt, 2009). As an example of the social norm of smoking, English and American governments provided free cigarettes to their soldiers. Tobacco companies supplied free or discounted cigarettes to patients, and mental health hospitals and doctors received free supplies at medical conferences (Hirshbein, 2011). This gross social norm of smoking culminated in the findings that post World War11 Britain had the highest incidence of lung cancer in the world, with the cause for many years being debated and deemed unknown (Keating, 2009).

As evidence about the harms from smoking emerged, such as lung cancer, during the 1950s and 1960s it was deemed too difficult to address because large public health bodies, such as the American Heart Association, did not want to alienate all their smoking members, or take on the tobacco industry (Howells, 2011). In the UK, the general medical community lagged behind their US counterparts in tobacco and public heath debates about smoking tobacco harms. These debates were extremely polarised and the disagreements on whether smoking was harmful to health, or not, was capitalised on by the tobacco industry (Howells, 2011). This continued until the 1960s, when the United States (US) Surgeon General Dr Terry chaired a committee which reviewed 7000 studies and concluded that cigarette smoking caused lung and laryngeal cancer in men and was the most probable cause of lung cancer in women. Furthermore, smoking was the most significant cause of chronic bronchitis in both genders. This extensive review by esteemed scholarly individuals with capacity for impartiality and critical broad thinking impacted on public opinion, and was a significant leap forward for the tobacco control movement (Brawley, Glynn, Khuri, Wender, & Seffrin, 2014). As these harms from smoking became overwhelmingly apparent and public health awareness campaigns commenced, then tobacco use declined in general populations (Brawley et al., 2014; Lawrence, Mitrou, et al., 2011). What remained significant however, was this smoking decline was not matched in vulnerable groups (Brandt, 2007; Burgess et al., 2015; Sohal, Huddlestone, & Ratschen, 2016).

In summary, smoking tobacco has shifted from an historic social norm to being increasingly marginalised as public health measures to address smoking tobacco harms were scientifically proven and smoking rates have reduced. Historically, many doctors smoked, and large public health organisations were slow to condemn a harmful product, lest they alienate their many smoking members. With the overwhelming evidence on the harms of smoking general population smoking rates began to fall, however disparity of rates of smoking between general population and vulnerable groups continues.

The Tobacco Industry and Smoking

The complexity and scale of the tobacco industry activities historically and contemporaneously was extensive and beyond the scope of this thesis. However, a snap shot of certain elements of the tobacco industry is given in order to understand its relevance with smoking prevalence and the industry connection to health, medicine, psychiatry and research.

This included the tobacco industry's financial funding and promotion of its product. It is argued that these continue to impact on tobacco control measures created to reduce the harm from smoking (Chan, 2014; Rowley et al., 2016). The tobacco industry has heavily invested financially to sell and produce as much of its product as possible for profit. Furthermore, it continued to invest tens of billions of dollars worldwide to promote smoking (World Health Organisation, 2015). Tobacco was argued to be the only legally available product that if smoked as intended was lethal (World Health Organisation, 2008).

In relation to health and medicine, the tobacco industry had a longstanding history of investment in research and partnerships with reputable clinicians, scientists and businesses, in order to increase sales and production of its product (Hirshbein, 2015). Such research and relationships were used by the tobacco industry in order to counter criticisms and concerns about tobacco use that emerged from the 1950s. Projects conducted by tobacco industry researchers included work that investigated relationships between smoking and stress, psychology, mental illness and Parkinson's disease. In relation to psychiatry, it was the tobacco industry's partnerships and shaping of research questions that led to the support of notions such as, people with schizophrenia smoke to self-medicate and it's their adult choice. Hirshbein (2011) explored ongoing and emerging evidence that the tobacco industry had invested heavily to try to understand the link between mental health and smoking and had actively targeted this group in order to increase sales. Furthermore, this was in stark contrast to mental health services and leaders who had entered into the issue of tobacco dependence and treatment much later, and on a background of tobacco and smoking being an entrenched social and therapeutic norm in mental health settings and continued to pervade contemporary mental health settings.

A major aspect argued by tobacco control experts that thwarted the debate around smoking harms and public health measures to reduce this was whether or not smoking was a habit or an addiction. Henningfield and Zeller (2006) explored the history of nicotine psychopharmacology and tobacco regulation in the US and began this account with the landmark US' Surgeon General Report (1964) which concluded smoking was a 'habituation', not an 'addiction', was linked to personality disorder and intoxication and these characteristics did not generally apply to smokers. Rigorous evidence to counter this belief was not published until the 1970s when addiction researchers concluded that tobacco use could be an addiction and thus tobacco dependence was subsequently included in the

Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-III). Henningfield and Zeller (2006) contended these factors prolonged the debate about nicotine's addictive qualities and link with personality disorder and were capitalised on by the tobacco industry in their continued aggressive marketing and internal research to sustain and expand their industry for profit and sales.

The tobacco industry attached itself to research and clinical experts through financial backing and partnerships. However, despite reduced smoking rates around the world, the tobacco industry continued as a lucrative business with sophisticated strategies to sell tobacco product and counter tobacco control measures (Chan, 2014), such as supporting their own internal investigations on smoking (Howells, 2011). Indeed, since Western countries had begun the implementation of the World Health Organisation's comprehensive package of measures which are designed to reduce tobacco smoking rates and associated harms (World Health Organisation, 2009), the tobacco industry had shifted their business to developing countries, such as Indonesia, Africa and China. The tobacco industry was further accused of continuing their ongoing practices to thwart research findings and tobacco control measures of Western countries (Moodie, 2014).

Since its inception the tobacco industry has impeded tobacco regulation and shaped public perception of cigarettes to their benefit (Brandt, 2007). Tobacco control experts (Brandt, 2007; Hirshbein, 2015; Moodie, 2014) shared similar views about how the tobacco industry used notions of risk, individual choice, rights and freedom. Therefore, since a person engaged in voluntary smoking behaviour, tobacco companies argued there was no case for an international tobacco control regime. The notions and constructs of individual rights and choice around smoking used as marketing strategy by the tobacco industry had parallel themes in mental health treatment in relation to people with a mental illness who were placed in involuntary treatment under the Mental Health Act (2014). Mental Health advocacy groups argued the right to smoke and choose when to quit and thus advocated for only smoke-free policy with a partial ban.

In summary, the tobacco industry is a transnational multibillion dollar industry that has used multiple marketing, sponsorship and advertising strategies to increase sales. A historical perspective highlighted the depth and impact of the tobacco industry which included medical and research sponsorship that was designed as a measure to continue

tobacco sales. The tobacco industry had countered claims that nicotine and cigarettes were addictive, omitted information on the harms from smoking and targeted vulnerable groups to maintain sales, with endemic marketing strategies around choice, freedom and human rights. The tobacco industry had been countered by tobacco control measures but continued to thwart public health measures. The historical context of the tobacco industry highlighted the social norms of smoking prevalence and particularly themes around choice and rights and this resonated with the debate and contentiousness around smoking and mental health settings being completely smoke-free and the involuntary treatment of patients who smoked when placed under the Mental Health Act (2014)

Smoke-free Policy and Tobacco Control

The increased mortality and morbidity from high rates of tobacco use globally were the building blocks for the World Health Organisation's Framework Convention on Tobacco Control (FCTC) (World Health Organisation, 2003). The reasons for the exponential and global spread of the tobacco epidemic were considered complex and included a mix of trade and foreign investment changes, transnational tobacco advertising and sponsorship and counterfeit cigarettes (World Health Organisation, 2003). This treaty had 178 ratifying countries, which encompassed almost 90 percent of the world's population. The FCTC has evolved into the largest and most successful treaty in the history of the United Nations. Since 2008, this evidence-based treaty had six MPOWER measures which were: monitor tobacco use and prevention policies; protect people from tobacco use; offer help to quit tobacco use; warn about the dangers of tobacco use; enforce bans on tobacco advertising, promotion and sponsorship; and raise taxes on tobacco (World Health Organisation, 2008).

Since MPOWER measures, Australia continues to lead with its advanced tobacco control measures and strategies to reduce smoking prevalence to fifteen per cent (Daube, 2013). These included raised taxes on tobacco product, smoke-free public places to prevent harms from environmental tobacco smoke, and plain packaging of cigarettes. In Australia, some of these smoke-free policies and strategies had been initiated many years prior to MPOWER. For example enclosed areas of hospitals becoming smoke-free in 1978 and the Australian Public Service became smoke-free in 1989 (Swanson & Durston, 2011). The Australian Government and Council of Australian Governments has committed to reduce the national adult daily smoking rate to ten per cent and halve the Aboriginal and Torres Strait

Islander smoking rate by half by 2018 (Australian Government of Health and Ageing, 2013). Public health commitments to try and reduce the discrepancy between general population and vulnerable groups' smoking prevalence rates are debated as to effectiveness. Grills et al. (2010) explored the benefit, risks and balance required between general population strategies and high risk group targeted strategies in the context of pregnant women who smoked. They concluded that general population interventions would lead to the largest reductions in antenatal smoking. However, they advocated for targeted programs for disadvantaged and high prevalence smoking groups because ethically and politically it was appropriate, and these targeted programs could contribute significantly to reversing reduction in life-expectancy gaps. An Australian study by Lawrence et al. (2011) similarly to Grills et al. (2010) advocated for general population strategies to be effective for disadvantaged groups. However they believed inadequate research had been conducted on which of these general population strategies were effective for people with a mental illness. Furthermore, a balance between general population strategies and specific targeted strategies was more cost effective from a public health perspective. Finally, they believed an imbalance on research about individually tailored tobacco dependence interventions to the detriment of the potentially effective general population strategies had occurred.

Smoke-free Policy in the Hospital

Smoke free policies in public and private services have been increasing over time and gaining support with both smokers and non-smokers when the rationale and benefits are better understood (Hyland et al., 2009). Within Australia, tobacco control and smoke free policies in public places are controlled by the individual state and territories (Australian Government of Health and Ageing, 2013) which has meant there is variability across the nation's health settings with extent of policy, practice and guidelines in public health settings such as hospitals. A systematic review by Frazer et al. (2016) found evidence from 17 observational studies to suggest that smoking bans in institutions such as hospitals and universities reduced both smoking rates and harms from environmental tobacco smoke.

Within Western Australia, the Smoke Free WA Health System Policy has been in effect since 2008. This policy aims to protect and improve health outcomes of patients, staff and visitors from exposure to environmental tobacco smoke (Department of Health Western Australia, 2013b). Under this policy, a public health facility has obligations to provide best

practice and safe working environment for those who work, visit or are treated within these services as evidence suggests that there is no safe level of exposure to environmental tobacco smoke (Department Health Western Australia, 2008). In essence, the smoking bans in public spaces, which include hospitals, are to provide safe and healthy environments for people in these areas rather than exposure to environmental tobacco smoke. This Smoke Free WA Policy was in conjunction with clinical guidelines and management for patients with tobacco dependence and included screening and assessment of level of nicotine dependence with treatment guidelines and discharge support for tobacco dependence (Department Health Western Australia, 2008).

Smoke-free Policy Inpatient Mental Health Units

Despite the introduction of smoke-free policies and guidelines in developed countries such as Australia, UK and US, mental health services continue to struggle to comply and shift from long-standing entrenched norms around smoking (Lawn & Campion, 2013; Stockings et al., 2014). Studies have suggested mental health settings were an environment where pro-smoking culture remained and patients continued to smoke at high rates, were initiated into smoking, or relapsed back to smoking when admitted to a mental health facility which did not have a smoke-free policy (complete ban) (Banham, Gilbody, & Lester, 2008; Sohal et al., 2016). The reasons commonly suggested to contribute to continued high rates of smoking were socialisation, boredom and stress (Hehir, Indig, Prosser, & Archer, 2013; Lawn & Campion, 2013; Parker et al., 2012). How to effect positive change away from this entrenched culture and continued high smoking rates continues to be debated nationally and internationally (Daube, 2013; Gilbody et al., 2015; Prochaska, 2011; Sohal et al., 2016). Mental health settings historically and contemporaneously struggle to provide smoke-free environments for a range of complex reasons that include negative attitudes, fear of aggression and entrenched culture where smoking is a social norm (Lawn & Campion, 2013; Olivier et al., 2007). Systematic reviews suggested that smoke-free policy (complete ban) when implemented did not lead to increased aggression, that many patients were motivated to quit and that tobacco dependence treatment was warranted (Lawn & Campion, 2013; Ruther et al., 2014).

The public health perspective to provide safe work places was the predominant factor that enabled smoke-free workplaces because there is no safe exposure to ETS (Department of

Health Western Australia, 2009). All health professionals (which included mental health professionals) have a role in promoting healthy behaviours, and smoking cessation is regarded as a gold standard treatment in smoking related disease and reduction in premature mortality (Anders et al., 2011; The Joanna Briggs Institute, 2016). Therefore an admission to hospital provided a treatable moment for tobacco dependence treatment and brief intervention for smoking was evidence based practice that increased smoking cessation rates (The Joanna Briggs Institute, 2016; Miller, 2003). However, within a mental health setting context, both nationally and internationally, studies suggested both staff and patients often smoked, smoking was viewed as therapeutic, and an engagement and behavioural management tool (Rowley et al., 2016; Sohal et al.,2016). Further complexity mental health settings faced was around issues of rights and choice in relationship to smoke-free policy (complete ban). For example, mental health advocacy groups, such as the National Mental Health Consumer and Carer Forum (NMHCCF) played a key role in advocating for people with a mental illness' rights to autonomy, choice and dignity (National Mental Health Advocacy Consumer & Carer Forum, 2014). The importance of this advocacy was magnified when patients were placed under the Mental Health Act 2014 by a treating psychiatrist and thus underwent involuntary inpatient treatment. In their advocacy brief on smoking and mental health, the National Mental Health Consumer and Carer Forum (NMHCCF 2014) stated that:

> *"Any service that imposes smoking bans on consumers at a time when they are acutely unwell and meet all of the criteria under the various states or territory mental health Acts, are engaging in cruel and inhumane treatment and demonstrating a complete indifference to the distress of this consumer group" (NMHCCF, 2014, p2).*

The views of advocacy services were important as was person-centred Recovery principles. However, smoke-free policy incorporated both provision of safe workplaces and reduced exposure to smoke and tobacco dependence treatment for the smoker. This contrast provided some understanding of the decisional dilemma mental health professionals faced in relation to practice and attitudes around tobacco dependence treatment and smoke-free policy in mental health inpatient settings and which might contribute towards ambivalence to change. In an Australian study by Hehir et al. (2013) they explored staff attitudes (n=111) to their high secure mental health unit becoming completely smoke-free. On the one hand, the majority of staff supported smoke-free environments and positive aspects related to patient

care and behaviour. On the other hand, many staff believed patients had a right to choose when to stop and should not be forced. A smoke-free setting meant that staff, patients and visitors were not exposed to environmental tobacco smoke, it provided a counter culture to smoking and a therapeutic environment for those who were quitting or ex-smokers. However, many mental health settings had entrenched culture of permissiveness to smoking with high rates of patients who smoked as part of the social nor and therefore cues to smoke/relapse/be initiated to smoke would be higher (Prochaska, Fromont, Hudmon, & Cataldo, 2009). The contradictory nature of this dilemma is reflected in statements by advocacy services, such as the NMHCCF (National Mental Health Advocacy Consumer & Carer Forum, 2014), who "acknowledged the benefits of smoking cessation and the right for everybody to have a smoke-free environment" (p1), however, the NMHCCF (National Mental Health Advocacy Consumer & Carer Forum, 2014) believed enforced abstinence while an inpatient was unacceptable and increased the patient's emotional distress and this was the rationale why an exemption for smoking should occur. The NMHCCF (2014) supported tobacco dependence treatment guidelines (World Health Organisation, 2009) and mental health Recovery principles (Mental Health Commission, 2016), which was that patients were screened and assessed for tobacco dependence, and if they chose treatment, then this included holistic and recovery principles. Similarly, in a qualitative exploration of mental health nurses dilemma in supporting smoking cessation, Lawn and Condon (2006) found similar beliefs that patients should be supported to stop smoking if they chose and were mentally stable. However, a dominant culture of permissive smoking prevailed which maintained the entrenched high rate of smoking by inpatients as part of therapeutic milieu which was difficult to change.

In summary, mental health settings struggle to provide routine tobacco dependence treatment and operate within smoke-free policy and practices. A dilemma seemed apparent in the contrast between public health measures for smoke-free services and health professionals to screen and treat tobacco dependence and the choice and rights for inpatients under the Mental Health Act (2014) to smoke which was advocated by mental health advocates who were against enforced abstinence from smoke-free policy with complete ban. Mental health settings had permissive norms around smoking, entrenched culture and continued to have high rates of patients who smoked. Smoke-free policy was about safe and smoke-free environments for everyone to reduce exposure to environmental tobacco smoke and to provide tobacco dependence treatment for patients who smoked. There was a complicated and counter dynamic between smoke-free policy and thus enforced abstinence which does not

allow choice and readiness to change, as recommended by mental health advocacy. This counter dynamic is evident in recommendations by national services such as Cancer Council Australia (2015) and tobacco researchers (Sohal et al., 2016) that smoke-free policy (complete ban) was more successful in shifting culture and providing a therapeutic mental health setting. Research suggested this conundrum continued with mental health facilities continued permissive smoking culture. The smoke-free policy partial ban satisfied mental health advocates who argued choice and rights of people with a mental illness to smoke while an involuntary patient, however, in practice it translated to continued high rates of smoking as an inpatient, and the exposure of staff and other patients to ETS (Sohal et al., 2016).

Smoke-free Policy (partial ban)

Mental health facilities nationally and internationally had been granted smoke-free policy exemptions after campaigns from various advocacy groups and/or because barriers related to permissive culture and high smoking rates could not be solved (Lawn & Campion, 2013; Prochaska et al., 2014). Glover et al. (2014) identified similar themes and barriers in their qualitative review of key stake-holders of mental health and drug and alcohol services in New Zealand and they further argued this should be challenged in order to effect change towards smoke-free facilities in both these sectors. In Western Australia, mental health advocacy and consumer groups, similarly to national and international groups, campaigned successfully and smoke-free policy (complete ban) was overturned subsequent to its implementation in 2008. This resulted in the Smoke Free WA Health System Policy partial exemption that came into effect in January 2013 (Government of West Australia, 2013). This exemption applied to involuntary patients, who were over the age of 18 years and treated under the Mental Health Act (2014) and had specific protocol requirements. These partial exemption protocols for mental health inpatient services included the designated smoking area to be a certain size, with shelter and safe distance and perimeter to stop environmental tobacco smoke and thus meet occupational, safety and health standards (Government of WA, 1996). Further, the frequency of patient smoking needed a limit set and staff were required to supervise patients who smoked and manage smoking paraphernalia. These protocols were expected to be tailored to the specific mental health site, and balance smoking behaviour with an offer of smoking cessation support and therapeutic activities, staff availability and resources (Government of West Australia, 2013). To implement a complete or partial ban was a decision made by the leaders and management of the individual mental health service

and the partial ban often translated to permissive smoking environments where patients continued to smoke at high rates and the social norm of smoking remained largely unchallenged (Glover, et.al, 2014; Lawn & Campion, 2013; Sohal et.al, 2016).

A review by Lawn and Campion (2013) examined a ten year history of smoke-free policy implementation within mental health services nationally and internationally. This review showed successful and unsuccessful experiences of smoke-free implementation attempts (both partial and completely smoke-free) and that research in this area demonstrated notably that success (smoke-free policy complete ban) came on subsequent attempts and when complete rather than partial bans were implemented. Furthermore, when a mental health service exercised a partial ban then this was relatively ineffective in addressing patient and staff cultural norms around smoking. This theme of partial versus complete smoke-free policy was carefully considered and reported on in the recent Cancer Council Australia (2015) position statement on mental health services and smoking cessation. The Cancer Council Australia position statement on mental health services and smoking cessation (2015) was comprehensive with recommendations being considered a high priority for people with a mental illness who smoked. Specifically, mental health settings were regarded as vital contributors to reduce smoking rates and improve health outcomes for people with a mental illness when admitted into treatment. The statement goals were in collaboration with the National Heart Foundation of Australia and acknowledged the complex considerations required for mental health settings because choice and empowerment were important elements in mental health recovery. Several key points were outlined. Firstly, a framework around recovery principles and individually tailored care and those partnerships with peer support workers, family and care group representatives were included. Secondly, that mental health services provide a supportive smoke-free environment which included implementing smoke-free policies. A noteworthy inclusion was that a service decide whether to implement a partial or total ban under smoke-free policy, however they cited evidence for better effectiveness of implementation with complete smoke-free as against a partial smoke-free mental health setting. Many traditional mental health settings had large grounds and outdoor areas so exemption protocols could be met in relation to occupational safety and health standards (1996) to eliminate environmental tobacco smoke and smoke drift. On the other hand, contemporary mental health units that were within a hospital setting for example, had inadequate structure and space to comply with occupational, safety and health requirements and exemption protocols around smoking. This had a consequence which removed choice

and meant that a smoke-free policy complete ban was the only option. This however, was unacceptable to advocacy groups and added a contemporary complexity between recovery, person-centred, choice principles for the smoker and protecting the rights and health of patients and staff from environmental tobacco smoke and providing smoke-free therapeutic environment to support smoking cessation (NMHCCF, 2014).

In summary, the smoke-free policy exemption for involuntary patients had been successfully petitioned internationally, nationally and at a local level by advocacy groups. The tenet of this exemption was that people with a mental illness hospitalised for treatment under the Mental Health Act (2014) should be able to choose when to smoke or quit. The continued conundrum was that mental health inpatient settings had entrenched social and cultural norms of smoking which partial smoke-free policy failed to counter. Studies demonstrated complete smoke-free policy was more successful in terms of implementation and provided better infiltration to shift culture around smoking (Lawn & Pols, 2005; Sohal et al., 2016). Managers of mental health services were afforded the decision-making power whether to implement a complete or partial smoke-free policy, though some contemporary mental health services were limited in choice because their facility could not meet OSH requirements for smoke-free policy (partial ban) and this was therefore unavoidably contrary to mental health advocates recommendations.

Tobacco Dependence Treatment

Numerous reviews and studies identified significant reductions in smoking tobacco in the general population with good response to harm-reduction and public health strategies (e.g. Chapman & Freeman, 2007; Lawrence et al., 2011; Schroeder, 2009). Furthermore, the majority of smokers successfully quit without formal treatment interventions such as counselling and/or tobacco dependence pharmacotherapy, such as nicotine replacement therapy (Smith et al., 2015). A systematic review found that the majority of Australian smokers quit or attempted to quit unassisted (that is without pharmacological or professional support) (Smith et al., 2015). Zwar (2010) reported that in Australia there was an advanced primary health care system where more than 80 percent of the population visiting their General Practitioner and that smoking cessation interventions were effective from this setting. These smoking cessation guidelines given to General Practitioners were internationally

evidence-based, comprehensive and integrated with Quitline (the national smoking cessation telephone support service) Swar et al. (2005).

The World Health Organisation (2014) outlined and recommended a set of strategies termed the '5A's' and '5R's' as initial steps in addressing tobacco dependence when a smoker entered a health setting and these interventions aimed to increase quit rates of smoking. These strategies were in the larger context of the tobacco control framework, MPOWER, which had six public health measures to reduce harms from smoking, as previously outlined. The '5A's' included asking the patient if they smoked, or did others around them smoke, advising them in a clear, assertive and personalised manner to quit, assessing motivation to quit, assisting with quit support and offering follow-up support. The '5R's' model was devised to increase motivation to quit smoking and included the incorporation of personal relevance, identifying risks of smoking, identifying rewards of quitting, exploring roadblocks to quitting and planning repetition of intervention during contact with a patient who continued to smoke. The smoking cessation guidelines recommended by World Health Organisation (2014) were endorsed by national and international bodies such as the Joanna Briggs Institute (2008), the Royal Australian College of General Practitioners (2011), the National Institute of Clinical Excellence (2013) in the UK, and the European Psychiatric Association (Ruther et al., 2013). Nicotine replacement therapy was considered an important part of tobacco dependence treatment including for when enforced abstinence management was required. Multiple randomised controlled trials found that nicotine replacement therapy can double the quit success rate and mitigated nicotine withdrawal symptoms, particularly cravings to smoke (McEwan et al, 2007). Notably self-help was not considered a front-line tobacco dependence treatment. The National Institute Clinical Excellence (2013) guidelines refer to a wide range of health-care facilities and included community, drug and alcohol, outpatient, pre admission, maternity and mental health services. The recommend tobacco dependence treatment was a whole of service plan that supports routine screening, electronic and written recording and routine, integrated tobacco dependence treatment for patients who smoked.

Hospitalisation provided an opportunity for health professionals to provide patients who smoked with tobacco dependence treatment (Thomas et al., 2013). The clinical guidelines for health care settings included screening patients for tobacco dependence and providing treatment interventions (Miller, 2003). In WA Health (Government of Western

Australia, 2008) clinical guidelines around nicotine dependence were in the context of smoke-free policy and included the 5A's and informing patients of the smoke-free policy. Further inclusions were medication guidelines around tobacco dependence pharmacotherapy and medication interactions with smoking and the medication adjustments that might be clinically indicated if patient smoked and had enforced abstinence during admission. Nicotine dependence is measured by use of the Fagerstrom Test for Nicotine Dependence (FTND) (Department of Health, West Australian Government, 2008). In the general hospital setting, asking about a patients' current smoking status and providing a brief intervention was considered a cost effective best practice for a "treatable moment" (Anders et.al, 2011;Thomas et.al, 2013). This type of brief intervention was well recognised internationally to affect increased quit rates in smokers, reduce harm, and include systematic opportunistic brief intervention which was a continued priority (Scanlon, 2006). However, in an Australian randomised controlled trial protocol, Thomas et al. (2013) suggests that tobacco dependence treatment is not widely available in public hospitals, despite being effective to assist patients who smoked to quit and that pharmacists could lead an effective systems change intervention to change this. This study identified gaps in routine care related to smoking cessation, however general population rates had reduced to 14 per cent in Australia which makes it a concern of lesser magnitude when compared to the mental health sector.

Mental Health Settings

Australian mental health settings, similarly to UK and US mental health sector, are under increased pressure to provide integrated and routine tobacco dependence treatment and be completely smoke free (Rowley et al., 2016; National Institute Clinical Excellence, 2014; Sohal et al., 2016). Studies have identified mental health services' that integrate tobacco dependence treatment and smoke-free environments can assist in helping patients to stop smoking (Bittoun et al., 2013; Parker et al., 20120). Key features that included wide-range consultation and co-ordination, staff education and support, patient preparation, system implementation of routine nicotine replacement therapy and transparent, cohesive management and leadership were recommended (Lawn & Campion, 2013). Integrating inpatient care and follow up in the community were argued to be important for better health outcomes for patients (Gilbody et al, 2015). Studies are emerging that suggest this imperative for integrated tobacco dependence interventions between inpatient and community settings (Stockings et al., 2011; Lawrence et al., 2011).

Australian national bodies such as the Cancer Council Australia and National Heart Foundation recently recommended such comprehensive and integrated smoking cessation interventions in their position statement for mental health services (Cancer Council Australia, 2015). The UK National Institute Clinical Excellence guidelines (2013) were revised guidelines that recommended that mental health services be smoke free (complete ban) in addition to providing routine tobacco dependence treatment. In contrast, the Australian Cancer Council in collaboration with the National Heart Foundation (Cancer Council, 2015) recommended mental health services provide tobacco dependence treatment under a person-centred and recovery framework and though they recommended a service be completely smoke-free they acknowledged some services may choose a partial ban.

Prochaska et al. (2014) reported multitudes of studies (n=8800) around tobacco dependence treatment informing clinical practice guidelines for a general health treatment settings but little research (n<24) had been done to investigate effectiveness in a mental health inpatient setting. However, though small in number the studies completed did challenge myths and misconceptions held by mental health professionals around smoking and mental illness. Researchers identified that a paucity of studies on tobacco dependence treatment among patients with a mental illness and associated harms from smoking had not been systematically or routinely addressed as in general health (Stockings et al.,2013; Baker, Richmond, Haile et al., 2006 and Wye; Bridge, Knight et al.,2013). Further, the harms from smoking warranted assertive and opportunistic tobacco dependence interventions and encouragement to stop smoking.

Many mental health settings had long-standing historical contexts of smoking as a normal part of the culture (Hirshbein, 2015; Lawn & Campion, 2013). This struggle to change is attributed to ongoing complex factors that include staff attitudes, entrenched culture of smoking, staff education deficits, and high rates of patient and staff smoking (Sohal et al., 2016). Recent studies share requirements of policy and organisation change to help the integration of tobacco dependence treatment and smoke-free services (Rowley et al., 2016, McAlister et al., 2016, Sohal et al., 2016 and Gilbody et al. 2015). Furthermore, these policy and organisation changes are feasible and could enable a shift away from entrenched smoking culture and thus contribute to reduced smoking rates and better health outcomes amongst mental health inpatients. Rowley et al. (2016) extends this for an Australian context and urges

collaboration between tobacco control and mental health sectors in order to maintain this issue as a priority in both the public health and mental health sectors.

Historically, smoking tobacco by mental health inpatient is entwined heavily with behaviour control, currency, commodity, and therapy, while staff smoking with their patients was part of therapeutic engagement (Allen, 2013;Hirshbein, 2015; Lawn, 2004; Olivier et al., 2007). This aspect of an entrenched culture and norms around smoking continued to be reported in the literature and be regarded as a significant barrier that required challenging in order to affect change (Glover et al., 2013; Hehir et al., 2012). Research suggested this could be done through more research on tobacco dependence, mental illness and addressing this in the mental health sector (Bittoun et al., 2013; Ragg et al., 2013; Stockings et al, 2014; Williams et al., 2013). However, a mental health facility included a range of services that included inpatient (acute, medium, secure, forensic, long-stay) to outpatient community settings. This range in services contributed to opinions that some types of services were more appropriate than others to be completely smoke-free, or that success in one type would be more difficult in another (Lawrence et al., 2011; Zabeen et al., 2015).

Both international and national research within a variety of mental health treatment settings had been conducted that aimed to better inform policy and practice around smoke-free policy and routine treatment for tobacco dependence. Such research commonly highlighted entrenched culture and norms around permissive smoking and reported themes which included high inpatient smoking rates and tobacco dependence, yet tobacco dependence treatment interventions were rare and inconsistent. International studies that identified feasibility of tobacco dependence treatment within an acute inpatient mental health unit included the US randomised control trial by Prochaska et al. (2014) which involved 224 participants with a mental illness including severe mental illness). Gleason et al. (2012) in a US study suggested with persistence, multiple types of mental health facilities (i.e. five outpatient, several inpatient units and up to 80 treatment programs) could implement smoke-free policies and that the complete ban contributed to an improved therapeutic milieu with several inpatient mental health settings reported to have a one-third reduction in restraint and seclusion. Their evidence suggested success with comprehensive packages of organisational strategies which included staff education and training, staff smoking cessation support and improved tobacco dependence treatment for patients which integrated wellness and physical health programs (Gleason et al., 2012). However, some studies, such as Crockford et al.

(2009) illuminated difficulty and failure in smoke-free policy and organisational change. This Canadian Mental Health Unit under study had an unsuccessful smoking ban with entrenched staff culture of permissiveness of patients being allowed to smoke resulting in the failure to change to a smoke-free service.

Australian research identified themes of barriers (cultural norms of smoking, resistance and high rates of patients who smoked) that impacted on policy and organisational change around smoking in mental health facilities (Stockings et al.,2011). This is similar to international research that explored differences in type of mental health service and smoke-free policy (complete or partial ban) which appeared to impact on successful change towards routine treatment of tobacco dependence and smoke-free environment (Magor-Blatch et al., 2016). Mental health services that implemented a smoke-free policy with a complete ban were reported in the literature to struggle to operationalise this ban when there was an allocated smoking area (partial ban) or indeed resistance to change by staff (Campion & Lawn, 2008; Glover et al., 2014). A cross-sectional study by Wye et al. (2014) of a large mental health inpatient facility reported that despite the smoke-free policy complete ban four years earlier, there was substantial smoking in the courtyard which subverted the intention of a smoke-free policy, complete ban. Earlier Campion et al. (2008) described a mental health unit's unsuccessful implementation of a smoke-free policy, and identified similar barriers and challenges around culture and permissive smoking norms. They discussed the complexity of the social environment, in particular for the secure mental health inpatient unit that impacted on its difficulty in operating within a smoke-free policy.

Mental health services often report a struggle to change permissive smoking culture and the social norm around smoking. This entrenched culture and staff resistance countered change strategies that service leaders or change champion attempted to implement related to smoke-free policy and tobacco dependence treatment. Studies that highlight this include Lawn and Pols' (2003) qualitative review of patient and staff experiences around smoking and violence in an involuntary mental health unit. This study suggested that for both staff and patients who smoked, the culture of permissiveness of smoking was a significant barrier to stop smoking. Further, once enmeshed in this type of system, smoking was overwhelmingly reinforced by this social norm. A systematic review of smoking and mental illness by Stockings et al. (2014) however, challenges some of the commonly held misconceptions around smoking and smoke-free mental health units. This review found evidence to support

being smoke-free could impact positively on patients' smoking behaviours and on smoking-related motivation and beliefs. Despite difficulties to implement smoke-free policy and tobacco dependence treatment in mental health services there were more services that had success with change from permissive smoking culture and social norms around smoking to smoke-free services. Relevant to the present study around a service transitioning from a partial ban to a complete ban is an Australian study by Bittoun (2013) which focussed on a protocol for a smoke-free mental health facility for residents (n=11) who had HIV AIDS and dementia. They reported that in several mental health services many staff believed that smoke-free policies were harsh and difficult to implement and maintain, and preferred to maintain the existing status quo of permissiveness. Furthermore, attempts to implement change had involved frequent disputes and verbal altercations among staff and between staff and patients. Ponti (2011) suggested that organisational change typically comes with barriers to change which included resistance and that ambivalence was a marker for resistance. Bittoun et al. (2013) reported that when the protocol for a smoke-free mental health facility was implemented (where smoking prevalence was 90 % of residents), these disputes and difficulties were overcome and the transition to a smoke-free facility was positive.

In summary, the success of implementing smoke-free policy and tobacco dependence treatment by a multi-pronged comprehensive approach was consistently reported in the literature however many mental health inpatient settings identified a long standing and entrenched culture of permissiveness around smoking and high rates of patients who smoked which made change difficult. . Regardless of the facility characteristic (inpatient voluntary mental health units, medium to high secure units and forensic units), a long standing culture of permissiveness towards smoking and the complex social environment that was entwined around smoking tobacco made it difficult to implement change. Despite these difficulties, the pressure and priority to implement smoke-free policy and routine tobacco dependence treatment had been ongoing since the early 2000s, in line with other public health settings in Australia and internationally. Limited evidence suggests that the outcomes for patients are positive.

Barriers to Tobacco Dependence Treatment and Smoke-free Policy

The following sections discuss two major barriers to tobacco dependence treatment and smoke-free policy of attitude and education and training of staff. Further challenges

related to psychotropic medications that interact with smoking cessation and physical health care intervention deficits are discussed. An attempt to separate these barrier challenges has been done to provide clarity however, these factors overlap. The main barriers consistently reported in UK, US, Australian and New Zealand literature that related to both routine tobacco dependence and smoke-free policy are staff attitudes and beliefs, smoking status of staff (as discussed previously), education deficits and that these were within an entrenched culture of permissiveness around patients smoking (Glover et al., 2014; Metse et al., 2014; Sohal et al., 2016; Zabeen et al., 2015).

A common belief reported by mental health professionals is that mental health patients were unmotivated to quit smoking (Stockings et al 2013; Ashton 2013). Another commonly held misconception is that quitting smoking will exacerbate mental illness (Mendelsohn et al., 2015; Lawrence et al 2011). The reality is many mental health inpatient services do not routinely or systematically integrate tobacco dependence treatment into patient care (Sohal et al., 2016). Patients with a mental illness who smoked were more likely to have high levels of nicotine dependence, smoke more intensely and experience greater difficulty in quitting therefore tobacco dependence treatment was at an increased imperative (Gilbody et al., 2015; Lawn & Campion, 2013; Prochaska et al, 2014). Mendelsohn et al. (2015) reviewed studies on smoking and mental illness and provided evidence-based guidelines for psychiatrists to support their patients to quit and thus counter the long-term neglect of treatment of tobacco dependence in psychiatry. These recommendations included the 5A's framework; nicotine replacement therapy, tobacco dependence pharmacotherapy and appropriate clinical monitoring for patients on medications that interacted with cigarette smoke. Mendelsohn et al. (2015) advocates that psychiatrists had a duty of care to routinely treat their patients for tobacco dependence and that mental health acuity was not a barrier.

National and international studies have been published which guide mental health professionals on best practice in relation to treating tobacco dependence, though they did not always clarify guidelines when a patient was considered high acuity such as when admitted to an acute inpatient mental health unit. Ruther et al. (2014) published The European Psychiatry Association guidance on tobacco dependence and strategies for patients with a mental illness. The key recommendations included both inpatient and outpatients and reflected the 5A's guidelines (World Health Organisation, 2008). The timing of smoking cessation intervention was noteworthy because the recommendations specified interventions take place when the

patient was stable with no anticipated change to psychotropic medication. Their findings supported smoking bans in mental health settings in order to protect staff and patients from environmental tobacco smoke and to support smoking cessation. However, if a patient had high mental health acuity or undergoing psychotropic medication then potentially a quit date was recommended to be delayed. This reflects some of the ambiguity seen in studies on tobacco dependence treatment. On the one hand, advocacy for smoke-free policy (complete ban), and on the other hand suggesting smoking cessation when a patient was stable. The issues related to enforced abstinence and mental health acuity are not directly answered. However, a US study by Leyro et al (2013), recruited patients from two acute, secure mental health inpatient units (n=324) for two randomised clinical trials for smoking cessation. Their findings included patients used nicotine replacement therapy despite low motivation to quit. Nicotine replacement therapy use was greater for patients with a psychotic illness which the authors suggested reflected clinical awareness of nicotine replacement therapy to offset agitation that could be precipitated by nicotine withdrawal. Contraindications to smoke-free complete ban in relation to mental health acuity were not reported on directly rather that increased routine use of nicotine replacement therapy was an important tool.

An argument against smoke-free policy (complete ban) which would then require routine tobacco dependence treatment was that patients were too unwell (high mental health acuity), this was not why they were in treatment and patients lacked motivation to quit. However, contemporary research continued to emerge which identified that motivation to quit with smokers who had a mental illness was similar to the general population of smokers who tried to quit, with similar motivations related to improved health and finances (Ashton et al 2013; Stocking et al., 2013; Dickens et al., 2014). Additionally, international and national research challenged high mental health acuity as a contraindication. A large longitudinal study in the US (Ferron 2013) of participants with severe mental illness and substance use disorder who smoked identified many participants were motivated to quit smoking and attempted to quit multiple times, but few engaged in professional support or used nicotine replacement therapy. Ragg et al., (2013) reviewed English studies and included inpatient, outpatient and community settings that assessed the impact of smoking cessation on schizophrenia and major depression with findings suggesting no contraindications to smoking cessation. They concluded no worsening of psychiatric symptoms or relapse, improved mood was found in some studies and psychiatrists along with other mental health professionals should provide patients with the same level of support to quit smoking tobacco that was given

to the general population. Similarly, a US study by Capron (2014) explored the effect of successful and failed attempts at smoking cessation on short-term anxiety, depression and suicidality in a community setting. Results determined no psychopathology impacts for those who had successfully quit, or for those that struggled to quit. Whilst some increase in depressive or anxiety symptoms were found, this was not a clinically significant increase, and could be due to protracted nicotine withdrawal which adequate nicotine replacement therapy could reduce.

Other studies have suggested deterioration in patient acuity did not eventuate when the mental health services were completely smoke-free. In fact, patient behaviour and clinical management was reported to be easier than anticipated and staff fears were not realised (Lawrence et al., 2011; Sohal et al., 2016; Stockings et al., 2014).

In relation to the barrier of tobacco dependence treatment and smoke-free policy of timing (acute versus stable mental health acuity) no contemporary studies were found that cited contraindications to smoking cessation for a mental health inpatient. Rather expert clinical advice related to lack of use of first-line pharmacotherapy medications and not about smoking cessation itself. Recommendations included that firstly patients required increased monitoring and potential reductions of their prescribed medications if these medications interacted with tobacco smoke (Carson et al., 2013). Secondly, mental health professionals should be vigilant and vigorous with screening, assessing and treating tobacco dependence when a patient was admitted to smoke-free services because there were no contraindications to enforced abstinence (Andrade, 2012; de Hert, 2011).

In summary, mental health settings continued to have multiple barriers to routine tobacco dependence and smoke-free policy that included staff attitude and beliefs and entrenched culture of smoking permissiveness and neglect in provision of integrated and systematic tobacco dependence treatment.

Provision Tobacco Dependence Treatment Inpatient Mental Health

A recent systematic review by Crlyjak et al. (2015) of tobacco dependence treatment in inpatient mental health units outlined a protocol to review randomised controlled studies and quasi controlled studies to build on the body of knowledge on what is effective and

required. The review findings identified evidence based tobacco dependence treatment is available but rarely done in mental health inpatient settings and that this is similarly reported in US, UK, Australia and New Zealand studies. This deficit in care is despite multiple study's findings that smoking prevalence for mental health inpatients is high, with tobacco as the main contributor to reduced life expectancy. Furthermore, tobacco dependence treatment guidelines clearly outlined screening, advice to quit and provision of treatment for tobacco dependence as important and that it was ethical to provide mental health inpatients with the same treatment as general population. Khanna's et al. (2016) systematic review found limited studies on smoking cessation for people with a severe mental illness. They found this group of people had greater tobacco dependence due to a range of complex reasons and was associated with poorer physical health. Furthermore, they recommended more trials were needed because it was important to facilitate improved health and safety which would reduce the financial and health burden of smoking.

Studies had been conducted in outpatient mental health settings that clearly identified better engagement and smoking reduction and/or cessation rates when the interventions were individually tailored and comprehensive. However, as discussed above, more studies were required that represented acute inpatient mental health settings. Overcoming entrenched social norms and culture was a barrier reported in a contemporary UK study by Parker et al. (2012) which developed a model for a comprehensive, tailored and integrated tobacco dependence treatment program. The tobacco dependence treatment was based on recommended national guidelines with the inclusion of treatment provider flexibility in its delivery and tested on participants from mental health inpatient (n=57) and community (n=53). Their findings showed that one third of participants made a quit attempt, one quarter reduced their cigarette consumption by half, and that though this was modest it identified an interest and demand for tobacco dependence treatment. A recent pilot randomised controlled trial (Gilbody et al., 2015) reported feasibility for smoking cessation for people with a severe mental illness. They showed feasibility for people with a severe mental illness to quit smoking when participants from four large counties in the UK were randomly assigned to care as usual, or an individually tailored and structured smoking cessation program. Findings suggested the individually tailored program had potential to increase engagement and boost smoking cessation rates. These researchers advocated for implementation of the UK, National Institute Clinical Excellence (2013) guidelines which recommend all mental health services be completely smoke-free. However, many of the participants were recruited from a

community mental health facility, with mental health stability (e.g. medication regimes were stable) considered more likely as compared to an acute inpatient mental health setting. Within a national context Baker et al. (2006) found people with a psychotic illness who smoked had higher cessation rates after they completed an individually tailored intensive smoking cessation programme. This study identified a correlation between increased number of sessions and smoking cessation. Contemporary studies such as Parker (2012) and Gilbody et al. (2015) reported similar findings to Baker et al. (2006) who suggested people with a severe mental illness required flexible, tailored interventions, over a longer time frame and this approach improved smoking cessation.

The above studies were mixed between outpatient and inpatient mental health settings so did not address directly the barrier to inpatient smoking cessation which related to increased mental health acuity and that smoking cessation would worsen mental health acuity. However, contemporary studies challenge this notion. A large US randomised control trial of 224 participants from a secure acute inpatient mental health facility showed positive results (Prochaska et al. 2014). They determined that patients with a psychotic illness could successfully quit and that smoking cessation while an inpatient was feasible and worthwhile. They reported that smoking cessation did not increase their re- hospitalisation risk and had capacity to reduce rehospitalisation by way of providing greater therapeutic input. Similarly, Stockings (2014) conducted a systematic review on the impact of smoke-free psychiatric hospitalisation and found this may have a positive impact on patient smoking behaviour and motivation.

Researchers in the UK developed a tailored dependence support for mental health patients that included four acute inpatient units and two rehabilitation units (Parker et al., 2012). This study had 110 participants with a range of diagnoses that included depression, schizophrenia and bipolar disorder. Inpatients who participated were deemed mentally stable, therefore suitable by clinical staff. Patients who left the study did so for reasons to continue smoking or that they were lost to follow up. No specific reference was made in this study that mental health acuity was too high or that participating in a smoking cessation program worsened their mental health condition. The researchers noted an anticipated low yield of participants from the inpatient setting because of the severity of mental health conditions of this group. They concluded that a smoking cessation treatment in this setting was difficult because of complex systemic barriers but there was a notable demand from the patients for smoking

cessation support. An Australian randomised controlled trial protocol by linking mental health inpatients to community smoking cessation supports was described as the first such study nationally and internationally (Stockings et al., 2011). It aimed to provide evidence for integrated and systematic smoking cessation interventions that were linked between hospital to community for a group that had disproportionately high smoking rates and related harm, yet not systematically supported. The findings from this study had not been published at time of writing this thesis. These studies highlight the need for mental health services to provide comprehensive tobacco dependence treatment interventions.

In summary, evidence around mental illness and tobacco dependence treatment suggested more research is required to build the evidence base for people with a mental illness who smoked and the provision of tobacco dependence treatment that work. Emerging findings from studies suggest that interventions which were comprehensive, tailored and have longer time frames showed positive impact on successful quit attempts.

Attitude Barriers

Negative attitudes were often cited as significant reasons for tobacco dependence treatment to be neglected within mental health and drug and alcohol services and this extended to difficulties with implementing smoke-free policy (Glover et al., 2014; Himelhoch et al., 2014; Hunt et al., 2014; Prochaska et al., 2012; Stockings et al., 2014). Negative attitudes included beliefs that patients were too unwell; smoking was an important coping strategy; staff smoking with patients was therapeutic; patients weren't motivated to quit or that it would make mental health acuity worse (i.e. aggressive and difficult behaviours).

Studies conducted in the alcohol and drug setting suggested similar barrier themes around tobacco dependence treatment and successful smoke-free policy implementation and therefore had relevance to the mental health setting (Bonevski et al., 2016; Glover et al., 2014). For example, a cross-sectional mixed method study by Richter et al. (2012) identified ambivalence as an underlying construct to attitude towards tobacco dependence treatment in a drug treatment setting and that their findings suggested staff resolved their ambivalence by stating that they offered tobacco dependence treatment, when in fact they did not. This study concurred with other research that the informal norms of staff strongly influenced behaviours and institutional cultures within an organisation and that policy and guidelines did not change

actual practice (Ferrante, 2006; Grant et al., 2014). Ambivalence and inconsistency themes were supported in an Australian national survey of attitudes and practice with tobacco dependence treatment in alcohol and drug treatment settings (Walsh, 2005). Staff ambivalence and inconsistency was identified as a major barrier. Of the 435 agencies eligible, 260 agencies completed the cross-sectional survey and these responses confirmed that a firmly enmeshed belief system existed. The highest ranking barriers were: patients not wanting to stop smoking or that it would harm them to stop; staff pessimism about tobacco dependence treatment success; lack of confidence and training, and staff who smoked.

In relation to mental health settings, studies by Glover et al. (2014), Lawn and Pols (2010), Prochaska et al. (2014) and Rowley et al. (2016) shared similar notions that attitudes were a barrier that impacted on routine tobacco dependence treatment for inpatients with a mental illness when admitted to mental health facilities which extended to smoke-free policy. Further, attitudes were among a set of complex factors, such as high smoking rates and cultural norms of smoking and these were road blocks to change from pro-smoking culture which was endemic in many mental health settings. All of the above mentioned studies suggest that because of this complexity, comprehensive strategies were required to enable services to shift towards smoke-free and integrated tobacco dependence treatment.

Burgess and colleagues (2015) discussed in public commentary that mental health nurses should be well placed and by profession supposedly well equipped with person-centred skills to offer smoking cessation strategies to their patients. However, this was impeded by attitude barriers of personal views around pro-smoking which increased if they were a smoker. Furthermore, ambivalence (i.e. reasons for and reasons against) toward supporting a patient's physical health (to stop smoking) and mental health (to keep smoking to avoid feeling worse) acted as a barrier to providing tobacco dependence treatment. Similarly, Grant et al. (2014) reported prevailing attitudes that included smoking as a coping strategy, smoking as a therapeutic tool, patients were less anxious and less agitated by continuing to smoke, patients should be able to choose when to quit, and the ethical dilemma that smoke-free policy imposed.

Nationally, studies suggested similar and consistent themes around attitudes negatively impacting on culture change towards routine and comprehensive tobacco dependence treatment. An Australian cross-sectional study by Hehir et al. (2013) reported

over a third of staff surveyed believed that patients should not be forced to stop smoking, however the majority of staff (88 %) preferred to work in a smoke-free environment. Furthermore, staff who smoked were more likely to have a negative attitude toward the smoke-free policy than non-smoking staff. More than half of the respondents believed that patient care was easier in a smoke-free environment, however a fifth of respondents believing that patients had increased aggression and difficult behaviours. Another Australian study by Wye et al. (2010) highlights the complexity services face with tobacco dependence treatment and smoke-free policy implementation. This survey of 123 nurse managers of psychiatric inpatient units in New South Wales determined that staff predisposition to smoking had been consistently shown to significantly impact on the success or otherwise of implementing routine tobacco dependence treatment in inpatient mental health settings. They found that there was strong support for tobacco dependence treatment, but, this was only in the context of patient readiness and choice to quit. This therefore implied selective intervention (Wye et al. 2010), as against the internationally recognised clinical and public health guideline of all smokers being assessed and provided with tobacco dependence support (World Health Organisation, 2014; National Institute Clinical Excellence, 2013; Royal Australian College General Practitioners, 2013). Furthermore, their study found that three quarters of the managers reported tobacco dependence treatment should be a core function of their unit, but, the majority perceived this in the context of patient request, and that patients who smoked were not interested in quitting (Wye et al. 2010).

Findings described thus far suggest that attitude was a consistent barrier to providing routine tobacco dependence treatment and successfully implementing smoke-free policy. Hunt et al. (2014) extended such findings that attitudes of staff were a barrier to routine tobacco dependence treatment, with the opinion that attitudes of staff had not been rigorously or systematically examined and validated and that this was useful to effect service change. These researchers subsequently developed and validated the Tobacco Treatment Commitment Scale (TTCS) to measure level of staff commitment to treatment of tobacco dependence in an alcohol and drug treatment setting. As discussed previously, similar themes were seen in both this sector and the mental health sector, thus shared findings and resources could be considered useful.

The Tobacco Treatment Commitment Scale (TTCS) (Hunt et al. 2014) measured commitment and thus underlying attitudes to provide tobacco treatment. At the time of the

present study this tool had not been tested in an inpatient mental health setting. The mental health unit under study was transitioning to a new site which was required to be completely smoke free and therefore would require routine tobacco dependence treatment to be implemented.

TTCS Attitude Domains

To develop the TTCS, Hunt et al. (2013) conducted a qualitative study which had a heterogeneous sample of 405 drug treatment facilities across the US and which used a panel of experts who critiqued the survey items. The final validated version of the TTCS had 14 items that represented three attitudinal domains that drove commitment to provide tobacco dependence treatment as outlined in Table 1.

In summary, attitudes are reported as barriers to smoke-free services and for providing routine tobacco dependence treatment, but have not been systematically studied (Hunt et al., 2013). The TTCS has three main attitudinal domains that explain commitment to provide tobacco dependence treatment. The TTCS has been validated and tested in the alcohol and drug setting and is relevant to a mental health setting but as yet not tested (Hunt et al., 2013). Understanding a service's level of commitment and thus underlying barrier attitudes around routine tobacco dependence treatment was an important insight that could help inform service leaders to implement change strategies to enable a shift away from the long standing entrenched attitudes that were reported in both alcohol and drug and mental health services.

Table 1

Description of TTCS Attitudinal Domains

Domain 1. Effects of Tobacco "Tobacco is less harmful than other drugs"	Domain 2. **Clinic Role** "It's not our job"	Domain 3. Effects of Tobacco Treatment "Tobacco treatment will harm **clients**"
Tobacco is less harmful than other addictive drugs.	Treating tobacco dependence should be part of the mission of **drug treatment programs.**	Quitting smoking makes anxiety and depression worse for our **clients.**
Smoking does not have an immediate effect on **client's** lives but drugs do.	**Drug treatment programs** should focus on fulfilling **court mandated treatment**, not treating tobacco dependence.	Smoking helps **clients** cope with stress in their lives.
It is better for **clients** to smoke than use other drugs.	**Programs** should not treat tobacco dependence because it is not what **clients** are in treatment for.	It is unfair to take **client's** tobacco away from them.
Tobacco dependence does not affect **client's** ability to function in society.	Tobacco dependence should not be treated in **drug treatment programs**.	Quitting all drugs at the same time is too much for **clients.**

Note. Bolded items indicate where the TTCS from Alcohol and Drug Services was adapted for use in this study. The modified TTCS used in this study can be seen at Appendix A.

Education Barriers

Education deficits were identified in the literature to impact on a mental health service's capacity to provide tobacco dependence treatment for patients (Glover et al., 2014; Wye et al., 2014. These deficits were often part of a range of barriers that included a lack of confidence and subscription to myths, tradition or practice that was not evidence-based around tobacco dependence treatment (Ratschen et al., 2009; Williams et al., 2014). Mental health professionals, like other health professionals who worked in hospitals and mental health services, are well placed to offer advice and support around tobacco dependence and

this was an evidence-based recommended practice (Joanna Briggs Institute, 2016; Miller, 2003; National Institute Clinical Excellence, 2013; Prochaska 2011; World Health Organisation, 2009). In this thesis, mental health professionals included doctors, psychiatrists, mental health nurses, pharmacists, psychologists, occupational therapists and social workers.

Studies supported evidence that deficits in knowledge and efficacy with tobacco dependence treatment were common and widespread amongst health professional groups (Ratchsen et al., 2009; Williams et al., 2014). Further, education-building strategies enabled a service to challenge attitudes and cultural norms that staff subscribed to and which impeded routine treatment of tobacco dependence and smoke-free environments. This was particularly relevant to doctors and nurses since they made up the largest proportion of health professional groups, though other health professionals should be considered important with tobacco dependence treatment (Thomas et al., 2013). Indeed, with regard smoke-free policy and tobacco dependence guidelines, key recommendations were that all health professionals had responsibility in this area (World Health Organisation, 2009; Department of Health, West Australian Government, 2008). Medical Doctors Williams, Scott, Stroup, Brunette and Raney (2014) published their professional concern at the underwhelming lack of action by psychiatrists to take a leading role with prioritisation of tobacco dependence treatment of their patient group. This was especially pertinent considering they were well positioned to do so and because tobacco use was the leading contributor to chronic diseases, cancers and earlier death for people with a mental illness. They argued that inadequate training for psychiatrists was an impediment to their provision of tobacco dependence treatment which they evidenced by the lack of compulsory requirement to provide tobacco dependence training in US medical psychiatry curriculums and that only half of the programs provided such training (Williams et al., 2014).

This historical lack of tobacco dependence treatment training within medical curriculum was compounded by cultural norms where psychiatrist's neglected the physical health of their patients. Hirshbein (2015) surmised the reasons why there was an inherent acceptance that their patient's smoked and psychiatrists had no role in supporting them to quit was because of a historic lack of psychiatrist's role in patient's physical health, the doctors own smoking behaviour, the psychoanalytical approach they subscribed to, power dynamics between doctor and patient, and the use of the cigarette as a behavioural control tool. This

was supported by Rogers and Sherman (2014) who reviewed tobacco use screening and treatment by outpatient psychiatrists before and after the release of the American Psychiatric Association Treatment guideline for nicotine dependence that was released in 1996. They reported that the number of psychiatrists who screened for tobacco use had declined and the proportion of patients who received tobacco dependence treatment, which included nicotine replacement therapy, was low. These researchers identified the system change in recent years where less time was spent with patients and this factored in the reduced rate of screening and treatment for tobacco dependence. Another reported factor was the patient's lack of motivation to quit, however, they argued that a systemic intervention was required and this should include education. However, they noted a positive relationship where psychiatrists who provided addiction support for alcohol or drugs provided advice around improved health outcomes and included smoking, which they hypothesised, was due to increased confidence and capacity. This was evidence towards the notion that confidence to treat in one area could transfer to another.

As mentioned previously doctors and nurses were the largest group of health professionals working in health services, with nurses being the larger of these two professions (Thomas et al., 2013). Nurses are therefore, particularly well placed to offer tobacco dependence treatment however, similar to doctors, tobacco dependence treatment is not a compulsory requirement in training curricula (Sarna et al., 2009; Wetta-Hall et al., 2005). They reported a lack of teaching around tobacco dependence treatment within nursing training modules. Additionally, they reported that many nursing staff cited knowledge and resource deficits; low confidence in patient self-efficacy and their own lack of confidence in delivering tobacco dependence treatment.

International studies showed similar deficits that included education, efficacy in delivery, subscription to outdated norms and that this was modifiable by training strategies. These studies included inpatient and outpatient mental health settings. Himelhoch et al. (2009) surveyed mental health clinicians (n=95) in four US counties who worked in public outpatient community mental health facilities to better understand barriers to smoking cessation practices. Their study reported less than half of these respondents screened for tobacco use and only one quarter felt confident in tobacco dependence treatment. These researchers believed the educational barriers were modifiable by training. Within the UK, Ratchsen et al. (2009) explored mental health professionals knowledge and attitudes to

tobacco dependence treatment and smoke-free policies by a large staff survey at 25 inpatient mental health units (n=675 staff respondents). They identified serious gaps in knowledge around tobacco dependence treatment, myths and misconceptions by staff, and smoke-free policy was not used as a health promotion opportunity across all the professional groups (which included doctors, nurses, and occupational therapists). They argued this translated to permissive smoking culture with support of smoking opportunities for patient's common practice. Half of the respondents reported no training in tobacco dependence treatment and more than half did not see this as part of their role. Further, differences were seen between professional groups with professional status a key factor in knowledge as well as their smoking status. Ratschen et al (2009) extended the views of Himmelhoch (2009) with a recommendation that comprehensive strategies which included education, training and resources needed to be implemented to address education deficit and culture, in addition to smoke-free policy to ensure that patients were consistently provided with tobacco dependence treatment.

Though doctors and nurses were the largest professional group and that tobacco dependence treatment was considered within their medical realm, other health professionals were considered to also play an important role. This was reflected in recommendations by global public health organisations such as World Health Organisation (2014) and mirrored at a local level (Department of Health, Western Australia, 2009) with statements that all health professionals have a responsibility with evidence based tobacco dependence interventions. However, studies such as Kleinfelder et al. (2013) showed deficits in knowledge and motivation for other allied health professions. Kleinfelder et al. (2013) explored the amount of tobacco dependence treatment in clinical social work programs and found only three published articles from their comprehensive review of this topic. This was despite most of the people they counselled coming from vulnerable and marginalised groups with high smoking prevalence. These authors acknowledged studies which highlighted improved smoking cessation outcomes when consistent messages were given by a range of health care professionals. However, education and training was rarely included in social work curricula and viewed as a low priority from leaders of these social work programs.

US researchers, Akpanudo et al. (2009) believed that psychologists had more expertise than other health professionals around behaviour change issues and this was relevant to tobacco dependence treatment. Specifically, their professional expertise included

training in motivational interviewing and health behaviour change interventions they used when working with patients. However, when these researchers conducted a random sample national survey of clinical psychologists (n=352) that explored depth and breadth of level of implementation, effectiveness and efficacy of tobacco dependence treatment their results were disappointing. Most (60 %) of the psychologists did not routinely follow 5 A's guidelines, and those who smoked in the past or present had less belief that they could provide tobacco dependence treatment and that it would be successful. Nicotine replacement therapy being a first line evidence based treatment, the majority (95 %) inconsistently recommended nicotine replacement therapy. These researchers concluded more work was required to improve tobacco dependence treatment consistently amongst psychologists.

There was some evidence that training was effective in improving knowledge and confidence around tobacco dependence treatment and this could translate to attitude change (Delucchi, Tajima, & Guydish, 2009). However there was some inconsistency with attitudinal shifts from education and training. A Canadian project by Herie et al. (2012) trained 741 health professionals from 15 different disciplines in a three day evidence-based tobacco dependence treatment program. The pre and post program survey identified positive attitudinal, confidence and capacity changes. They concluded that this training package positively impacted on clinical practice around tobacco dependence treatment. Further, the skill set for many of these professions was advantageous and relevant, particularly with skills around counselling and health behaviour change. In contrast, Dawes et al. (2014) results from a study that implemented training and education on tobacco dependence treatment to staff (n=56) in an alcohol and drug setting suggested increased training resulted in staff being more knowledgeable and confident but it did not improve their motivation and commitment to provide a tobacco dependence intervention.

In summary, evidence suggested that mental health professionals had education deficits, which included subscription to myths around mental illness and smoking (such as patient motivations and self-efficacy) and these were barriers to routine provision of tobacco dependence treatment and support of smoke-free policy. Gaps in the education curricula for doctors and nurses (the largest professional groups) were suggested by research. Other health professionals had relevant and advantageous skills and were important to be included. Education and training around evidence based tobacco dependence treatment guidelines was an important strategy to increase knowledge and confidence, though results from some

studies suggest increased focus on commitment in addition to education was an important strategy that could assist change towards routine tobacco dependence treatment.

Psychotropic Medication Interaction with Smoking

Clozapine and olanzapine are two common antipsychotic medications used in the treatment of psychotic illnesses such as schizophrenia and both are affected by inhaled cigarette smoke (Edward & Alderman, 2013). The inhaled smoke from a cigarette contains polycyclic aromatic hydrocarbons which induce the CYP1A2 hepatic enzyme and this affects the metabolism of a range of medications including the regularly prescribed psychiatric medications, clozapine and olanzapine. This impact on drug metabolism affects the benefit of standard doses of these medications and an increased dose is required to gain therapeutic levels when a person smokes as few as seven to twelve cigarettes per day (Andrade, 2012; Lowe & Ackman, 2010).

These medications have multiple adverse health side effects such as haematological, cardiovascular and metabolic syndrome pathology. A person who smoked cigarettes requires higher doses of the medication to gain therapeutic benefits than a non-smoker, and thus is at greater risk of adverse health side effects. Further, if they reduced their cigarette consumption or quit smoking, the dosage of medication requires reduction to prevent toxicity side-effects (Edward & Alderman, 2013). These are important considerations for a person who smoked when admitted into a smoke-free facility for treatment and indeed had been seen as reasons why there should be smoke-free exemptions for mental health patients whose mental illness was high acuity and/or on medications that were affected by their smoking.

Research however did address this interaction between smoking and commonly used psychotropic medications and clinical guidelines were published detailing recommended dose adjustments and clinical monitoring when a patient stopped smoking during a smoke-free admission to hospital. In a meta-analysis on the effects of smoking on olanzapine and clozapine Tsuda et al. (2014) clarified the effects of smoking on these medications and provided clinical guidelines to adjust the dosage in the context of smoking cessation, and also the increased dosage required by a patient who smoked. The most pertinent clinical guideline was to screen for smoking status, the patient level of dependence and increased clinical

monitoring in relation to dosage and adverse side effects from smoking cessation or reduction of cigarettes. Similarly, Andrade (2012) provided a practical psychopharmacological guide to schizophrenia and smoking. He succinctly addressed the clinical issue related to forced abstinence of smoking when being treated in a smoke-free facility and the recommended psychotropic medication adjustments to dosage. The recommendation included nicotine replacement therapy, irrespective of the antipsychotic medication prescribed because nicotine withdrawal could increase agitation related to psychosis. Of note, smoking cessation was not deemed a contraindication, rather something that required clinical management and monitoring by the treating psychiatrist. However, further studies were required to provide evidence to counter arguments related to barriers which included that high mental illness acuity and unstable psychotropic medications were contraindications to routine tobacco dependence treatment and smoke-free mental health services.

Anti-psychotic drugs were not the only prescribed medications that interacted with inhaled cigarette smoke and thus required monitoring and adjusting in the event of smoking cessation. Multiple medications that included antidepressants, anti-epilepsy, sedatives and opioids as some common examples, were noted for a range of interaction with inhaled cigarette smoke from small, moderate, large and unknown (Mendelsohn, 2015). This provided further clinical justification and importance for routine screening and treatment for tobacco dependence. This was supported in a comprehensive literature review by US nursing researchers (Schaffer, Yoon, & Zadezensky, 2009) who reported that health professionals under-appreciated the importance of screening for smoking status in order to manage dosage adjustments affected by inhaled cigarette smoke. Of particular importance were the psychiatric medications olanzapine, clozapine and respiratory medication, theophylline, all of which had a narrow therapeutic ratio. Furthermore, the rapidity of changes that could lead to toxicity, particularly in diabetics and older adults warranted careful review and monitoring.

In summary, some commonly prescribed psychotropic medications plus other general medicine prescribed medications are affected by inhaled cigarette smoke which often meant that higher doses of medication were required to gain therapeutic effect. This meant there was a greater chance of adverse side effects from the higher medication dose. Smoking cessation changed drug metabolism and if not clinically monitored and adjusted, then toxicity and adverse health events could occur from medications been maintained at the same dose and not reduced. The instability of medication related to short term smoking cessation had been

an argument for exemptions to smoke-free policy (i.e. partial ban), however, medical and pharmacological experts provided case reports and guidelines that adjusted for smoking cessation by routine and diligent pharmacological and clinical management. Systematic reviews and research trials had reported no contraindication to smoking cessation for people with a severe mental illness in both inpatient and outpatient settings. However, recommendations were often made in the context of patients being deemed stable with their mental illness and not specifically in the context of enforced abstinence of smoking that resulted from hospitalisation for acute treatment. Therefore it seems apparent that recommendations in the context of acute mental illness and enforced smoking cessation had some ambiguity.

Mental Health Patients and Physical Health Care

People living with a severe mental illness had increased morbidity and mortality and this had been identified as a serious public health issue that required priority targeting (Mental Health Commission, 2016; Happel et al., 2013). Common illnesses for this group were obesity, diabetes, respiratory illness, stroke and cardio vascular disease. In addition high risk factors of smoking, poor diet and alcohol consumption were highly prevalent (Blythe & White, 2012). Within psychiatry there had been a historical neglect of the physical health of patients with a mental illness and smoking continued to be a major factor that contributed to poorer health outcomes and disease pathology (Hirshbein, 2014). Despite this patient group having higher rates of smoking and poorer physical health, routine tobacco dependence treatment and physical health care within the mental health sector were often neglected. Both needed prioritising and were complementary, with better implementation of one likely to transfer to the other, with some research that showed support to this premise (Happell, Platania-Phung, & Scott, 2013). The importance of tobacco dependence intervention in combination with physical health care interventions were highlighted in a systematic clinical review by Stubbs et al.(2015) who suggests that promoting smoking cessation for people with severe mental illness, such as schizophrenia, should be high priority in clinical practice. Physical health care interventions in combination with tobacco dependence treatment were important because metabolic complications from medications that interacted with smoking and potential weight gain and diabetes from smoking cessation needed to be addressed to provide optimum care and metabolic risks from smoking cessation. Nationally, this

prioritising of a holistic model that included physical health and wellbeing was reflected in the New South Wales Mental Health Commission (2016) evidence guide for physical health and wellbeing for people with severe mental illness. They reported that people with severe mental illness received less thorough care in relation to physical health than those without severe mental illness. Included in this comprehensive guide was changes to clinical practice that covered programs from the inpatient and community setting in both public and private sectors. The overarching model was a Recovery framework which used principles of hope and empowerment, and was strengths based and involved person-centred care. The program and session contact times were increased with integrated individual and group sessions that were flexible and individually tailored. Key important strategies included training for mental health professionals around nutrition, exercise, tobacco dependence treatment, health literacy, and side effects from antipsychotic medication.

In support of the argument that better interventions in one area transferred to another was an Australian landmark study by Happell et al. (2013) which found that mental health nurses reported high provision of care than that previously seen in the literature. However, despite the high levels of 'often' and 'very often' reported, this was not evident in the 'always' category. Predominant areas of physical health care covered included linkage with a general medical practitioner and providing advice around smoking, exercise and diet. This study identified that increased actions in one physical care area led to an increase in other areas. Furthermore, gender, specifically, a positive female gender bias, in relation to provision of physical health care, was reported as statistically significant. This meant that female mental health nurses were more likely to provide physical health care action than male mental health nurses however further study was required to explore possible explanations for this difference. International literature also identified gaps in physical care and solutions to this problem. In a UK integrative review encompassing ten years of the literature about the role of the mental health nurse towards physical care in serious mental illness, Blythe and White (2012) identified several key themes that contributed to sub-optimal care. These included lack of training and education; role ambiguity of the nurse; poor communication between services; staff shortages and limited support from management. The recommendations from their study included future research around attitudinal barriers of mental health nurses to providing physical health care role and interventions aimed at the organisational level. One such study which endeavours to address this gap is an Australian protocol for a randomised controlled trial which was developed by Baker et al. (2011) to

provide evidence for a healthy lifestyle intervention designed to assist mental health patients lower their risk of cardiovascular disease by healthy behaviours which included smoking cessation.

Smoking cessation behavioural programs were included under the category of physical health care because smoking was identified as a predominant risk factor with high prevalence rates in people with a mental illness. Findings from the Australian national landmark survey by Happell et al. (2013) suggested that nurses who performed physical care in one area scored higher in other areas. This positive transfer of care was relevant in relation to the cross-over between provision of physical health care treatment and tobacco dependence treatment. However, tobacco dependence treatment was more than just advice, so despite optimism with the extent of mental health nurses who provided physical health care, it warranted noting that though advice to quit smoking was shown to increase quit rates, more than advice (that is, an intensified level of intervention) was often required to increase smoking cessation rates and thus affect positive health outcomes for people with a mental illness (Gilbody et al., 2015; Herie, Connolly, Voci, Dragonetti, & Selby, 2012).

In summary, physical health screening was given low priority despite the high prevalence of obesity, disease and early death from cancer in both national and international literature (Baker et al., 2011; Robson et al., 2013). Emerging best practice guidelines suggested holistic recovery focussed models of care to address this, along with comprehensive education and training for mental health professionals. Encouragingly, some research identified that there was a positive transfer of care from one area to another. This meant therefore, if mental health professionals improved physical care interventions then this would positively impact on important other interventions such as tobacco dependence treatment, which had a direct impact on physical care outcomes. However, there continued to be educational and attitudinal gaps in the depth and breadth of physical care and this also negatively impacted on routine tobacco dependence treatment provided by mental health professionals.

Theoretical Framework

The Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1973) and Trans Theoretical Model (TTM) of behaviour change (Prochaska & DiClemente, 1983) were the theoretical framework foundations for this study and were considered complementary. Both models had relevant concepts to help understand change and behaviour in relation to staff attitudes and entrenched social and cultural norms of smoking by inpatients at mental health units which impacted on staff attitudes. TRA provided a framework for attitudinal and normative influences around behaviour change, and the TTM provided a model for stages of change.

Theory of Reasoned Action (TRA)

Ajzen and Fishbeins' (1973) TRA is derived from the seminal work of Allport (1954) who discussed that attitude was a distinctive and indispensable concept in contemporary American psychology. Attitude was defined as a key determinant when looking at consistent behaviour toward an 'object'. A person's attitude toward some object made up a predisposition on their part to respond to the object in a consistently favourable or unfavourable way. Furthermore, inconsistencies could occur with prediction on certain behaviours from particular attitudinal variables. TRA extended this and included the normative factor being about the social environment and its influence of those within the particular group. Furthermore, within this normative factor (i.e., social pressure) was a group member motivation to comply with what they believed was expected. This theory postulated intentions to act were predictive of actual behaviours and this intention was a function of attitude towards the behaviour, and the subjective norms towards this behaviour played a role (O'Connell, 2008) (*Figure 1*).

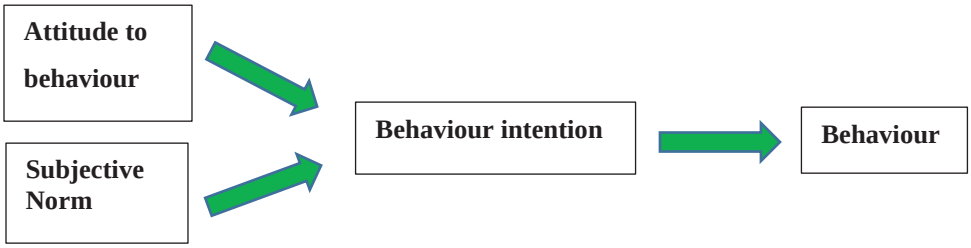


Figure 1 Theory of Reasoned Action (TRA).

The behaviour in this present study was exploring commitment to the provision of tobacco dependence treatment by mental health professionals and operating within a smoke-free policy. Attitudes towards this behaviour (tobacco dependence treatment and smoke-free policy (complete ban)) could predict intention to carry out the behaviour (provide tobacco dependence treatment and proactive behaviour around smoke-free policy). Attitude and entrenched norms were considered barriers within the mental health unit under study. The TRA framework was deemed useful to understand a complex problem around culture, norms and attitude that were barriers to tobacco dependence treatment and proactive support of smoke-free policy. An understanding of prevailing attitudes and beliefs within a local context could contribute towards strategies to shift staff culture towards recommended and evidence-based practices (i.e., mental health professionals routinely provided tobacco dependence treatment and operated within smoke-free policy).

The Trans-Theoretical Model (TTM)

The Trans-Theoretical Model of change behaviour was developed in the 1980s by Prochaska and Di Clemente (1983) and was a way to explain and assist change processes (Levesque et al., 2001). The TTM model of behaviour change was a dominant and explicit model used in research on tobacco dependence treatment and other addictive behaviours and had been applied to multiple general health behaviours (Grant & Franklin, 2007; O'Connell, 2009). Additionally, this model had been deemed useful for application with organisational change to assist leaders and managers to lower resistance of staff, increase participation and help change processes (Campbell et al., 2012; Prochaska, Prochaska & Levesque, 2001).

This model asserted that individuals could be at various stages of readiness to behaviour change and that change processes were dynamic (*Figure 2*). The first stage was *pre-contemplation* where the individual had no intention to take action in the present time frame, or that they did not see their behaviour as a problem. The second stage was *contemplation* where an individual was considering change in the future and typically had substantial ambivalence around their behaviour. The next stage was *preparation* where individuals were more committed to change their behaviour and often would have a plan of change. This stage was followed by *action* where the individual had made observable

changes to their behaviour. The final stage was *maintenance* where the individual had changed their behaviour and had more success and confidence with maintaining this change.

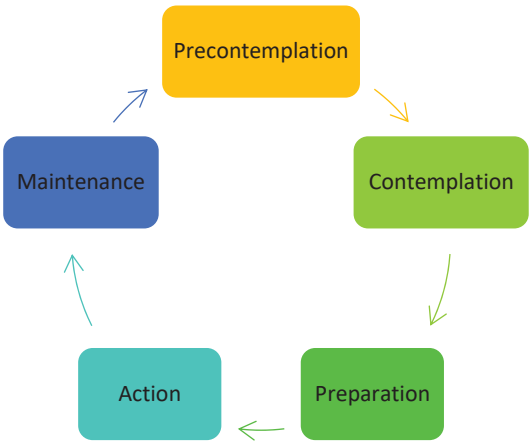


Figure 2 Trans Theoretical Model (TTM).

Di Clemente (2008) discussed that decision making was an integral part of the TTM of behaviour change and this was represented by the pros and cons around the behaviour in question. Furthermore, this could be particularly relevant to individuals who were non-compliant, unmotivated or resistant. Di Clemente's work around decision making and TTM was for the purposes of improved outcomes for patients who were seen as hard to treat by doctors because they were non-compliant with taking medications and health behaviour change (Di Clemente, 2008). From an organisational perspective, McDeavitt (2012) used TTM to articulate change management processes in the context of staff resistance that often impeded change within organisations. They suggested that meaningful change was disruptive and required significant organisational commitment to shift to an authentic change. Practical application of this model required an understanding of change processes and differing characteristics that could be seen in different stages of change, and interventions that matched the stages were more effective (Miller & Rollnick, 2013; Prochaska & Di Clemente, 1983).

Multiple studies had been published that used TTM of behaviour change and reported effectiveness and relevance of stage-targeted interventions (Bright et al., 2008; Redding et al., 2015). Ambivalence was considered a normal part of the change process and key to effect change because being stuck in ambivalence meant continued status quo in relation to behaviour change away from something difficult (McEvoy & Nathan, 2007). When

discussing ambivalence it was relevant to include the counselling technique of Motivational Interviewing (MI) developed by Miller and Rollnick (2013) which they describe as "…collaborative conversation counselling style to strengthen a person's own motivation and commitment for change by exploring and resolving ambivalence" (p12). Miller and Rollnick (2013) described TTM and MI as good, complementary conceptual fits that happened to be developed in a coinciding time frame. Furthermore, they believed TTM emphasised clinicians' practice be guided by flexibility and client's level of readiness to change, and that MI was an effective counselling style to use when a person was in pre-contemplation, contemplation or preparation stages. Having two sides of an argument would be evident in an ambivalent person, and Miller and Rollnick (2013) defined these as sustain talk (not supportive of change) and change talk (supportive of change) with ambivalence a positive and normal part of change constructs.

The TTM underpinned the development of the TTCS and related to level of commitment. A guiding principle used by Hunt et al. (2014) when they developed the TTCS was commitment-making as a significant predictor of short and long-term behaviour. This relationship of commitment and readiness was underpinned by the TTM. Furthermore, they used the work by Amrhein et al. (2003) and Lokhorst et al. (2013) who examined an empirical connection between client language of commitment and subsequent behaviour change within the framework of TTM of change behaviour and MI. Lokhorst et al. (2013) in their meta-analysis on pro-environmental change focussed on the relationship between commitment and behaviour change and found that commitment was predictive of behaviour and that underlying attitudinal constructs drive this. The TTM of behaviour change encapsulated commitment and readiness to change. Commitment was a construct that underlined attitudinal domains, and as such, attitude guided level of commitment (Zins, 2001; Lokhorst et al., 2013; Tam, Suen & Chan, 2012).

In summary, two theoretical models were used in this study as a framework to better understand staff attitude and behaviours around smoking and tobacco dependence treatment. The TRA was pertinent to behaviour change affected by attitude and normative influences (perceived social pressure) and was relevant to long-standing entrenched permissive smoking culture experienced by mental health settings both nationally and internationally. The TTM of behaviour change was a dominant and explicit theory in addictions research and this theory had been extended to multiple general health behaviours and organisational change. The

TTM postulated stages of change and readiness to change which included ambivalence and decisional balances. The different stages of change required particular strategies to be more effective and an understanding of readiness to change could be applied at an individual or organisation level and assist shifting through resistance and ambivalence. MI complemented and often accompanied the TTM of behaviour change. Both TTM of behaviour change and MI were constructs that underlined the TTCS which measured commitment and underlying attitudes to provide tobacco dependence treatment.

Method

The purpose of this study was to explore mental health professionals' attitudes towards providing treatment for tobacco dependence to inpatients operating within a completely smoke-free inpatient mental health facility. In addition to this, staff smoking status was identified. Barriers and enablers to routine tobacco treatment and operating within a smoke-free policy complete ban were explored through open-ended questions.

Sample

A convenience sample of mental health professionals employed at one inpatient mental health facility at a large metropolitan teaching hospital were selected for this study. The unit was in transition from its existing site to a new site. The old site exercised the smoking exemption for patients under the Mental Health Act (2014) and operated informally as a permissive smoking environment with many patients smoking in the outside courtyards of the unit. The newly built inpatient mental health facility comprised a twelve bed secure unit for involuntary patients; 18 bed open ward and a six bed 48 hour short stay mental health observation area. The short stay unit was located in a different part of the hospital. The 30 bed acute inpatient unit was planned to be a completely smoke-free mental health unit.

Within this department was approximately 140 clinical staff. They ranged from the disciplines of doctors, nurses, social workers, welfare officers, occupational therapists, pharmacists and clinical psychologists. For the purposes of this study, the sample was placed in three groups of doctors, nurses and allied health (which incorporated the other occupational health disciplines).

Convenience sampling had been chosen in order to use the TTCS within an easily accessible specialty group (that is an inpatient mental health setting). This type of sampling was considered suitable and appropriate for re-testing a scale or test within a group, however the voluntary participation of staff increases the probability that staff who felt strongly about the issue being studied would participate. Therefore a potential bias and favoured outcome creates limitations with generalization of findings (LoBiondo-Wood & Haber, 2014). A

purpose of the TTCS was to determine a facility's readiness to provide tobacco dependence treatment by surveying staff at that particular facility and scoring the items, hence the decision to use a purposive sample.

It had been anticipated that this research project would have commenced prior to the transition to a new mental health unit with a completely smoke- free policy. However, due to multiple factors including construction and departmental delays, this research project commenced once staff had moved into the new inpatient mental health facility.

Recruitment

Participants were recruited at the facility by internal email. The email notification included an attachment of the study's Participant Information Sheet (Appendix B) and the internet link to complete the survey (Appendix A) using SurveyMonkey ®. Consent was implied by the adult participant completing the online anonymous survey and submitting their responses.

The researcher attended various interdisciplinary staff meetings and provided a reminder and overview of the study. At these meetings staff were given a copy of the Participant Information Sheet and verbal and written information about how to access the survey electronically with SurveyMonkey ®. A student nurse was employed as a research assistant to recruit staff over a one week period in the second month of recruitment. The research assistant handed out Participant Information Sheets and also invited staff to participate. These potential participants were given the opportunity to complete the survey using the researcher's IPad™ to access SurveyMonkey ® as many nurses work on a rotating morning/evening or night shift and had limited access to a computer. This limited access prompted the strategy of providing staff with a copy of the Participant Information Sheet and an IPad™ to access SurveyMonkey ®. The multipronged approach to recruitment was chosen to potentiate a higher completion rate of the survey, knowing that this facility was an acute and busy treatment setting.

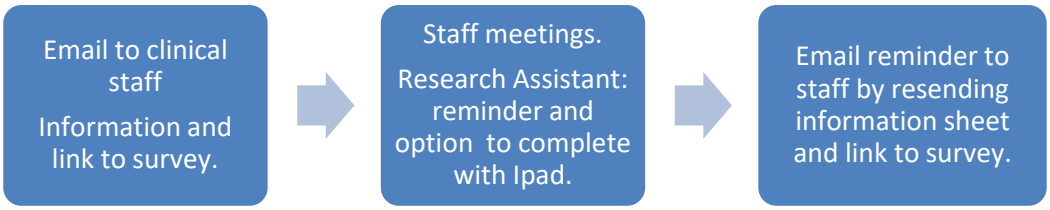


Figure 3. Flow chart of recruitment.

Study Power

Sample size for this study was calculated to be sufficiently powered based on the study by (Lemeshow et al., 1990). Specific details for each profession are provided below.

A sample size of 100 nurses would be sufficient to estimate the prevalence of smoking by nurses working in an inpatient mental health setting to be 30 per cent. This sample would provide a sample proportion to be within 10 per cent of the true population percentage and would be estimated with 95 per cent confidence.

A sample size of 20 doctors would be sufficient to estimate the prevalence of smoking of doctors working in an inpatient mental health setting to be five per cent. This sample would provide a sample proportion to be within 10 per cent of the true population percentage and would be estimated with 95 per cent confidence.

A sample size of 40 allied health professionals would be sufficient to estimate the prevalence of smoking by allied health professionals working in an inpatient mental health setting to be five per cent. This sample would provide a sample proportion to be within 10 per cent of the true population percentage and would be estimated with 95 per cent confidence.

Survey Instrument

The online survey comprised of 27 questions in four parts. Part A collected demographic information which included date of birth, gender, professional group, level of education, years of experience working in the mental health field and employment status (Appendix A).

Part B was the Tobacco Treatment Commitment Scale (TTCS), which is a brief and reliable 15 item scale measuring commitment and thus underlying attitude towards providing tobacco dependence treatment (Hunt et al., 2014). It is reported to have good content validity. Unified reliability for the final TTCS was described by Hunt and colleagues (2014) as substantial (0.975) with the reliability of the three final domains of the scale also described as substantial with 0.778, 0.836, and 0.792 respectively. Written permission was granted to use the scale in this present study (K. Richter, personal communication, August 26, 2014, Appendix C) with a copy of the questionnaire (Table 1) and scoring instructions provided (Appendix D). The TTCS's first question was related to the facilities commitment to providing tobacco dependence treatment with a 5-point Likert scale ranging from 1 (very poor) to 5 (very good). The subsequent 14 questions comprised a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). These 14 items were within three attitudinal domains: 'tobacco is less harmful than other drugs' (Effects of Tobacco); 'it's not our job' (Clinic Role); and 'tobacco treatment will harm clients' (Effects of Tobacco Treatment) (as previously described Table 1). The TTCS questions that referred to the facility were customised to the mental health inpatient setting by replacing the original term 'drug treatment program' with 'mental health facility' and the term of 'client' was replaced with 'patients'. The reference to 'court mandated treatment' was omitted. The modified TTCS used is this study is provided at Appendix A.

Part C collected information about staff smoking behaviour with questions about ever smoking and currently smoking. If a respondent was a current smoker then they had additional questions which used the Fagerstrom Test for Nicotine Dependency (FTND) developed by Fagerstrom, Heatherton and Kozlowski (1990). The FTND is a shortened version of the Fagerstrom Tolerance Questionnaire (FTQ) and psychometric properties had

been found to have moderate screening performance, sensitivity and specificity (Huang, Lin, & Wang, 2008). The FTND is the most widely used nicotine dependence screening tool seen in the research literature (Prochaska, Leek, Hall, & Hall, 2007; Richardson & Ratner, 2005) (Appendix E). The two item FTND asked: 1) How soon after waking do you smoke? (Within 5minutes; 5-30 minutes; 31-60 minutes; 60 plus minutes) and 2) How many cigarettes a day do you smoke? (<10; 11-20; 21-30; >30), was used in this study. This decision was guided by this shortened two question scale being the chosen FTND tool used in this State Health Department, and thus all services under their jurisdiction (Department of Health, Western Australia, 2011). Furthermore, the two items of the FTND as outlined above, had been found to be the most important items that reflected nicotine dependence and that when included amongst other survey questions, a shorter two-item scale was preferable to the longer six item FTND (de Leon et al., 2003).

The final section, part D collected qualitative data through two open-ended questions with standardised prompts relating to patients, staff, policy, education and training. Question one asked respondents to identify possible barriers in relation to routine tobacco dependence treatment and operating within a smoke-free policy. Question two asked respondents to identify possible enabling factors in relation to routine tobacco dependence treatment and operating within a smoke-free policy. The third item provided participants the opportunity to make further comments. These were thematically categorised into the corresponding code framed categories relating to barriers and enablers to the treatment of routine tobacco dependence and operating within smoke-free policy (Appendix A).

Analysis of Data

Data analysis comprised both quantitative and qualitative analysis in this mixed method study. Questionnaire responses were extracted from SurveyMonkey® and saved onto a password-protected computer with access to this data by the researcher and supervisors only. All data collected was electronic and anonymous.

Quantitative Data Analysis.

Quantitative data generated from demographics, TTCS, smoking status and FTND was analysed using the IBM SPSS (Version 23). Demographic data was described using frequencies, percentages, distribution, mean and standard deviation. Hypotheses were tested using statistical tests for group differences (t-tests, ANOVA, chi square or the non-parametric alternative) and relationships explored using the General Lineal Model (GLM). Final GLM model residuals were checked and met the assumption of normality (Shapiro-Wilks $p>.05$). Respondent's age was calculated based on date of survey completion minus the respondent's date of birth, to give age in years at time of survey completion.

The scoring instructions for the TTCS (K.Richter, personal communication, August 26, 2014, Appendix D) provided a final scoring scale where one represents a low commitment and five represents a high commitment to providing tobacco dependence treatment. All items except one, were negative meaning that the higher the score, the lower the commitment to provide tobacco treatment. An inverse scoring system was deemed difficult to interpret except in the game of golf. To facilitate interpretation, the final score was inverted to a poor to high commitment corresponding with numbers one to five as per the scoring instructions.

The FTND provided a final scoring scale of level of nicotine dependence (the psychoactive drug in tobacco). A score of one to two is very low dependence, three is low to moderate dependence, four is moderate dependence and five plus is high dependence.

The SurveyMonkey™ tool participants accessed was retrospectively found to have an omission in question one of the FTND. This related to how soon after waking do you have a cigarette? Response options were: within 5 minutes, 5 to 30 minutes, 31 – 60 minutes and more than 60 minutes. The option, more than 60 minutes was omitted in error. An analysis was conducted on the FTND scores from the survey data with this omission and on adjusting the respondents who scored on 31-60 minutes to hypothetically scoring in the omitted response option of more than 60 minutes. The FTND final score was the same in the two groups (100% agreement). Kappa measure of agreement was very good ($k = 1.00$, $p<.001$) and this omission was therefore deemed not to be a limitation (Table 2).The original data was used for analysis.

Table 2

Comparison of adjusted FTND score, n=9.

FTND Dependence Score	FTND original data	FTND- adjusted for omitted option of more than 60 minutes
Low	6	6
Low -Moderate	0	0
Moderate	1	1
High	2	2

Qualitative Data Analysis.

The first two questions invited respondents to write their thoughts and opinions on barriers and enablers to providing tobacco treatment dependence and operating within smoke-free policy. Both these questions were code framed in relation to patients, staff, policy, education and training. The third open-ended question asked respondents for any further comments. These responses were coded into the relevant category of barriers and enablers. The open ended survey data was analysed thematically to determine common themes across responses. Vaismoradi (2013) described this type of qualitative descriptive approach that incorporated thematic analysis as suitable for researchers who wanted to use low level interpretation as against other more complex interpretative methods such as grounded theory. The open-ended questions from this mixed method study were deemed appropriate with this choice of qualitative analysis. The number of open ended responses was deemed suitable for manual generation of codes and subsequent themes from this raw data after consultation with supervisors and independent expert in qualitative analysis.

Generation of a theme was established from grouping related codes. Such codes are short statements that provide meaning to the responses and they were grouped together when similar (Chapman et al., 2015). Thus codes and themes around barriers and enablers to provision of tobacco dependence treatment and operating within smoke-free policy were

identified and tabled. Thematic analysis method for this study was drawn from the work of Braun and Clarke (2006). They described this method as a way to identify, analyse and report patterns (themes). A two-step process for thematic coding was used. The researcher conducted the first round of coding with support from supervisors and researchers cognisant and experienced in the area of qualitative data coding. The thematic codes were then reviewed and agreed on by the supervisory team. Where codes and grouping codes into themes were difficult to categorise, group discussion was conducted until consensus was achieved.

Ethics

Written approval from the Head of the Department of Psychiatry was granted for the research candidate to conduct this study in the proposed mental health facility (Appendix F). Ethics approval to undertake this study was also obtained from the University of Notre Dame Australia (UNDA) Human Research Ethics Committee (HREC) (015121F) (Appendix G). Upon UNDA ethics approval, project approval was granted by the North Metropolitan Area Health Service Mental Health, Quality Improvement registration number 2015-21 to undertake this study.

The UNDA Participation Information Sheet (Appendix B) provided participants with information about the study. The participants were assured that confidentiality will be maintained and that no individual will be identified by name in the thesis or any subsequent report generated by this study (note survey was anonymous). Completion of the questionnaire by the participants was seen as consent.

Results

Overall this study had a 70 per cent response rate (98 respondents from approximately 140 mental health professionals). Three respondents were removed from the final data analysis due to incomplete data which was not missing at random. Two individuals only completed demographic questions and nothing else. The third individual only completed gender and date of birth. One respondent had the incorrect year of birth as 2015 and therefore age could not be calculated. Therefore the total number of respondents was reduced from 101 to 98, or 97 for any statistical analysis involving age.

The professions response rates were 13 of 25 Doctors (52.0%), 70 of 100 Nurses (70.0%) and 14 of 25 Allied Health (56.0%) completed the survey (Table 3). Of this group, there were more females (n=67, 68.4%) than males (n = 31, 31.6 %). No respondents identified themselves as indeterminate with this category omitted from further analysis involving gender.

Nine of the respondents currently smoked (9.2%), 88 respondents did not smoke (89.8%) and one respondent preferred not to say (1.0%). Forty-three respondents had smoked previously (43.9%, ever smokers) with 55 of the respondents never smoked (56.1%) (Table 3). Only nurses reported smoking, however group differences were not significant (χ=4.06, p=.448). Group differences between smoking history and professions also found no significant difference (χ=1.21, p=.557).

Participant's age ranged from 19 to 73 years 9M= 37.1 years, SD=13.2, median= 35.0). Only 97 responses were analysed for age as one participant reported an invalid date of birth. Age was not normally distributed with a positive left skewed distribution and a frequency spike around 30 years of age. Group differences with age were examined using the non-parametric alternatives. Kruskal-Wallis test found no significant group differences between age and professional groups (p=.591), while Mann-Whitney tests reported no significant group differences for gender (p=.150), smoking history (p=.142) and current smoking status (p=.176).

Table 3

Smoking status and history separated for profession and gender, N=98

Variable	Frequency	%	Doctor	Nurse	Allied Health
Gender					
Male	31	31.63	7	19	5
Female	67	68.36	6	51	10
Smoking status					
Non Smoker	88	89.78	13	61	15
Current smoker	9	9.18	0	9	0
Prefer not to say	1	1.02	0	1	0
Smoking history					
Ever smoker	43	43.88	7	31	5
Never smoked	55	56.12	6	39	10

Demographic information pertaining to the level of education completed, employment status and years of experience within mental health are outlined in Tables 4 and 5.

The majority of staff had a Bachelor Degree or higher qualifications and worked full time. One fifth of the respondents were students. These were predominantly nursing students, with no medical students participating in the survey.

Table 4

Level of education and employment status, N=98

Variable	Frequency	Percent	Doctor	Nurse	Allied Health
Level of education					
Hospital nursing dip	12	12.24	0	11	1
Technical college	1	1.02	0	0	1
Bachelor's degree	45	45.92	8	33	4
Post grad diploma	12	12.24	2	7	3
Masters or Doctorate	11	11.22	3	4	4
Student	17	17.35	0	15	2
Total	**98**	**99.99**	**13**	**70**	**15**
Employment status*					
Full time	62	63.92	12	43	7
Part time	14	14.43	1	6	7
Casual	20	20.62	0	19	1
Agency	1	1.03	0	1	0
Total	**97***	**100**	**13**	**69**	**15**

*N= 97. One respondent did not answer this question.

Table 5

Level of experience in the mental health field, N=98

Variable	Frequency	Per cent (%)	Doctors	Nurses	Allied Health
Years of experience					
Up to 3 years	44	45.36	7	34	3
3 to 5 years	13	13.40	1	7	5
5 to 10 years	17	17.53	1	12	4
> 10 years	23	23.71	4	16	3
Total	**97**	**100**	**13**	**69**	**15**

Level of Commitment Analysis TTCS

The first question of the TTCS asked respondents to rate the facilities overall commitment to providing tobacco dependence treatment. Of the respondents, most were positive (n=66), 23 responding adequate and 17 negative (*Figure 4*).

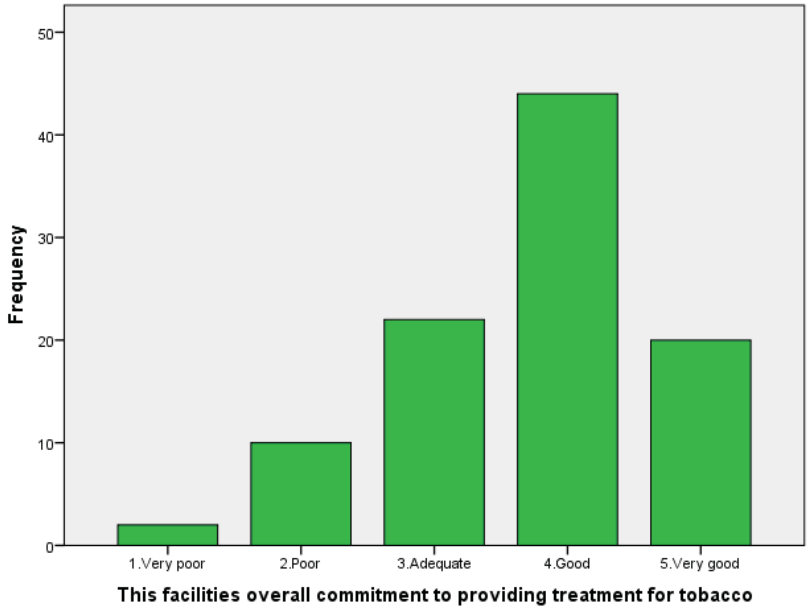


Figure 4. TTCS Q1 Facility overall commitment to provide tobacco dependence treatment, N=98.

TTCS Score

The TTCS score (Questions 2 -14) data was normally distributed. Overall the TTCS found health professionals had a mean commitment of 2.71 (SD=0.65) with scores ranging from 1.14 to 4.57 *(Figure 5).*

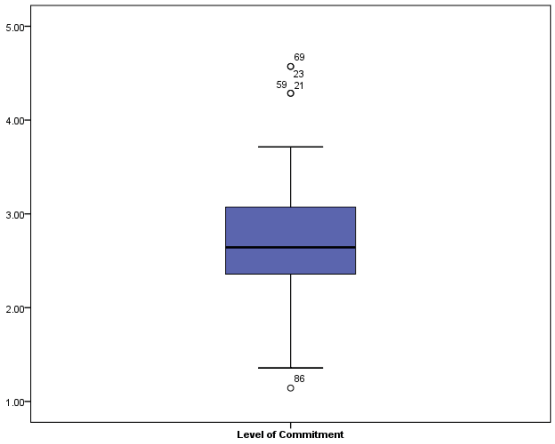


Figure 5 TTCS commitment score of combined doctors, nurses, allied health.

TTCS level of commitment score between professional groups was doctors 2.49 (SD=0.69); nurses 2.80 (SD=0.66); allied health 2.50 (SD= 0.54) with summary statistics shown in Table 6. Within the mental health facility there was no significant differences (F=2.27, *p*=.108) in commitment between the professional groups of doctors, nurses and allied health staff. The level of commitment to providing tobacco dependence treatment based on years of experience was also not significant (F=0.51, *p*=.674).

Mean commitment of TTCS score for gender was significantly different (t= -3.03, *p*=.003) with males scoring higher (n=31 M= 2.99, SD= 0.65) than females (n=67 M=2.58, SD=0.65) (*Figure 6*). Current smokers (M=3.25, SD=0.73) reported significantly higher commitment (t=2.70, *p*=.008) to non-smokers (M=2.66, SD=0.62), despite the low number of current smokers in the sample (9%) (Figure 7). The TTCS level of commitment score was not significantly different (t=1.45, *p*=.150) for smoking history i.e. ever smoker (M=2.82, SD=0.62) or never smoker (M=2.63, SD=0.67).

Table 6

TTCS commitment between professional groups, N=98

Variable	Frequency	TTCS Mean	SD	TTCS Min to Max Range
Professional group				
Doctor	13	2.49	0.68	1.14-3.64
Nurse	70	2.80	0.65	1.50-4.57
Allied Health	15	2.50	0.53	1.36-3.50
Total	98	2.71	0.65	1.14-4.57

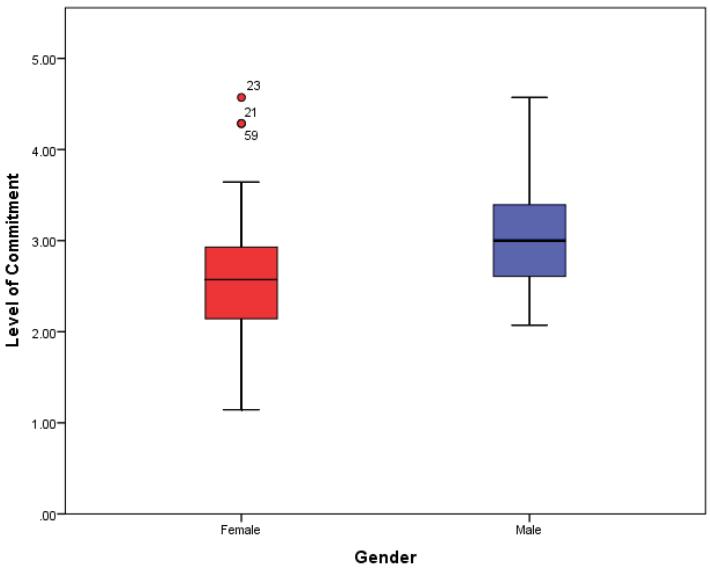


Figure 6. TTCS commitment score between females and males.

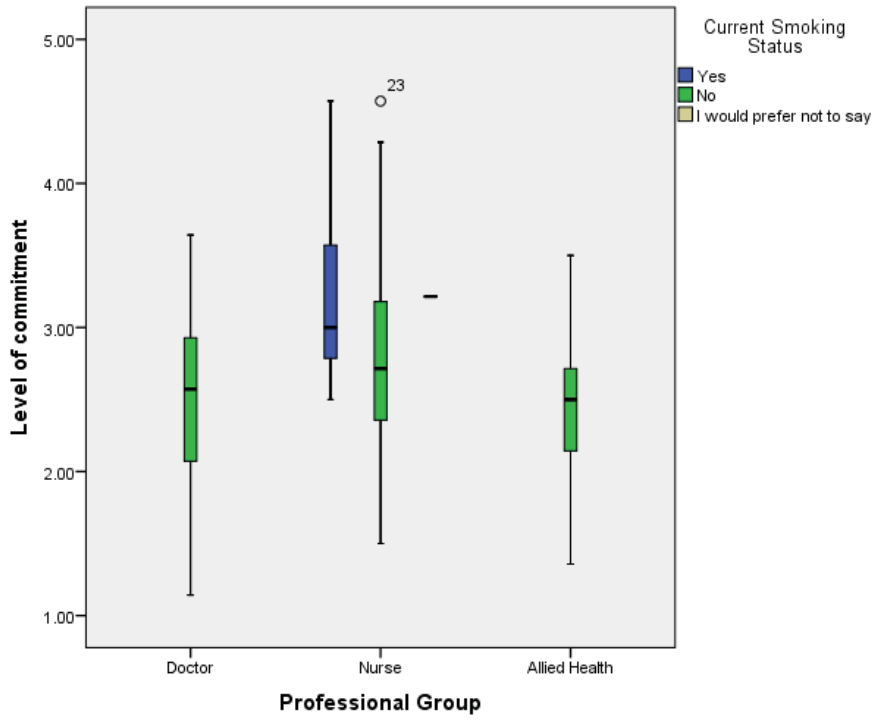


Figure 7. TTCS commitment of doctors, nurses, allied health groups and current smoking status.

A GLM explored the predictors of TTCS score and found gender and current smoking status remained significant predictors (Table 7). Hence being female decreased commitment

(compared to males), and being a current smoker increased your commitment (compared to non-smokers). Previous smoking history had no predictive effect.

Table 7

GLM TTCS (Question 2-14) Score

Variable	B estimate	Standard Error	P
Intercept	2.921	0.130	**<.001**
Gender (female)	-0.391	0.135	**.005**
Current smoker (yes)	0.539	0.230	**.021**
Smoking history (Smoked before)	0.008	0.136	.954

TTCS Domains

The TTCS has three domains, Domain 1 (Effects of Tobacco, EOT); Domain 2 (Facility Role, FR) and Domain 3 (Effects of Tobacco Treatment, EOTT). Note domain scores are not inversed like in the calculation of the TTCS final score, hence higher scores represented lower commitment. Scores for the three domains were not normally distributed therefore non-parametric chi tests were used for group comparisons of profession, gender and smoking status (Table 8). Independent Samples Median Test found no significant differences between profession and Domain 1 (p=.465), Domain 2 (p=.690) and Domain 3 (p=.630). Gender differences were found for Domain 1 (p=.044) and Domain 2 (p=.026), but not Domain 3 (p=.450) with females having higher median scores than males. People who had smoked before (ever-smokers) had higher domain scores, however this was only significant for Domain 3 (p=.032) and not Domain 1 (p=.364) or Domain 2 (p=.575). For current smoking status, no significant differences were found for Domains 1 (p=.398), Domain 2 (p=.429) and Domain 3 (p=.054).

Table 8

*Level of commitment TTCS by attitude domains**

Group	Total	Domain 1(EOT)		Domain 2 (FR)		Domain 3(EOTT)	
	Frequency	M (SD)	Median	M (SD)	Median	M (SD)	Median
Profession							
Doctors	13	3.66 (0.68)	3.80	3.36 (0.63)	3.25	2.97 (0.84)	2.80
Nurses	70	3.32 (0.81)	3.40	3.12 (0.63)	3.25	2.68 (0.75)	2.60
Allied Health	15	3.68 (0.59)	3.60	3.33 (0.50)	3.50	2.97 (0.83)	2.80
Gender							
Female	67	3.56 (0.73)	3.60	3.31 (0.57)	3.50	2.68 (0.82)	3.60
Male	31	3.12 (0.81)	3.20	2.89 (0.61)	3.00	2.49 (0.57)	3.20
Smoking history							
Yes	43	3.33 (0.78)	3.40	3.08 (0.65)	3.25	2.59 (0.67)	2.60
No	55	3.50 (0.79)	3.60	3.27 (0.57)	3.25	2.90 (0.67)	2.60
Smoking Status (n=97,1 did not respond)							
Yes	9	2.91 (1.05)	2.80	2.69 (0.71)	2.50	2.15 (0.66)	2.20
No	88	3.50 (0.74)	3.60	3.23 (0.59)	3.25	2.84 (0.75)	2.70

* Note domain scores are not inversed, hence higher scores represent lower commitment.

Domain 1 (EOT, effect of tobacco).

For domain 1 (Effect of Tobacco) the higher the score corresponded to lower commitment to tobacco treatment and corresponding level of agreement to the belief that "tobacco was less harmful than other drugs" (Hunt et al., 2013).

A GLM explored the predictors of TTCS Domain 1 score (Table 9) and found females had significantly higher scores (less commitment) in this domain compared to males (*p*=.009). There was no significant difference for current smokers (*p*=.059) or smoking history (*p*=.848).

Table 9

GLM Domain 1 (EOT, Effect of Tobacco)

Variable	B estimate	Standard Error	P
Intercept	3.175	0.159	**<.001**
Gender (female)	0.439	0.165	**.009**
Current smoker (yes)	-0.539	0.282	.059
Smoking history (Yes)	0.032	0.167	.848

Domain 2 (FR, facility role).

The higher the Domain 2 scores the less commitment to tobacco treatment. This domain represented attitudes around tobacco treatment not being the role of the facility and tobacco dependence was not their reason for admission. Hunt et al. (2013) phrased this, "it's not my job".

A GLM explored the predictors of TTCS Domain 2 (Table 10) and found females scored significantly higher (*p*=.003) hence an attitude that it was the role of the facility to treat tobacco dependence. Current smokers also scored significantly higher (*p*=.039), hence lower commitment. There was no significant difference for smoking history (*p*=.735).

Table 10

GLM Domain 2 (FR, Facility Role).

Variable	B estimate	Standard Error	P
Intercept	2.977	0.122	**<.001**
Gender (female)	0.384	0.127	**.003**
Current smoker (yes)	-0.453	0.217	**.039**
Smoking history (Yes)	-0.043	0.128	.735

Domain 3 (EOTT, effect of tobacco treatment).

Domain 3 reflected attitudes around quitting smoking would worsen anxiety and depression, treating tobacco would hinder patients' recovery, it was unfair to take tobacco away from patients, and that smoking helped them cope with stress in their lives. Hunt et al. (2013) phrased this as "tobacco treatment will harm clients".

A GLM explored the predictors of TTCS Domain 3 (Table 11) and found females scored significantly higher compared to males (p=0.29) hence more of a belief that tobacco treatment would have a negative impact on patients. Current smokers also scored significantly higher (p=0.45). There was no significant difference for smoking history (p=0.481).

Table 11

GLM Domain 3 (EOTT, Effect of Tobacco Treatment).

Variable	B estimate	Standard Error	P
Intercept	2.632	0.156	**<.001**
Gender (female)	0.357	0.161	**.029**
Current smoker (yes)	-0.560	0.275	**.045**
Smoking history (Yes)	-0.115	0.163	.481

Fagerstrom Test for Nicotine Dependence (FTND)

The FTND two questions completed by the nine nurse respondents who smoked were compared with their TTCS score. This subset of respondents (n=9) TTCS score was normally distributed (Table 12).

An ANOVA conducted between FTND groups and TTCS level of commitment score found no significant difference between FTND level of tobacco dependence scored and TTCS level of commitment score (F=0.456, *p*=0.654). However, the number of participants who identified as smokers was nine from a total sample of 98 respondents which is statistically underpowered. The FTND scores are outlined in Table 13.

Table 12

FTND scored, n=9

FTND Scored	Frequency FTND	%	Mean TTCS (SD)	SD
Low	6	66.66	3.42	0.86
Low-Moderate	0			
Moderate	1	11.11	2.56	0.00
High	2	22.22	2.96	0.15

Table 13

FTND Question 1 & 2, n=9

FTND Question	Smokers	%	TTCS Mean	SD
Frequency of smoking				
Within 5 minutes	3	33.3	2.90	0.15
5-30 minutes	1	11.1	4.57	0.00
31-60 minutes	5	55.6	3.20	0.73
60+ minutes	0			
Total	9	100.0		
Number of Cigarettes				
10 or less	5	55.6	3.25	0.84
11-20	2	22.2	3.53	1.06
21-30	2	22.2	2.96	0.15
31 or more	0			
Total	9	100.0		

Qualitative Results

The qualitative component of the survey was three open-ended questions in part D of the survey (Appendix A) and these were thematically analysed and categorised as barriers and enablers to routine tobacco dependence treatment and operating within smoke-free policy.

Barriers to Routine Tobacco Dependence Treatment and Completely Smoke-free Policy.

The first open-ended question had 95 registered responses. Responses either left blank or which had “no comment” were excluded, which left 76 (80%) written responses. This question asked respondents what barriers they identified in relation to providing tobacco dependence treatment and operating within smoke-free policy and was code framed in relation to patients, staff, education and policy.

Comments in relation to patients were substantial with dominant and most prolific themes related to patients' choice and level of mental health acuity made smoking cessation difficult. Descriptive words such as patient readiness, willingness, preference, rights were themed under the category choice. Participant's comments that described increased aggression, agitation, difficult behaviours, too unwell, increased distress from enforced abstinence were themed under mental health acuity.

Other themes identified were in relation to compliance; staff smoking; staff attitudes; social norms of smoking and education deficits. Several comments were about the need for community support and follow up for smoking and that smoking cessation support and focus should be in the community rather than an acute inpatient setting. Some respondents commented that short length of stay made quitting inappropriate and that patients might not want an admission because they could not smoke (Table 14).

Table 14

Response themes and codes with frequency of barriers to routine tobacco dependence and operating within smoke-free policy (complete ban), n=76

Themes & Codes (n)	n	Quotes
1.Mental health acuity Patient too unwell (9) Increased aggression (10) Agitated, difficult behaviour(8) Increased distress to Quit(7)	34	"To deny patients access to cigarettes and a smoking area when they cannot be counselled and are refusing NRT is not ethical" (P95). "Yes patients get angry towards staff if not allowed to smoke" (P55). "Ninety per cent of the aggression directed at staff on the locked ward has been related to smoke-free policy" (P52). "When patients are unwell we remove enough of their rights already but to remove their free will to smoke as well we are causing more problems than we are solving…" (P35).

Themes & Codes (n)	n	Quotes
		"Not being able to smoke is the biggest cause of patient distress on admission." (P44). "Some are so disorganised, that rational, reality based discussions around smoking are impossible." (P95). "Trying to quit smoking while also coming off drugs and trying to get well can be too much at once for the client" (P17). "I think it is more important to prioritise and treat the presenting mental health problems than tobacco use" (P37).
2.Patient Choice Choice (15) Rights (4) Willingness (5) Readiness (5)	29	"Most patients report that they do not intend to cease smoking" (P6). "A number of patients are resistant to the treatment of their tobacco dependence" (P28). "Patients choice and freedom to make choices" (P64). "Smoking is a personal choice and a right, unless people are involuntary there is no way we can force them to have treatment" (P27). "Tobacco smoking is a legal right" (P80).
3.Compliance Can't be forced (7) Lack of consistency(6) Non-compliance staff (6) Refuse (4) Smoke in room/smoke-free areas (4)	26	"Many psychiatric patients who will never adhere to such a draconian approach. Many smoke in their bedroom putting staff and patients at risk of fire" (P33). "People will continue to smoke in smoke-free areas. It is already happening" (P16).

Themes & Codes (n)	n	Quotes
4. Staff attitudes	13	"Some staff strongly disagree with this policy and will provide for patients to smoke" (P61). "Staff used to old ways" P88). "Staff resistance" (P84). "Personal opinions which are opposed to the evidence about the role of tobacco in mental illness may make it difficult" (P14). "There are too many staff with conflicting views" (P39). "No one really cares about smoking" (P71).
5.Staff smoking	7	"Staff who have been smoking for years, as it is not easy to cut out a habit" (P5). "It would be difficult to take away tobacco. A lot of staff smoke. Sometimes it is all that can deescalate a patient" (P92).
6.Education and resource deficits	7	"Lack of understanding and knowledge of staff" (P91). "Staff not sure what to do around tobacco treatment" (P71). "Other smoking cessation therapies, aside from NRT are not readily available" (P24).
7.Social norm of smoking	3	"Patients memories of the old policies which did not have smoke-free policy" (P68). "A lot of socialisation is centred around going for a cigarette" (P24). "Taking a smoke outside the ward is an opportunity to get outside, feel relaxed, and engage with other patients. I believe this is one of the most therapeutic aspects of being in hospital" (P95).

Themes & Codes (n)	n	Quotes
		"High rates of patients smoke so this makes it hard" (P86). "Many patients report that they smoke a lot more while they are in hospital" (P25).

Additional barriers were identified in staff responses to open-ended question two (enablers) and question three (other comments). For example, many staff stated that an enabler was to have a smoke-free policy (partial ban). However, this is actually an attitudinal barrier to operating within smoke-free policy (complete ban) so was code-framed under barrier.

Table 15

Themes of barriers from combined three open-ended questions, N=187

Barrier Themes	n
1.Mental Health Acuity	38
2.Patient choice	36
3.Apply Smoke free Policy exemption	32
4.Compliance	26
5.Staff attitudes	17
6.Staff smoking	7
7.Social norm smoking	7

Enablers to Routine Tobacco Dependence Treatment and Completely Smoke-free Policy.

The second open-ended question had 95 registered responses. Responses either left blank or which had "no comment" were excluded, which left 68 written responses (72%) that were thematically analysed. This question asked respondents to comment on factors that enabled the routine treatment of tobacco dependence and to operate within a smoke-free policy. This question was code framed in relation to patients; staff; policy and education/training.

The predominant theme was an opinion by staff that the Smoke-free policy exemption should be applied at this facility. The second major theme was the need for education, training and resources to both patients and staff around tobacco dependence treatment. Minor themes were for dedicated tobacco nurses, community follow up and staff to have support to quit smoking (Table 16).

Table 16

Themes and codes of enablers to routine tobacco dependence treatment and operating within a smoke-free policy (complete ban), n=68

Themes & Codes (n)	**n**	**Quotes**
1.Smoke-free Policy Apply exemption (17)	17	"This will only work if patients are willing to participate in NRT" (P73). "Smoke free environment is not really feasible with an open ward" (P4). "Provide for a smoking area away from the ward for patients to smoke' (P61). "I do not believe a smoke-free policy is realistic. Of course treatment of tobacco dependence should be

Themes & Codes (n)	**n**	**Quotes**
		offered, but it is not possible to treat an addiction when the patient does not want it to be treated" (P95). "There is a big problem making patients angry and some smoke in their room" (P55). "Applying exemption for involuntary patients' (P94). "Not in favour of smoke-free policy as it places unnecessary pressure on already overburdened, overworked staff. Also places pressure on patients at their most vulnerable time" (P61).
2.Education & Training Resources	26	"More education for staff and patients" (P13). "More systematic use of NRT to all patients" (P25). "Make it easier for nurses to start NRT with all their patients" (P65). "More education and access to information" (P49). "Global education would be essential in implementing the treatment of tobacco dependence" (P28).
3.Smoke-free Policy Complete ban(2) Consistency(5)	7	"Consistent message to all patients and reinforced across all sites" (P68). "Clear guidance and policies regarding this site and smoking" (P70).
4.Dedicated Tobacco Nurses	4	"Good input from drug/alcohol liaison nurses" (P7).

The staff comments in the open-ended question two of enablers that referred to having a smoke-free policy (partial ban) were barriers and thus omitted from enabler themes (Table 17).

Table 17

Themes from combined enablers and other comments (barrier themes omitted)

Enabler themes	n
1.Education and Training resources	29
2.Smoke free policy (Complete)	12
3.Tobacco specialist nurses	5
4.Communty mental health focus	3

Open-ended Question Other Comments.

The final open-ended question invited participants to make any further comments. This question had 95 registered responses. Responses that were left blank or had "no comment" were excluded which left 43 responses that were thematically analysed. Predominantly, responses related to an opinion for the smoke-free policy (partial ban) which were deemed barriers. The remaining themes were evenly spread across patient choice, in favour of smoke-free policy (complete ban) and consistent policy, mental health acuity and social norm of smoking. Further identified themes were more education and resources, tobacco nurses, community mental health focus and staff attitudes (Table 18).

Table 18

Response themes and frequency from open-ended question of any other comments, n=43

Themes & Codes (n)	n	Quotes
1.Smoke-free Policy (Partial) (15)	15	"While support to quit is vital, it is not sustainable to have the locked ward non-smoking" (P4). "I do not believe a smoke-free policy is realistic. Of course tobacco dependence should be offered to all patients, but it is not possible to treat an addiction when the patient does not want it treated" (P95).
2.Patient Choice: Rights(5) Readiness(2)	7	"I feel that patient and staff safety and rights should be maintained wherever possible, and the priority of the admission. ...is to treat the mental illness..." (P82). "This will only work if the patients are willing to participate in NRT" (P41).
3.Smoke-free Policy: Ban(2) Consistency(3)	5	"Must have a clear policy and be applied 100%." (P64). "A state wide congruent policy" (P82).
4.Mental Health Acuity: Increased distress (4)	4	"I believe that enforcing the smoke-free policy puts staff and patients at risk" (P93). "Allow the patients to smoke when stressed" (P59).

Themes & Codes (n)	n	Quotes
5.Social norm/relaxing to smoke (4)	4	"Many patients report that they smoke a lot while in hospital than they otherwise would in the community, this is pretty concerning" (P25).
6.Education/resources (3)	3	"Up to date education" (P88). "Available resources to patients and staff as well as counselling skills" (P83).
7.Staff attitudes (3)	3	"It is not a nurse's job to treat tobacco dependence" (P60). "Not in favour of a non-smoking policy as it places unnecessary pressure on already overburdened, overworked staff" (P61).
8.Tobacco Nurses (1)	1	"Dedicated tobacco nurses" (P44).
9.Community MH focus on Quit Support (3)	3	"More support to the patients and once they are discharged" (P86). "Focus more on tobacco dependence in community Mental Health clinics when patient's mental state is stable" (P24).

Discussion

This mixed method study is the first known study to test the Tobacco Treatment Commitment Scale (TTCS) with mental health professionals from an acute inpatient mental health setting. The TTCS level of commitment and relationship with smoking status of staff in addition to barriers and enablers to tobacco dependence treatment and operating within a smoke-free policy (compete ban) were also explored. The TTCS had been validated and tested in the alcohol and drug sector but not tested within an acute inpatient mental health setting. Historically both sectors shared similar themes around high rates of patients who smoked and consequently poorer health and increased morbidity. Despite this, both alcohol and drug and mental health services were reported to neglect routine tobacco dependence treatment, struggled to implement smoke-free policy and reported high rates of staff who smoked.

The present study findings supported the null hypothesis that the level of commitment to provide tobacco dependence (TTCS score) is no different between doctors, nurses and allied health professionals. The central findings suggested that the mid-range scores across the doctors, nurses and allied health indicated ambivalence (McEvoy & Nathan, 2007). The present study explored staff smoking status and relationship to level of commitment to tobacco dependence treatment. The study findings supported the hypothesis that there is a relationship between smoking and level of commitment to tobacco dependence treatment. The study findings suggested that current smokers had higher commitment than non-smokers and ever-smokers. This result was inconsistent with both national and international studies which reported that staff who smoked were less supportive and had more negative attitudes toward provision of tobacco dependence treatment (Connolly, Floyd, Forrest, & Marshall, 2012; Dwyer et al., 2009; Happell et al., 2013; Hehir et al., 2013). It should be noted that in the present study, the sample size of current smokers was small and there was a suggested inconsistency between the low smoking prevalence in demographic data and higher smoking rate of staff suggested by comments in the qualitative data. Qualitative data suggest staff smoking was more prevalent and had greater negative impact in relation to attitude and culture, than number of smokers suggested. Overall, the majority of respondents in this study were female, non-smokers, with nearly half of the respondents having smoked previously. Unexpectedly, the present findings suggested that male respondents had higher commitment to tobacco dependence treatment than females. However, this varied for TTCS attitude

domains and when relationship between gender and smoking status was explored. Gender differences in relation to tobacco dependence treatment and smoke-free policy in mental health were not identified in the research literature. However being female has been shown to predict the provision of physical health care practices to their patients (Happell et al., 2013) suggested some evidence of gender as a influencing factor. This had potential relevance and importance in relation to tobacco dependence treatment, because tobacco dependence treatment is an aspect of physical healthcare practice and smoking is a major contributor to poorer health and chronic illness of patients with a mental illness. Both physical health care interventions and tobacco dependence treatment share similarities of neglect with implementation by mental health professionals (Robson, Haddad, Gray, & Gournay, 2012). Though male mental health professionals scored statistically higher commitment than female staff in the current study, the overall mid-range results suggest ambivalence across gender, although, in relation to TTM, males may have more reasons for than against with their decisional balance, and thus are more along the continuum of stage of change i.e. to provide tobacco dependence treatment.

Open-ended questions explored barriers and enablers to routine tobacco dependence treatment and operating within smoke-free policy (complete ban). Staff opinions were thematically coded and the emerging themes shared similarities to other studies (Banham et al., 2008; McAllister et al., 2016; Ratschen et al., 2009 ;Sheals, Tombor, McNeill, & Shahab, 2016). These included overarching barrier themes of cultural norms of permissive smoking in a mental health service, lack of staff education and training, mental health patients' rights, choice, acuity and smoking as a coping strategy and barrier to a mental health service being smoke-free (complete ban). Other barrier themes identified in this study included the negative impact of smoking cessation on certain psychotropic medications and staff opinion for a smoke-free policy (partial ban) as against the smoke-free policy (complete ban). The enabler themes for this study were consistent with previous literature (Rowley et al., 2016; Stockings et al., 2014) around smoke-free policy and routine tobacco dependence treatment and included prioritising more resources and training for staff on tobacco dependence treatment, smoke-free policy and practice challenges to be completely smoke-free, and the need for improving inpatient and post-discharge support for patients who smoked.

The components of this mixed method study are discussed in the following order: commitment as measured by the TTCS and the three attitude domains of the TTCS;

commitment in relation to smoking status of staff, commitment and gender, barriers and enablers to provide routine tobacco dependence treatment and operate within smoke-free policy (complete ban). Exploring the combined quantitative TTCS scores and qualitative findings enabled a deeper understanding of attitudes, commitment, barriers and enablers to routine tobacco dependence treatment and smoke-free policy at an acute inpatient mental health unit. These findings contributed to the body of knowledge around attitude and barriers to treating tobacco dependence and smoke-free policy in an acute inpatient mental health setting. Similarities with national and international studies related to attitudes towards routine tobacco dependence treatment and smoke-free policy (complete ban) were seen in the present study. This study contributes at a local level acute inpatient mental health unit context which assists a better understanding of barriers identified from staff opinion and level of commitment from the TTCS. This could have a practical usefulness with policy and practice, particularly education and training strategies for staff to effect positive change around attitude and pro-smoking culture. The present study's limitations, implications, conclusion and recommendation completed this thesis.

TTCS and Level of Commitment

The first question of the TTCS elicited rating on the facility's overall commitment to treat tobacco dependence. In this study the findings suggested that the majority of respondents' believed the service had reasonable to strong commitment to provide tobacco dependence treatment and this was the same amongst the different health professionals. This strong level of commitment could be categorised into TTM, action stage of change where overt modifications to change would be happening (Prochaska, 2008) and that the service is actively engaging in the new structure i.e. routine provision tobacco dependence treatment (Campbell et al., 2012). This contrasted with the overall participant TTCS which was low to mid-range and therefore ambivalent. This implied ambivalence from TTCS mid-range score placed staff in TTM stages of change, contemplative stage which is characterised by an intention to change in the future but having an equilibrium of reasons for and against this change (Prochaska, 2008). This can be argued as not necessarily negative, rather, a normal part of change and that which strategies could assist movement towards behaviour change (Miller & Rollnick, 2013).

The gap between high commitment given to the overall service and lower commitment of staff is noteworthy. This gap in commitment level of the service and staff identifies a possible barrier and resistance to change in relation to provision of tobacco dependence treatment. Positively it identified that the service is attempting change in relation to tobacco dependence treatment. Negatively it identifies a lack of commitment of staff in relation to provision tobacco dependence treatment. Hunt et al. (2013) envisaged the TTCS as a tool to assist a service to understand their level of readiness and then use this to implement appropriate strategies to assist change.

To assist change in context of routine provision tobacco dependence it is argued that change requires education and training strategies in addition to other comprehensive strategies, such as organisational commitment, collaboration and planning, change champions and smoke-free policy (complete ban). This is because the barriers were complex and overlapping in relation to both provision routine tobacco dependence treatment and smoke-free policy. For example the recent UK study by Sohal et al. (2016) and Australian study by Rowley et al. (2016) acknowledge the complexity and challenge around mental health services changing permissive smoking culture. Both strongly argue for comprehensive strategies in order to assist mental health services to be completely smoke-free and provide tobacco dependence treatment. In a survey of mental health professionals (n=506) in the Netherlands, Blankers et al. (2016) found that generally the staff supported their patients to quit smoking and felt capable to provide tobacco dependence treatment. However, nearly half reported no experience in helping a patient quit smoking and only a minority of staff intended to do so in the near future. Overall findings from this study were that attitudes and staff perception that they could perform a behaviour (i.e. tobacco dependence treatment) were the main barriers and required direct strategy to effect change.

Studies, such as above that provide solutions to support effective change away from entrenched pro-smoking culture and towards routine tobacco dependence treatment share common ground in discussing complexities that negatively impact on change which is historical, longstanding and debated for many years, as evidenced by earlier studies (McNally et al., 2006; Walsh, Bowman, Tzelepis, & Lecathelinais, 2005).

In summary, the overall rating of the facility's commitment to tobacco treatment (reasonable to strong) when juxtaposed to the respondents TTCS score (ambivalent)

suggested differences with level of commitment between service and clinical staff level. The mid-range TTCS score was similar across the three different groups of doctors, nurses and allied health supports the research null hypothesis that there was no difference in level of commitment between groups. The present study supports the TTCS as a useful tool in understanding the level of commitment to routine tobacco dependence and shows potential relevance for an inpatient mental health unit. Earlier and contemporary studies support strategies for change to provision tobacco dependence treatment and smoke-free services were comprehensive. The present study supports the use of a tool such as the TTCS to determine readiness of staff to provide tobacco dependence treatment, but is one part of a package required to assist change in relation to provision tobacco dependence treatment.

TTCS Attitude Domains

This section discusses the three attitude domains that underlie the TTCS and differences between gender and smoking status in relation to these three TTCS attitudinal domains and matching qualitative data. This matching of TTCS and qualitative data was for the purpose of highlighting similarities and thus provide further support to the usefulness and relevance of the TTCS within a mental health setting. All of the attitudinal domains of the TTCS were reflected to varying frequency in the qualitative data. The attitude domains in the TTCS and qualitative attitudinal themes which emerged from staff responses were compared to the recent systematic review and meta-analysis conducted by Sheals et al. (2016) to highlight continued evidence of these barriers to routine tobacco dependence treatment and smoke-free policy implementation in mental health settings. Sheals et al. (2016) found continuing evidence that a significant number of mental health professionals held negative attitudes and misconceptions that undermined tobacco dependence treatment. The present study found variation in the TTCS scores for each domain with some reaching statistical significance. This suggests ambivalence was more related to particular domains over others, and this varied between gender and smoking status. The statistical significant results from TTCS individual domain and relationship to gender and smoking status still reflected overall results where males and current smokers scored higher TTCS commitment to tobacco dependence treatment.

Effect of Tobacco ("Tobacco is less harmful than other drugs").

TTCS Domain 1: 'Tobacco was less harmful than other drugs,' captured attitudes relating to smoking being a better option than other drugs, it caused few problems and it didn't affect a patient's ability to function. The present study findings suggested that females across the three professions were more likely to agree with this attitude domain, though scores were still mid-range. Qualitative data examples that showed similarities to TTCS domain are outlined below:

> "Trying to quit while coming off other drugs and trying to get well can be too much at once for the client" (P17).
> "Patient not wanting to be treated for tobacco dependence…after all it is the least of their problems" (P9).
> "…from experience tobacco is a strong habit and not always related to addiction. I can calm people's anxiety and distress and a way to relax" (P27).

Domain one related to degrees of harm and as such smoking was less harmful than other drugs and was mentioned infrequently in written responses. This lesser theme was similarly reported by Sheals et al. (2016) and mentioned only in the context as an attitude barrier in an inpatient alcohol and drug setting.

Facility Role ("It's not my job").

Domain two represented beliefs that mental health services should not treat tobacco dependence because this was not why patients entered treatment. Rather, mental health services should focus on treating the mental illness. Gender (female) had statistically significant higher TTCS score in domain two associated with more subscription to the belief that mental health services should not treat tobacco dependence because it was not why they entered treatment. Though scores were still in the mid-range this possibly suggests ambivalence being driven by this attitude domain more than the other two domains. Stockings (2014) findings from a systematic review suggests that a smoke-free hospitalisation for mental health patients had potential benefits in increasing patients motivation to quit and staying abstinent up to 12 months post-discharge. Therefore, though

smoking cessation was not the reason for admission, the admission was an opportunity to address smoking behaviours, which were a continued and significant problem for this patient group. Inpatient mental health hospitalisation is one-arm of mental health services that included community services. Mental health and tobacco dependence experts such as Gilbody (2015) and Stockings (2011) argue for an integrated approach where both inpatient and community mental health services provide routine tobacco dependence treatment and this integrated approach is important to shift the entrenched culture of pro-smoking.

Qualitative data included comments that it was not the job of the mental health service, which corresponded to domain two, i.e. tobacco dependence was not why patients were admitted, so therefore should not be treated. Though these were less frequent in the qualitative data they were reported as a barrier in a systematic review conducted by Lawn and Campion (2013) who explored barriers to achieving smoke-free mental health services. Some examples from the present study which reflected domain two attitude theme (tobacco dependence was not why they were in treatment, so shouldn't be treated) are outlined below:

> "I think it is more important to prioritise and treat the presenting mental health problem" (P37).
> "It's not a nurse's role to treat tobacco dependence" (P60).
> "Mental Health services could focus more on tobacco dependence in the community, when patient's mental state is stable instead of inpatient units where patients are acutely unwell and under a lot of stress" (P24).
> "Smoking cessation is important to address as a health professional, for patient's long term health. However, it should be addressed pragmatically and using clinical judgement as to whether this is currently relevant/a priority" (P31).

The attitudinal barrier relating to tobacco dependence treatment not being the role of the service and not the reason for admission were identified by Sheals et al. (2016) systematic review as a minor theme and this was similar in the present study's findings.

Effect of Tobacco Treatment ("Tobacco treatment will harm clients").

Domain three represents attitudes that tobacco treatment will harm patients, it was unfair to take cigarettes away from them during an admission and smoking helped patients

cope. Staff who were ever smokers had significantly higher scores in this domain meaning that they subscribed more to this attitude domain of tobacco treatment will harm clients. Though scores were still mid-range, in relation to ever smokers, this attitudinal domain possibly impacted on level of commitment and ambivalence more than the other domains. Nearly half of the staff who completed the survey were ever smokers. Qualitative data had similar attitudinal comments to domain three and this was a major theme and related to patient choice and patient rights and the enforced compliance to stop smoking when admitted to a mental health service operating from a smoke-free policy (complete ban).

> "I feel that denying people who smoke having breaks to smoke, in most cases cause more trauma as they are unwell and feeling unsafe and then we take away their right to smoke which could be the only control they feel they have" (P11).
> "Patients may feel bullied into giving up if this becomes policy as staff will feel more pressure to control it" (P36).
> "Not being able to smoke is the biggest cause of patient distress on admission" (P44).
> "Whilst they (patients) are in hospital they are made to quit. This can cause extra stress causing their mental health to deteriorate further" (P47).

In summary, the three TTCS attitudinal domains were reflected to varying frequency in the written responses of staff. Prevalence of attitude themes, from least to most in the TTCS were domain one ('tobacco is less harmful than other drugs'), domain two ('it's not my job') and domain three ('tobacco treatment will harm clients') respectively. This frequency of minor to major themes of TTCS attitudinal domain was similarly found in the qualitative data of the present study and similarly when compared to the recent systematic review and meta-analysis by (Sheals et al., 2016) of mental health professionals' attitudes towards tobacco dependence treatment. Although the present study findings cannot be generalised more broadly, they do reflect what has been found in other studies in inpatient mental health settings.

Staff Smoking and TTCS Level of Commitment

In this study, despite the low sample of self-identified current smokers, they scored statistically significantly higher than non-smokers and ever-smokers in their level of commitment to provide tobacco treatment. These findings support the research hypothesis

that there is a relationship between staff smoking status and TTCS level of commitment. However, the TTCS scores which suggest that smokers have higher commitment to provide tobacco dependence treatment are in contrast to studies that identified staff smoking as a barrier to provision tobacco dependence treatment(Glover et al., 2014; Lawn & Campion, 2013; Zabeen et al., 2015).

Within the literature it is often reported that health professionals inconsistently offer tobacco dependence treatment (George, Taylor, Hong et al., 2010) and that staff who smoked were a barrier (Blankers et al., 2016; Kerr et al., 2013). Health professionals are well placed to role model healthy behaviour (Miller, 2003; Pusca, 2005; Tremblay, 2009; WHO, 2014). Specifically in mental health services, mental health professionals who smoked were still reported as a barrier to the provision of routine tobacco dependence treatment (Glover, 2014; Zabeen et al., 2015).

This inconsistency in which current smokers in this study had higher commitment to provide tobacco dependence treatment warrants discussion. Firstly, though the current smokers' commitment scores were statistically significant they were similarly mid-range to other respondents' and thus possibly less clinically different. Secondly, the qualitative themes that emerged suggested staff who smoked were more prevalent than identified by survey demographics, and that staff smoking was an attitudinal barrier. It could further be that some staff had only recently quit smoking with the transition to a complete ban facility therefore identified themselves as ever-smokers.

Mental health nurses were reported as having higher smoking prevalence than other health professional groups and general population (Smith, 2007; Sarna et al., 2010). Mental health nurses having higher smoking rates as compared to the other health professional groups of doctors and allied health was supported in the present study, which found the nine staff current smokers to be all nurses and that the doctors and allied health were non-smokers. The low sample number of current smokers meant cautious interpretation of results was warranted. The nine percent prevalence of current smokers (all nurses) in the present study however is below smoking prevalence rates lower than general population smoking rates of 15 percent (Rowley et al., 2016) and lower than rates for mental health nurses reported in studies from the UK and US and which ranged from 11 to 21 per cent (Dickens et al., 2004 ; Robson et al., 2013 (21%); Sarna et al., 2010; Shahbazi et al., 2014 (11%) as well as

Australian studies of prevalence of 21% (Berkelmans et al. 2010) and 16% (Dwyer, 2009) The level of nicotine dependence of the nurses who smoked (as measured by the FTND) made no difference to their level of commitment to provide tobacco dependence treatment, although it should be noted the sample for current smokers was small and inferences cannot be made.

The qualitative data provided a broader exploration of opinions about routine tobacco dependence and smoke-free policy and comments included reference to staff currently smoking at the mental health unit under study and that this was a barrier. These comments as outlined below, reflect similar barrier themes reported in other studies that suggested staff smoking was a barrier because staff who smoked were less likely to offer tobacco dependence treatment or endorse smoke-free policy, that cigarettes were used as a behavioural tool and that staff smelling of smoke was a cue to trigger cravings (Lawn and Campion, 2013; Ratschen et al., 2009; Robson et al., 2013).

> "Staff who have been smoking for years, as it is not easy to cut out a habit" (P5).
> "It would be difficult to take away tobacco. A lot of staff smoke. Sometimes it is all that can de-escalate a patient" (P92).
> "Staff who smoke return to the ward smelling of smoke" (P30).
> "Staff not sure what to do around tobacco treatment, or they smoke themselves, so don't think they have a right to do something" (P71).

Possible explanations for the contrast between the small number of identified smokers (9%) and qualitative data which suggests staff smoking was more prevalent than demographics suggested requires further study. However, anecdotally some staff reported quit attempts in the lead up time to the shift to the new mental health unit. Staff who smoked potentially did not complete the survey or did not identify themselves as a smoker. The de-normalisation of smoking that had occurred since public health tobacco control measures began was argued to contribute to shame and stigma experienced by smokers (Berkelmans 2011). It was anecdotally observed in the transition to the new mental health unit that management were actively encouraging staff to quit. Further, the discreet smoking areas where staff smoked previously was not geographically viable to attend during work breaks, rather, the area where staff could now smoke during breaks was a public thoroughfare with

high visibility. These factors may have influenced study recruitment whereby staff who smoked did not participate and/or identify as smokers in the study.

Nearly half of the mental health professionals who completed the study survey were ever-smokers, and being a doctor, nurse or allied mental health professional who had smoked before had no significant difference in TTCS level of commitment score as compared to never smokers. This is a potential untapped resource to provide support to mental health inpatients who smoked. Lived experience was defined by Davidson et al. (2006) as including principles that those who have endured and overcome adversity can be sources of hope, encouragement and mentorship to others in a similar situation. Principles of lived experience and peer support were consistent with contemporary models of care in mental health (Mental Health Commission, 2016). A recent study by Dickerson et al. (2016) explored the experience of peer mentors (who worked alongside a mental health professional) to promote smoking cessation of people with a mental illness. They reported that despite some tensions between person-centred care and promoting behaviour change, the role was rewarding and an important type of service to offer mental health patients. Furthermore, this type of partnership with a mental health professional was being increasingly incorporated into mental health services. Though mental health professional's role is different to that of a peer mentor, there are similarities of both roles incorporating therapeutic use of self and empathy. Lived experience of ever-smoker status of many staff could potentially be used to increase support to patient's who smoked and could be a focus for future research.

In summary, staff who smoked showed higher commitment on the TTCS to tobacco dependence treatment which is inconsistent with national and international studies that identify staff smoking status as a barrier to tobacco dependence treatment and support of smoke-free policy (complete ban). The present study results related to staff smoking and level of commitment supports the hypothesis that there is a relationship between staff smoking status and level of commitment on the TTCS. However, the results were contrary to expectation. Smoking prevalence of mental health nurses in this study was lower than general population rates and contrasted previous studies that identified mental health nurses with high smoking rates. However the sample size of current smokers was small which warranted caution with inferences that can be drawn. Mental health nurses were the only current smokers, as compared to the other profession groups of doctors and allied health professionals which was similarly reported in the literature. The qualitative data added

contrasting depth to the quantitative demographic of smoking status and suggested higher smoking prevalence of staff. Similarly across doctors, nurses and allied health, nearly half of the staff who completed the survey identified as ever-smokers and this made no difference to level of commitment to provide tobacco dependence.

Gender, TTCS and Level of Commitment

The majority of staff in the present study were female and the level of commitment score on the TTCS between males and females showed statistical significance with males having higher commitment than females to provide tobacco dependence treatment. In the present study, the gender significance with TTCS score was similar across the three groups of doctors, nurses and allied health. Gender has not been reported in studies related to tobacco dependence treatment and smoke-free policy in mental health settings. However, as discussed previously, the gender of mental health nurses had been reported as a predictive factor in one Australian study which explored the provision of physical health care interventions by Australian mental health nurses (Happell et al., 2013). These researchers reported this factor of gender playing a role in provision of physical health care practice as unique and that more study was required to understand their findings that female mental health nurses were more likely than males to provide physical health care practices. In a Japanese study by Yada et.al. (2014) they reported that mental health nursing profession in particular had a higher ratio of male nurses to female nurses which was similar to epidemiological studies in the UK and US. Furthermore they reported a relationship between gender and engaging in certain tasks. For example, female nurses spent more time building rapport with their patients, whereas, male nurses spent more time responding to aggressive patients and tended to resist physically caring for female patients (Yada et al., 2014). The possible relationship between gender and physical health care practice and extending this relevance to tobacco dependence treatment was pertinent because asking about smoking status and providing tobacco dependence treatment was an important sub-category of physical health care practice.

The rationale to provide tobacco dependence treatment and physical health care is implicit in the role smoking plays in chronic illness and poorer physical health outcomes exist in patients with a severe mental illness (Baker et al., 2011). Furthermore, both of these areas i.e. tobacco dependence treatment and physical health care practice were neglected within

mental health service settings. Blythe and White (2012), and Happell et al. (2013) discuss social norm and culture playing a role in the lack of physical health care intervention by mental health nurses. An explanation they gave is an entrenched norm where mental health nurses' subscribe physical complaints to the patient's mental illness. This had direct parallels with the entrenched social norms and culture related to permissive smoking culture and neglect of routine tobacco dependence in mental health settings. Positively, some studies identified efficacy in one type of clinical intervention performed by health professionals transferred over to another (Happell et al., 2014; Prochaska, 2008). Therefore effective training in one area (such as physical health care intervention) could positively impact tobacco dependence treatment.

In summary, the present study findings suggest that males have a higher level of commitment to tobacco dependence treatment than females which was an unexpected finding. Gender has not been previously reported in the literature in relation to tobacco dependence treatment and smoke-free policy although a relationship between gender and physical health care provision has been shown. The rationale to link physical health care practice and tobacco dependence treatment was that smoking was a major contributor to cardiovascular disease and the poorer health outcomes for people with mental illness because they had continued high smoking prevalence rates. Both physical health care provision and tobacco dependence treatment shared themes of negative attitudes of mental health professionals, and entrenched culture and social norms of neglect that were barriers to providing this care. Studies supported the interrelatedness and transferability of one type of health care intervention would transfer to another.

Barriers

The major barrier themes identified in the open-ended questions added depth to understanding the overall ambivalence of doctors, nurses and allied health professionals identified by the mid-range TTCS scores. The major barrier themes included mental health acuity of patients, patient choice to quit smoking, and staff in favour of smoke-free policy (partial ban). Moderate themes included compliance, staff attitude as a barrier. Less frequent barrier themes included staff smoking and the social norm of smoking. The barrier themes were consistent with both UK and Australian research, particularly around themes that staff

subscribed to the false belief that smoke-free policy (complete ban) contributed to increased mental health acuity, and that the majority respondents endorsed a smoke-free policy (partial ban) (Magor-Blatch & Rugendyke, 2016; Sohal et al., 2016b).

Subthemes categorised under mental health acuity (theme 1) included patients' being too unwell, more aggressive, more agitated and distressed with the enforced compliance that accompanied smoke-free policy (complete ban). Staff comments commonly referred to increased aggression, agitation and distress of patients because they were not able to smoke. Studies suggest there is little evidence to support these beliefs related to increased aggression when a mental health facility transitioned to smoke-free policy (complete ban) (Hehir et al., 2013; Lawn & Pols, 2005; Prochaska et al., 2009). Sohal (2016) explored preparation of mental health services to be completely smoke-free across a large UK Health Trust which included four acute inpatient mental health units, found the opposite, extending opposing evidence that smoke-free (complete bans) do not increase aggression and other difficult behaviours. Specifically, aggressive incidents and increased patient agitation was frequently related to smoking-related arrangements that were an aspect of smoke-free policy partial bans. In effect the aggressive and behavioural difficulties were related to the mental health services operating smoke-free policy (partial ban) and permissive smoking culture. Examples from the present study related to staff concerns that smoke-free policy (complete ban) would lead to increased aggression are outlined below:

> "Ninety per cent of the aggression directed at staff on the locked unit has been related to smoke-free policy." (P52)
> "Patients becoming aggressive and staff being at risk of harm from patients." (P82)
> "Not being able to smoke is the biggest cause of patient distress on admission, and routinely leads to non-compliance with treatments for mental health issues." (P44)
> "Staff could be open to abuse and aggression." (P95)

In the present study staff opinion highlighted that consideration of choice was important and that patients lacked readiness to stop smoking because firstly, of their mental health acuity and secondly, that it was not why they were in treatment (theme 2). The opposition to smoke-free policy (complete ban) furthermore is similar to the recommendation of mental health advocacy groups (Mental Health Consumers and Carers Forum, 2014). Lawn (2006) suggests a complicated role existed for mental health nurses where it is argued

that they are well placed to offer tobacco dependence treatment, but in fact they do not and these were for ethical reasons related to patients' rights, choice and that the timing was inappropriate when mental health acuity was high (such as acute inpatient mental health admission). The study concluded there is a need to consider ethical decision making as one part of a multipronged strategy to challenge entrenched pro-smoking culture in mental health settings. More recently and similarly, Sheals et al. (2016) found that staff subscription to beliefs that patient choice, patient rights and patient mental health acuity were dominant reasons against smoke-free policy (complete ban) was commonly reported in the many studies reviewed. Choice, rights and readiness sub-themes were commonly expressed by staff and are categorised under patient choice (theme 2). The tension between choice, rights and enforced compliance was frequently referred to in the qualitative data.

> "Smoking is a personal decision and a right, unless people are involuntary there is no way we can enforce them to have treatment." (P27)
>
> "Locked patients should be allowed to smoke when they are acutely unwell and under the Mental Health Act."
>
> "Smoking is a personal decision and a right, unless they are involuntary there is no way we can force them to have treatment." (P27)
>
> "To deny patients access to cigarettes and a smoking area when they cannot reasonably be counselled and are refusing NRT is not ethical." (P95)

A major barrier theme that emerged was staff opinion that the mental health unit should have a smoke-free policy (partial ban) as against the smoke-free policy (complete ban) that was implemented in the new mental health unit (theme 3). These comments were placed in the enabler or other comments section by respondents, but categorised in this study as a barrier. At the new mental health unit, staff were required to follow smoke-free policy (complete ban). The Occupational, Safety and Health requirements (1996) which informed there was no safe level of exposure to environmental tobacco smoke (Department of Health Western Australia, 2009) was a major justification for this. Furthermore, the new mental health unit under study had been identified as lacking structure and space to facilitate the protocols required for a smoke-free policy (partial ban) and additionally management wanted to effect positive culture change around tobacco dependence treatment and smoke-free environments in an inpatient mental health setting. Despite this, the survey results suggest many staff had opposition to this. The belief that smoke-free policy (partial) ban should be in

place rather than completely smoke free is similar to the recommendation of mental health advocacy groups (Mental Health Consumers and Carers Forum, 2014).

The complexity is argued to be around managing the balance between choice and rights of the patient (which is an important advocacy principle for both consumer groups and mental health professionals) and providing therapeutic environments which promote smoke-free opportunities to a group who are significantly burdened morbidly and financially by high smoking rates (Lawn, 2008; Stockings et al., 2014). However, studies conducted suggest smoke-free policy (partial ban) was less effective and did not impact on changing long-standing pro-smoking culture and high smoking prevalence of mental health patients (Rowley et al., 2016; Sohal et al., 2016) . This ineffectiveness to reduce smoking rates and shift entrenched pro smoking culture in a group significantly burdened by smoking was a factor driving large public health organisations such as National Institute for Health and Care Excellence, (2013) and Cancer Council Australia (2015) to recommend mental health services implement smoke-free policy (complete ban). Extending this argument for completely smoke free facilities was a lack of cost-effectiveness based on an economic cost analysis related to smoke-free policy (partial ban) (Sohal, 2016). This economic burden on services was in addition to the erosion of therapeutic interventions and milieu that accompanies permissive smoking culture in mental health inpatient units, such as frequent incidents around smoking behaviour facilitation and clinical time and resources were costly in relation to facilitating smoking breaks (Sohal, 2016).

Other reasons to operate smoke-free policy (complete ban) and routine provision tobacco dependence treatment related to mental health professionals' opportunity for a treatable moment to address the high smoking rates of their patients and that patients were both motivated to quit and had capacity if given support (Prochaska, 2014). Stockings et al. (2014) examined the impact of smoke-free policy (complete ban) and concluded a complete ban may have a positive impact on patient motivation and beliefs to quit which extended after discharge, although further research was needed. However in the present study, staff responses were related to beliefs, lack of resources, time or feasibility. Examples from participants included:

"Not in favour of a non-smoking policy as it places unnecessary pressure on already overburdened, overworked staff. Also places extra pressure on patients at their most vulnerable time" (P51).

"What is so wrong with a small designated area for them to smoke at allocated times that do not collide with therapy groups." (P35)

"Smoke-free environment is not really feasible on an open ward." (P4)

"Allow smoking." (P51)

"I do not believe a smoke-free policy is realistic." (P95)

"Perhaps the division in opinions held by staff members should also be addressed" (P16).

A barrier theme related to patient compliance and that patients would just smoke anyway. Magor-Blatch & Rugendyke (2016) explored attitudes of Australian mental health professionals (n=98) to smoke-free policy and found similarly consistent beliefs to the present study, that staff believed patients did not want to quit and would continue to smoke in the long term, therefore, why make them stop in the short term, because patients should be able to choose when to quit. The major negative attitude barriers were similar to the present study with mental health acuity of patients was negatively affected by smoking cessation, overall staff did not agree with the smoke-free policy (complete ban) and that choice was important (Magor-Blatch and Rugendyke, 2016) . Further examples from the present study are outlined below:

"It is unrealistic to expect that patients being admitted for distress related to their mental health will willingly submit to a non-smoking environment i.e. they will just smoke anyway." (P44)

"People will continue to smoke in smoke-free areas. It's already happening" (P35).

Attitude as a barrier theme in this study (theme 5) further related to staff opinion around a culture of permissive smoking and an entrenched social norm of permissiveness and acceptance of patients smoking. Comments related to the high prevalence of smoking by patients and this had a therapeutic function and many staff subscribed to this notion that smoking was therapeutic. A Dutch study by Blankers et al. (2016), explored ways to assist mental health professionals (n=506) to provide considerably more tobacco dependence treatment to their patients with a mental illness in the context that smoking prevalence was high in this group with significant earlier death related to smoking, and yet this was not done.

This study explored the role of informal norms related to permissiveness of smoking and beliefs related to smoking being a lesser concern. Their study findings suggested that the majority of staff supported encouraging patients to quit, felt capable to provide tobacco dependence treatment, yet only a minority of staff had an intention to do so. This study concluded their results suggest social norm (i.e. perceived social pressure) had less influence than intention, and that attitude and intention were important to address in mental health service change strategies to improve tobacco dependence treatment. In relation to the present study examples related to social norm and culture included:

> "A lot of socialisation is centred around going for a smoke." (P24)
> "Culture of mental health services." (P18)
> "While I support provision of treatment for nicotine dependence, enforcing a non-smoking policy on a locked mental health unit is inappropriate….." (P6).
> "There are too many staff with conflicting views and it causes concerns." (P39)
> "A divided workplace never leads to successful intervention." (P61)
> "Staff used to old ways." (P88)

Staff smoking (theme 6) was discussed previously with respect to quantitative results. To recap, in the present study staff smoking prevalence was low, however data suggested a higher smoking prevalence ("A lot of staff smoke." (P92)); that staff smoking behaviour was a barrier in relation to providing tobacco dependence treatment ("It is difficult for some staff who smoke to offer help to patients who smoke." (P37)); negative staff role modelling ("Staff who smoke or are addicted to other drugs or who have a close loved ones who smokes may normalise nicotine addiction." (P58)); and staff returning to the workplace after smoking (Staff who smoke returning to ward smelling of smoke." (P30)).

The historical context of permissive smoking at the old mental health unit site and the changed context where the new site was completely smoke-free was referred to in the qualitative data and categorised under social norm of smoking (theme 7). In particular, these comments suggested there was a high rate of patients who smoked and this functioned as a social and therapeutic norm. Local contexts and cultural factors (i.e. individual beliefs, the influence of group norms, leadership and local specific norms) affect mental health inpatient units implementing smoke-free policies, with group norms being a notable and persistent presence (Grant et al. 2014). Further, that a general acceptance of patients smoking appeared

to be formed from the historical entrenched culture of pro smoking (Sheals et al. 2016). The qualitative data in the present study showed similar themes (i.e. social norm and entrenched culture) and provided local context thoughts and opinions of staff relating to tobacco dependence treatment and smoke-free policy (complete ban). For example:

> "Continues to seem a very hard issue to work with…..voluntary patients can go out and smoke don't tend to engage in any smoke support. They smoke so they can. Opportunity missed" (P86).
> "High rates of patients smoke, so this makes it hard. Staff don't have time or aren't educated." (P86)
> "Other smoking cessation therapies aside from nicotine replacement therapy are not readily available, nor always suitable. Smoking cessation would be difficult in an inpatient unit, as patients are around others who smoke, and a lot of socialisation is centred around going for a cigarette." (P24)
> "Patient's memories of the old policies which did not have a smoke-free policy." (P67)

In summary, overall barriers from the qualitative data suggested that the majority of staff who completed the survey advocated for smoke-free policy (partial ban) and this was in the context of a service which had recently transitioned from a partial ban to being completely smoke-free. A major barrier related to attitudinal beliefs which related to mental health acuity of patients and patient choice to quit smoking. Studies suggest there is still work to be done to shift culture, norms and negative or outdated beliefs that impeded mental health services capacity to increase tobacco dependence treatment and smoke-free environments.

Enablers

In the present study four enabler themes were identified from the open-ended questions on routine tobacco dependence treatment and operating within smoke-free policy(complete ban). Two major themes related to the need for education and training resources for staff (and patients) and to a lesser degree related to having consistent smoke-free policy (complete ban). Other enabler themes related to dedicated tobacco specialist nurses working at the inpatient mental health unit and that there should be a community

mental health focus for tobacco dependence treatment, in addition to inpatient tobacco dependence treatment.

The major theme which related to education and training resources (theme 1) is similarly found in contemporary research which suggest education and training to be an ongoing requirement to shift entrenched norms, culture and staff attitudes (Rowley et al., 2016; Sohal et al., 2016). However, this is in the context of comprehensive package of strategies which included systematic tobacco dependence treatment and organisational consistency regarding policy and practice around tobacco dependence treatment and smoke-free policy (complete ban). Staff views in the present study related to this theme included:

> "Global education would be essential in implementing the treatment of tobacco dependence. Further, any program to treat such a thing would likely have to, to an extent, be eased into a service as many treat rapid change with automatic rejection." (P28)
> "Education, education and support." (P32)
> "More education and access to information." (P49)
> "Knowledge about the impact of nicotine on the body, increased vulnerability of people with mental illness and earlier death from its complications." (58)

Comments from staff that agreed with a smoke-free policy (complete ban) (theme 2) were infrequent when compared to staff opinion advocating for a smoke-free policy (partial ban). Other enabler opinions related to management consistency ("Consistent message from management. Regular meetings/forums to discuss issues." (P91)), leadership ("Decide if it is a smoke-free zone….if it is, enforce all aspects of the policy in all areas of the hospital at all times. If not, ditch it. Half measures are litigious and unclear for staff." (P87)) and service congruence across the state (" A state wide congruent policy." (P82))(theme 3). This had importance because of the negative impacts of environmental tobacco smoke and inpatients increased cigarette use, which included initiation and relapse (when admitted permissive smoking mental health units). These enablers of completely smoke-free, leadership, service consistency are key factors identified by research for enacting change (Leyro et al., 2013; Williams, Scott Stroup, Brunette, & Raney, 2014). Other studies, such as Dickens et al. (2014) suggest benefits with nurses trained in tobacco dependence interventions leading

drop-in style clinics in acute mental health settings. Ultimately, integrated and comprehensive smoke-free policy and routine tobacco dependence treatment provision in mental health services (both inpatient and outpatient) and community service partnerships were recommended by international and national bodies, such as the UK ,National Institute Clinical Excellence (2013), Australian Cancer Council (2015) and Mental Health Commission (2016). Cancer Council, Australia mental health service position statement (2015) reported successful smoke-free services had key features which included extensive consultation, staff support and education, patient preparation, comprehensive inclusion of nicotine replacement therapy and a consistent transparent management style.

Community mental health focus (theme 4) was both an enabler and barrier theme in this study. Comments comprised two sets of opinions. Firstly, community support after discharge ("More support to the patients and once they are discharged." (P86)) was seen as needed in order to improve smoking cessation outcomes (enabler). Secondly, that community focus ("Mental health services could focus more on tobacco dependence in community mental health clinics, when patient's mental state is stable, instead of inpatient units, where patients are acutely unwell and under a lot of stress." (P24)) was in relation to this being the more appropriate time to undertake tobacco dependence treatment because of a stable mental health acuity and this included references to psychotropic medications ("…clozapine dose will suddenly become sub therapeutic in the community when the patient discharges and starts to smoke, while clozapine level becomes toxic on admission if the patient forbidden to smoke." (P67)) and the impact smoking cessation on medication levels and potential adverse side-effects (barrier). Stockings et al. (2014) in a systematic review found that smoke-free mental health inpatient admission may impact positively on patient's motivation and beliefs related to their smoking behaviour both during their admission and up to three months post discharge. However, difficulties identified in achieving this and the complex barriers to providing integrated services (that included inpatients at mental health units) was outlined in a UK pilot study (Parker et al., 2012). The complex barriers they found included systems and procedures, knowledge, skills, attitudes (staff) and difficulties in engaging some patients who had severe mental illness. More recently, a UK study attempting to address the gap relating to provision of tobacco dependence treatment for patients with severe mental illness in primary care and mental health settings showed promising initial results. Gilbody et al. (2015) found in their pilot randomised controlled trial that a bespoke smoking cessation intervention for

people with a severe mental illness was feasible and effective in engaging and improving smoking cessation rates.

In summary, key enablers identified by participants related to education and training, smoke-free policy (complete ban) and consistent management and leadership to support this. Other enablers included tobacco specialist nurses and post discharge community support for patients who smoked. Research suggests comprehensive strategies which included mental health services being completely smoke free are required to shift entrenched culture and provide integrated and routine tobacco dependence treatment.

Limitations

Mental health professionals from the mental health facility under study potentially worked between secure, and open unit and this was not identified. There are particular characteristics between whether the unit is secure or open that could impact on attitudes to tobacco dependence treatment and smoke-free policy (complete ban) (Zabeen et al., 2015) but this was not investigated. The transition to the new facility meant substantial disruptions and change which potentially contributed to higher levels of stress amongst staff and may have impacted survey participation and attitude. The transition from the old unit having an unofficial smoking courtyard to the new unit which had no smoking area could negatively bias staff attitudes. An anonymous electronic survey from a convenience sample introduced the potential for a biased sample of respondents with more interest and opinion in this topic. Staff who smoked may have not completed the survey or honestly reported their current smoking status, or may have been attempting to quit. Finally, the present study findings could not be generalised to all acute inpatient mental health facilities, though the results of this study contributed to local level knowledge and show parallels with other published findings.

Recommendations for MHU Smoke-free Policy (complete ban)

Recommendation 1: Clinical Staff Training

Training for clinical staff in tobacco dependence treatment that included interactive education sessions that address ambivalence and complexity around smoke-free mental health services and evidence for routine tobacco dependence treatment. Staff engagement to increase practice of systematic screening, electronic recording and tobacco dependence treatment.

Recommendation 2: Tobacco Champions.

Dedicated mental health professionals trained in tobacco dependence treatment to provide specialist intervention, staff training and community linkage.

Recommendation 3: Patient Education Resources

Comprehensive education resources tailored for patients and families which included Recovery principled interventions such as peer support, broader positive physical health and smoking cessation support that included post-discharge.

Recommendation 4: Policy and Practice Strategy

Management leadership, consistency and service congruence for continued policy and practice strategy. Further development and reflection of innovative strategies to support policy and practice around smoke-free policy (complete ban) and tobacco dependence treatment and this is tailored to local conditions.

Recommendation for Future Research

The TTCS (Hunt et al., 2013) was successful in measuring the level of commitment to provide tobacco dependence treatment among mental health professionals in an acute mental health unit, hence reflecting the level of this facility's readiness. Hence the TTCS tool could be used to:

- Investigate other facilities readiness for change.
- Compare commitment between different unit types (e.g. voluntary, secure, short-stay)
- Compare multi-site readiness or commitment for change.
- Compare gender differences in commitment across units and sites.

Further research is required to investigate best practice for transitioning units to smoke-free policy (complete ban) (intervention study), using tools such as the TTCS to measure commitment pre and post, as well as evaluation of participants transition in relation to TTM stage of change and changing social norms around pro-smoking culture. Best practice initiatives need to consider enablers and barriers identified in this and other studies in the mental health arena which encompass both treating tobacco dependence and operating completely smoke-free services. Concurrently, patient outcomes should be objectively measured and monitored.

Conclusion

This study aimed to explore staff attitudes to routine tobacco dependence and operating within smoke-free policy in an acute inpatient mental health unit that transitioned from an old site which had permissive smoking culture and smoke-free policy (partial ban) to a new site which was smoke-free policy (complete ban). This mixed method study is the first in a mental health setting to use the TTCS in order to measure staff attitudes thus underlying commitment to tobacco dependence treatment. The TTCS had been validated in the alcohol and drug sector but not used in acute inpatient mental health setting. Both sectors face similar challenges around smoke-free environment and addressing high smoking rates of their client group. The TTM provided a framework for change and understanding the decisional balance that drove ambivalence. TRA provides a framework where both attitudes and normative influence were considered and how they impacted on behaviour change. Both are relevant considering the complexities relating to inpatient mental health services routinely treating tobacco dependence and providing smoke-free services in the context of longstanding normative culture around permissive smoking and negative staff attitudes. The present study was consistent with other studies which suggest staff attitudes contribute to the continued challenge that hinders routine tobacco dependence treatment and mental health services implementing smoke-free policies.

The TTCS three attitudinal domains related to “tobacco was less harmful than other drugs”; “it’s not my job” and “tobacco treatment will harm clients” (Hunt et al., 2014). Overall, TTCS suggested staff ambivalence to provide tobacco dependence treatment and this level of readiness likely required further organisational strategy to shift ambivalence and increase commitment to tobacco dependence treatment. Across the three professional groups of doctors, nurses and allied health, the level of commitment was similar. Smoking status of staff is often suggested to be a barrier to provide tobacco dependence treatment. This study’s results found the opposite was the case, where staff who smoked, had statistically significantly higher commitment, although a low sample size means this result needs to be considered cautiously. Another unexpected finding related to gender difference with males scoring higher commitment TTCS to females.

The qualitative data provided depth and possible reasons for ambivalence with major themes relating to patients’ choice, rights, level of mental health acuity and noncompliance as

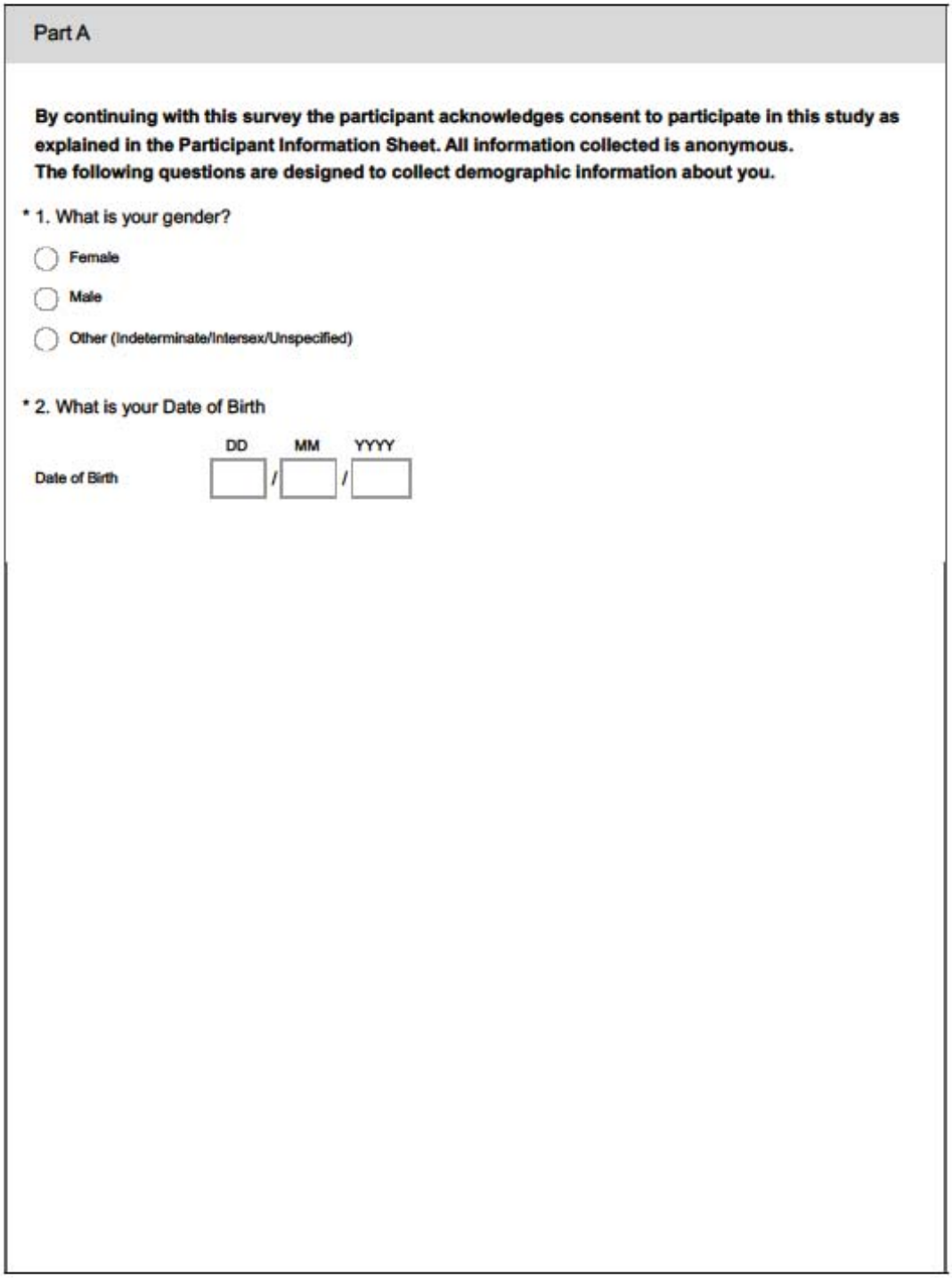
reasons against smoke-free policy (complete ban). Furthermore, a majority of staff believed that smoke-free policy (partial ban) should be implemented. The negative attitudes and implied social norm of patient and staff smoking from qualitative data is similar to other studies and further that these were entrenched factors which contributed negatively to a mental health service changing culture and integrating both routine tobacco dependence and smoke-free policy(complete ban).

Combined, TTCS and qualitative data provided a richer understanding of attitudinal barriers to change. Together they suggest cultural norms around permissive smoking within an inpatient mental health setting, negative attitudes towards smoke-free policy (complete ban) and education and training deficits of mental health professionals. Research continues to suggest that comprehensive strategies are required to support change, especially when a majority of staff (norm) support a smoke-free policy (partial ban), and that smoke-free policy (complete ban) was more effective than partial ban. Furthermore, this study identified the need for consistent leadership, organisational commitment, tobacco champions and resourcing to shift towards smoke-free policy (complete ban) and routine treatment tobacco dependence. In order to shift culture, mental health and tobacco experts call for comprehensive and integrated interventions which need to address barrier themes identified in this study, including community and consumer partnerships, recovery- principled interventions and educational resources.

Appendix A

Modified TTCS and Survey

Please double click on object to view full pdf.



Part A

By continuing with this survey the participant acknowledges consent to participate in this study as explained in the Participant Information Sheet. All information collected is anonymous.
The following questions are designed to collect demographic information about you.

* 1. What is your gender?

- ◯ Female
- ◯ Male
- ◯ Other (Indeterminate/Intersex/Unspecified)

* 2. What is your Date of Birth

Date of Birth DD / MM / YYYY

Appendix B

Participant Information Sheet

Please double click on object to view full pdf.

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

PARTICIPANT INFORMATION SHEET

PROJECT TITLE: Attitudes of mental health professionals toward the provision of tobacco dependence treatment in the transition to a smoke-free mental health unit: a mixed method study
STUDENT RESEARCHER: Jane Chambers
STUDENT'S DEGREE: Masters of Nursing. University of Notre Dame (UNDA) Fremantle.
Supervisors: Dr. Richard Bostwick & Dr. Paola Chivers

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?

The research project investigates thoughts and opinions of mental health professionals around treating tobacco dependence and operating within a smoke-free policy in an inpatient mental health unit. A Tobacco Treatment Commitment Scale (TTCS) that was developed by researchers in America within Alcohol and Drug (AOD) treatment settings is being used within an inpatient mental health setting.

Many patients with mental health issues have high rates of smoking tobacco, suffer poorer health, and die earlier than a person in the general population. General population rates of daily tobacco smokers in Australia have reduced to 12 percent yet for people with a mental illness these rates range from 30 to 90 percent. In fact, they have hardly dropped since public health measures were introduced many years ago. Within the mental health sector there has been a long- standing cultural norm of not treating tobacco dependence and many services continue to struggle to treat tobacco dependence and provide smoke-free environments.

Treating tobacco dependence continues to be a complex and challenging problem within inpatient mental health settings. An understanding of your thoughts and opinions around tobacco dependence treatment and a smoke-free policy and also, staff smoking rates, may assist with training, education and policy protocols around tobacco dependence treatment and smoke-free inpatient services.

Who is undertaking the project?

This project is being conducted by Jane Chambers and will form the basis for the degree of Masters in Nursing by Research at The University of Notre Dame Australia (UNDA), under the supervision of Dr Richard Bostwick (School of Nursing & Midwifery UNDA) and Dr Paola Chivers (Institute of Health Research UNDA).
In December 2014, Jane Chambers received a $4000 Advancing the Nursing Profession Fellowship, Office of the Chief Nurse, Health Department of West Australia.

What will I be asked to do?

- You are asked to complete a short electronic survey on SurveyMonkey© which asks for your thoughts and opinions around treating tobacco dependence in an inpatient mental health unit. Two open-ended questions at the end asks you to type in your comments in relation to treating tobacco dependence and smoke-free policy. This should take no more than 15 minutes to complete.
- Some questions in this survey are in relation to your own tobacco use.
- There are no "right" or "wrong" answers.
- To maintain confidentiality please do not type your name on any part of this survey.

Appendix C

TTCS Permission

From: Kimber Richter [mailto:KRICHTER@kumc.edu]
Sent: Tuesday, 26 August 2014 23:53
To: Chambers, Jane
Subject: RE: TTCS replication in mental health inpatient

Hello Jane,

Please find attached the entire scale we administered to study participants (FINAL ITT...). This has all of the 38 or so attitude items that we included in our original TTCS scale. I have also attached the TTCS scale, which is the 14-item validated version (for substance abuse facilities). I have also included the scoring instructions for the TTCS and the paper on validation of the scale (which you probably already have!).

Good luck with your project! I'd love to hear how it turns out!
Kim

Kimber P. Richter, PhD, MPH
Director, UKanQuit
Professor
Department of Preventive Medicine and Public Health
University of Kansas Medical Center
3901 Rainbow Boulevard
Kansas City, Kansas 66160
email: krichter@kumc.edu
Ph: 913.588.2718

From: Kimber Richter [mailto:KRICHTER@kumc.edu]
Sent: Sunday, 24 August 2014 03:54
To: Chambers, Jane
Subject: RE: TTCS replication in mental health inpatient

Hi! I'd be happy to! I'll get you a copy with scoring instructions shortly -
Kim

Kimber P. Richter, PhD, MPH
Director, UKanQuit
Professor
Department of Preventive Medicine and Public Health
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Appendix D

TTCS Scoring Insturctions

Tobacco Treatment Commitment Scale (TTCS)

The purpose of this survey is to collect information on staff thoughts and feelings regarding treating tobacco dependence in substance abuse treatment. Because commitment is predictive of behavior, we focused on items that might reflect staff commitment to providing tobacco treatment (either high or low). A full description of how candidate items were identified, evaluated, and selected for the final scale are available elsewhere.(J. J. Hunt et al., 2014) This scale was validated among clinic leaders (directors, owners, counseling supervisors, head nurses) of outpatient substance abuse treatment facilities.

It may be useful to record do not know or unsure=7; refused=9

To generate the ITTQ "score":

Nearly all items are negative-the higher the score, the lower the commitment to tobacco treatment. One item is positive – "Treating tobacco dependence should be a part of the mission of drug treatment programs..[P]." The score from this item must be inverted prior to summing the scale. Invert the score for this item by subtracting from 6.

Sum all of the scores of all of the items and divide by the number of items (14). This will yield a final score between 1 and 5, with 1 representing strong commitment to providing tobacco treatment and 5 representing poor commitment to tobacco treatment. With the exception of golf, this type of inverse scoring system is difficult to interpret. To facilitate interpretation of scale scores, we decided to invert the final score.

To invert the final score, subtract each respondents' mean score from 6, to create a final score in which 5 represents a high commitment to providing tobacco treatment and 1 represents a poor commitment to tobacco treatment. Hence, the final scale is scored by a) inverting scores from items that represent positive attitudes about tobacco, b) calculating the mean score across all items, and c) subtracting this mean from 6.

The TTCS is a subset of a broader survey on services and attitudes toward treating tobacco. For the entire survey, please write to:

Kimber Richter, PhD
Department of Preventive Medicine and Public Health
University of Kansas Medical Center
3901 Rainbow Boulevard
Kansas City, KS 66160
krichter@kumc.edu

Grant Number R21DA020489 (Richter, P.I.) from the National Institute on Drug Abuse funded this project. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse or the National Institutes of Health.

Appendix E

Fagerstrom Test Nictotine Depedence

Use the following test to score a patient's level of nicotine dependence once they have been identified as a current or recent smoker.

Please tick(√) one box for each question		
How soon after waking do you smoke your first cigarette?	Within 5 minutes 5-30 minutes 31-60 minutes 60+ minutes	□ 3 □ 2 □ 1 □ 0
How many cigarettes a day do you smoke?	10 or less 11-20 21-30 31 or more	□ 0 □ 1 □ 2 □ 3
	Total Score	
Score	1-2= very low dependence 3= low to moderate dependence	4= moderate dependence 5+= high dependence

Smoke Free WA Health System Policy - *Clinical Guidelines and Procedures for the Management of Nicotine Dependent Inpatients*. Government of Western Australia Department of Health

Appendix F

Permission Head of Department

Government of **Western Australia**
Department of Health
North Metropolitan Area Health Service – Mental Health

Human Research Ethics Committee
Notre Dame University
19 Mouat St (PO Box 1225)
Fremantle WA 6959
16 March 2015-03-16

Dear Ethics Committee

Re: Departmental approval for Masters Nursing (Research) project:
Supporting Tobacco Intervention Commitment of Clinicians (STICC);
Transitioning to a Smoke free Mental Health Facility by Jane Chambers.

I endorse and encourage this research project that Jane Chambers is undertaking as part of her Masters Nursing (Research).

Yours Sincerely

Dr Mark McAndrew

Head of Clinical Services
Department of Psychiatry
D Block
Sir Charles Gardiner Hospital
Monash Avenue
Nedlands 6009

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Department of Psychiatry & Behavioural Sciences
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Appendix G

Ethics Approval UNDA

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

19 Mouat Street (PO Box 1225)
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ABN: 69 330 643 210
CRICOS PROVIDER CODE: 01032F

15 September 2015

Dr Richard Bostwick & Ms Jane Chambers
School of Nursing & Midwifery
The University of Notre Dame Australia
Fremantle Campus

Dear Richard and Jane,

Reference Number: 015121F

Project Title: "Attitudes of mental health care professionals toward the provision of tobacco dependence treatment in the transition to a smoke-free mental health unit: An exploratory mixed method study."

Your response to the conditions imposed by a sub committee of the university's Human Research Ethics Committee, has been reviewed and assessed as meeting all the requirements as outlined in the *National Statement on Ethical Conduct in Human Research* (2014). I am pleased to advise that ethical clearance has been granted for this proposed study.

All research projects are approved subject to standard conditions of approval. Please read the attached document for details of these conditions.

On behalf of the Human Research Ethics Committee, I wish you well with your study.

Yours sincerely,

Professor Selma Alliex
Chair, Human Research Ethics Committee

cc: A/Prof Karen [illegible], Acting Dean, School of Nursing & Midwifery
A/Prof Caroline Bulsara, SRC Chair, School of Nursing & Midwifery.

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