

ADDRESSING SMOKING AMONG PERSONS ACCESSING ACUTE PSYCHIATRIC SERVICES: A NEED FOR PROACTIVE AND UNIVERSAL INTERVENTION

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Statement of Originality

The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository**, subject to the provisions of the Copyright Act 1968.

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Statement of Authorship

I hereby certify that this thesis is in the form of a series of *papers. I have included as part of the thesis a written statement from each co-author, endorsed in writing by the Faculty Assistant Dean (Research Training), attesting to my contribution to any jointly authored papers. (*Refer to clause 39.2 of the Rules Governing Research Higher Degrees for acceptable papers; Appendix 1).

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October, 2016

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List of Publications Included in the **Thesis**

Paper 1: Metse AP, Wiggers J, Wye P, Wolfenden L, Prochaska JJ, Stockings E, Williams JM, Ansell K, Fehily C, Bowman JA: **Smoking and mental illness: a bibliometric analysis of research output over time.** *Nicotine Tob Res* 2016, in press*. doi:10.1093/ntr/ntw249

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Paper 3: Metse AP, Wiggers J, Wye P, Clancy R, Moore L, Adams M, Robinson M, Bowman JA: **Uptake of smoking cessation aids by smokers with a mental illness.** *J Behav Med* 2016, **39**(5):876-886. doi: 10.1007/s10865-016-9757-3

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smoking cessation intervention initiated in inpatient psychiatry and continued post-discharge: a randomised controlled trial. *Aust N Z J Psychiatry*. Under review*.

*Evidence to support manuscript submission/acceptance is included in Appendix 2.

Co-author Statement

I attest that Research Higher Degree candidate Alexandra Metse has contributed to publications for which I am a co-author. For all publications, where applicable, Alexandra has:

- Contributed to the development of research questions
- Contributed to research design and methodology
- Contributed to the development and modification of data collection tools
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Additional Publications and Presentations

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Metse AP, Wiggers J*, Wye P, Wolfenden L, Freund M, Clancy R, Stockings E, Terry M, Allan J, Colyvas K, Prochaska JJ, Bowman J: **An integrated smoking cessation intervention for mental health patients: a randomised controlled trial.** Oral Presentation: *World Cancer Congress, Paris, 31st October – 3th November, 2016.*

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Fehily C*, Metse AP, Wiggers J, Wye P, Colyvas K, Bowman J: **Efficacy of an integrated smoking cessation intervention for persons with a mental illness: a randomised controlled trial.** Oral Presentation: *University of Newcastle, School*

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Metse AP*, Wiggers J, Wye P, Clancy R, Moore L, Adams M, Robinson M,

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T, Stockings E, Bowman JA: **Social and environmental determinants of smoking cessation: their prevalence and role among smokers with mental illness.** Oral presentation: *Population Health Congress, 6th - 9th September, 2015.*

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provision of smoking cessation care for people with mental illness: expectations and experiences of 'carers'. Oral presentation: *Australasian Society for Behavioural Health and Medicine Conference, Perth, 11th – 13th February, 2015.*

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Bowman JA: **Mental health patients' receptivity to and uptake of a**

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smoking cessation intervention. Oral presentation: *World Cancer Congress, Melbourne, 3rd – 6th December, 2014.*

Metse AP*, Bowman JA, Wye P, Stockings EA, Adams M, Clancy R, Terry M, Wolfenden L, Freund M, Allan J, Prochaska JJ, Wiggers J: **Evaluating the efficacy of an integrated smoking cessation intervention for mental health patients: study protocol for a randomized controlled trial.** Oral presentation: *World Cancer Congress, Melbourne, 3rd – 6th December, 2014.*

Bailey J*, Bowman J, Wye P, Stocking, E, Bartlem K, Metse AP, Wiggers J: **The provision of smoking cessation care for people with mental illness: expectations and experiences of 'carers'.** Oral presentation: *World Cancer Congress, Melbourne, 3rd – 6th December, 2014.*

Metse AP, Bowman JA, Wye P, Stockings EA, Adams M, Clancy R, Terry M, Wolfenden L, Freund M., Allan J, Prochaska JJ, Wiggers J*: **Evaluating the efficacy of an integrated smoking cessation intervention for mental health patients: a study protocol.** Poster presentation: *International Congress of Behavioural Medicine, Netherlands, 20th – 23rd August, 2014.*

Synopsis

In a number of high income countries including Australia, persons with a mental illness smoke at rates two to three times greater than the general population.

Consequently, this group experience disproportionate levels of preventable tobacco-related morbidity and mortality, and reduced life expectancy of 10 to 25 years. Despite higher levels of nicotine dependence, smokers with a mental illness are motivated to cease smoking and attempt to quit at similar rates to those without a mental illness, however, find it more difficult to do so successfully. The persistently elevated smoking prevalence, in comparison to the steady decline observed among smokers generally over the past two decades, suggests this group has not equally benefited from population-wide smoking cessation interventions, and that the development of tailored interventions is required.

Hospitals have been identified as opportune settings to initiate the provision of smoking cessation interventions, particularly following the introduction of smoke-free policies and the associated need to treat patient nicotine dependence. Admission to a general hospital setting has been shown to have a positive impact on smoking and quitting behaviours, with smoking cessation care provided during hospitalisation and post-discharge increasing the likelihood of prolonged cessation. Integrating hospital smoking care with support post-discharge may therefore represent an intervention approach for psychiatric services to contribute to reducing the prevalence of smoking among people with a mental illness. The efficacy of integrating psychiatric inpatient and community-based smoking support has been assessed in a limited number of trials, of which yielded equivocal findings. In addition, due to a paucity of research surrounding smoking and mental illness, little is also known regarding the determinants of quitting

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behaviour among smokers accessing acute psychiatric services, or their receptivity and uptake of smoking cessation aids following discharge. To address these gaps in the literature, the broad aims of this thesis were to:

1. Assess the quantity and quality of research outputs relating to smoking and mental illness.
2. Explore potential determinants of quitting behaviour among persons with a mental illness.
3. Evaluate receptivity to, and utilisation of smoking cessation aids offered to smokers upon discharge from an acute psychiatric inpatient facility.
4. Examine the efficacy of initiating smoking cessation support during an inpatient psychiatric admission and continuing post-discharge in reducing smoking rates among persons with a mental illness.
5. Based on the findings of the studies undertaken to address the above aims, propose recommendations for future research to facilitate smoking cessation for persons accessing psychiatric services.

A series of studies were undertaken to address the first four aims. The first was a repeat cross-sectional bibliometric review of peer-reviewed publications focussed on smoking among persons with a mental illness. Three other studies were carried out across four acute psychiatric facilities in one local health district in New South Wales, Australia: a cross sectional descriptive study of 754 inpatient smokers examining environmental and smoking determinants of quitting behaviour, a descriptive study of 378 recently discharged smokers receiving proactive and universal smoking cessation support addressing receptivity and uptake of such support, and a randomised controlled trial of a smoking cessation intervention offered to patients ($N = 754$) during a psychiatric inpatient admission and continued post-discharge.

SYNOPSIS

The findings presented in this thesis have contributed to advancing the field of smoking and mental illness research in a number of areas. First, assessment of the volume and characteristics of peer reviewed publications in the field revealed that research regarding smoking among those with a mental illness has increased over time; however it also revealed more research is needed to inform the development and implementation of effective cessation interventions for this group. Second, among a large and diverse population of psychiatric inpatients who were smokers, a high level of exposure to smoking in the immediate residential environment was identified. Further, quitting behaviours were associated with nicotine dependence, receipt of support to quit from a psychiatrist and residing with another smoker. Third, smokers with a mental illness were found to be receptive to and to utilise offers of evidence-based smoking cessation aids, with those who were older, more nicotine dependent, able to identify as a non-smoker and using smoking cessation aids whilst an inpatient, being more likely to do so. Fourth, integrating psychiatric inpatient smoking care with post-discharge cessation support was found to be efficacious in increasing seven day point prevalence smoking cessation rates and related quitting behaviours at six months post-discharge, with sustained effects on quitting behaviours at 12 months.

Overall, this thesis has highlighted the need to develop tailored interventions to reduce the prevalence of smoking among persons with a mental illness. In the development of such interventions, consideration of the identified determinants of quitting behaviour and of cessation aid uptake may increase effectiveness. The final chapter of this thesis proposes recommendations for future research to increase the effectiveness smoking cessation interventions initiated in inpatient psychiatry and continued post-discharge.