



ORIGINAL ARTICLE

Patient receipt of smoking cessation care in four Australian acute psychiatric facilities

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ABSTRACT: *This study aimed to report the receipt of smoking care, and associated clinical and smoking characteristics among smokers admitted to four public psychiatric inpatient facilities in New South Wales, Australia. Between October 2012 and July 2014, adult smokers (N = 236) were surveyed during admission to and 1 month following discharge from the facilities. Measures of smoking care receipt were reported descriptively, and logistic regression analyses were used to explore characteristics associated with care receipt. The majority of participants were offered (78%) and used (78%) nicotine replacement therapy (NRT), with 66% of NRT-users reporting the amount provided was sufficient to reduce cravings. A minority of participants (16%) received information or advice to quit smoking, and 60% reported smoking throughout their admission. Patients not contemplating quitting and those with non-psychotic disorders were more likely to receive an offer of NRT. The findings suggest the provision of smoking care in Australian acute psychiatric units is sub-optimal overall, with an indication that care may be provided selectively to certain patients, rather than systematically to all. Development and dissemination of interventions to increase smoking care provision in inpatient psychiatry are needed.*

KEY WORDS: *mental health, mental health services, smoke-free policy, smoking, tobacco.*

INTRODUCTION/BACKGROUND

Tobacco smoking is a leading cause of preventable illness and death worldwide (Lim *et al.* 2012). Smokers with a mental illness experience disproportionately high tobacco-related morbidity and mortality (Royal College of Physicians and Royal College of Psychiatrists, 2013) due to a higher smoking prevalence (de Leon & Diaz 2005; Metse *et al.* 2017) and greater difficulty in quitting (de Leon & Diaz 2005; McClave

et al. 2010). Persons admitted to acute psychiatric facilities have a notably high smoking prevalence: 62% and 83% in Australia (Metse *et al.* 2017) and the United States (USA; de Leon & Diaz 2005), respectively. Compared to smokers generally, this group of smokers consume a greater number of cigarettes per day (de Leon & Diaz 2005; McClave *et al.* 2010) and are more nicotine dependent (de Leon & Diaz 2005; McClave *et al.* 2010), and as a result, a particular need has been recognized for systematic and adequate smoking care while admitted to hospital (Royal College of Physicians and Royal College of Psychiatrists, 2013).

Approximately a decade ago, smoke-free healthcare policies were introduced in acute psychiatric inpatient units in Australia and other high-income countries (House of Commons Health Committee, 2005; New South Wales Department of Health, 2005). Smoke-free policies aim to protect staff, patients and visitors from the harmful effects of second-hand smoke and to encourage smokers to quit (House of Commons Health

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Committee, 2005; New South Wales Department of Health, 2005). In New South Wales (NSW), Australia such policies stipulate that tobacco is not to be smoked anywhere on hospital grounds (New South Wales Department of Health, 2005), and associated policy guidelines direct staff to assess the smoking status of all patients and provide evidence-based smoking care to all identified smokers (New South Wales Department of Health, 2002, 2005). Current evidence suggests nicotine replacement therapy (NRT) and/or varenicline coupled with behavioural support is most effective for smoking cessation among smokers generally and those with mild to severe mental illness (Anthenelli *et al.* 2016; Banham & Gilbody 2010; Stead & Lancaster 2012). Accordingly, while in hospital, NSW guidelines state that smoking care should, as a minimum, comprise (i) assessment of smoking status and where applicable, (ii) assessment of nicotine dependence and provision of, (iii) brief advice to quit, and (iv) adequate NRT (New South Wales Department of Health, 2002). Upon discharge, smokers are entitled to receive, (v) at least a 3-day supply of NRT, and (vi) a referral to the NSW Quitline (New South Wales Department of Health, 2002). Systematic review evidence suggests admission to a smoke-free general (Rigotti *et al.* 2012) or psychiatric (Stockings *et al.* 2014) hospital, where adequate smoking care is received, increases the likelihood of quitting behaviour post-discharge, with additional community-based support likely to facilitate longer term behaviour change (Metse *et al.* 2017; Rigotti *et al.* 2012). As a result, routine provision of adequate smoking care in hospital settings may be an important, sustainable and feasible component of interventions to increase smoking cessation at the population level.

A systematic search of studies published between 2006 and 2016 found 19 studies reporting the prevalence of smoking cessation care provision/receipt in acute inpatient psychiatric facilities (Bailey *et al.* 2016). The majority (79%) of studies were undertaken prior to or during 2010, with such studies consistently suggesting care provision was sub-optimal (Sarna *et al.* 2009; Stockings *et al.* 2015; Williams *et al.* 2015). The most recent studies undertaken in NSW, Australia include a survey of psychiatric inpatients who smoke ($N = 97$) completed between May 2009 and 2010 (Stockings *et al.* 2015), and a medical record audit ($N = 1054$) of psychiatric inpatients discharged between June and October 2009 (Wye *et al.* 2017). The patient survey revealed that 31% received brief advice to quit, and while 75% used NRT, only 44% of

those patients reported the NRT was sufficient to reduce nicotine withdrawal symptoms (Stockings *et al.* 2015). The audit study reported that 36% and 5% of patients had their smoking status and nicotine dependence assessed, respectively, 1% were provided with advice to quit, and 8% and 9% were prescribed NRT during hospitalization or provided NRT at discharge, respectively (Wye *et al.* 2017).

Since 2010, no research has assessed the prevalence of smoking care provision/receipt in psychiatric inpatient facilities in NSW, Australia. At that time, the smoke-free policy had been implemented in psychiatric facilities for approximately 3 years (New South Wales Department of Health, 2002, 2005). In light of evidence suggesting policies generally take time to implement (National Institute for Health and Care Excellence, 2007) and research indicating the implementation of a smoke-free policy and associated treatment of nicotine dependent patients has improved recently in general hospital settings in NSW (Slattery *et al.* 2015), it might be expected that the provision of smoking care in psychiatric inpatient facilities has changed since last assessment.

Assessing the association of patients' clinical and smoking characteristics including mental health diagnosis, nicotine dependence, and readiness to quit, with receipt of smoking care can provide insight into whether care is provided selectively or systematically to all. Only one study was identified that explored the association between such characteristics and a measure of smoking care receipt (Leyro *et al.* 2013). Among US smokers admitted to an inpatient psychiatry facility, NRT use reported by patients was found to be associated with more severe psychiatric and nicotine withdrawal symptoms (Leyro *et al.* 2013). To the authors' knowledge, the possible association between smoking care receipt in inpatient psychiatry and readiness to quit has not been formally assessed. However, clinician perceived patient interest in quitting has been identified by nurse managers (Lawn & Pols 2005) and behavioural health professionals (Williams *et al.* 2015) as a factor likely to influence the provision of smoking care in psychiatric settings.

Given the gaps in the literature, a study was conducted that aimed to (i) describe patients' receipt of smoking care in psychiatric inpatient facilities in NSW, Australia, and (ii) explore potential associations between multiple measures of smoking care receipt and clinical and smoking characteristics of patients including mental health diagnosis, nicotine dependence, and readiness to quit.

MATERIALS AND METHODS

Design and setting

A descriptive study was undertaken using data derived from a randomized controlled trial (RCT) of a smoking cessation intervention initiated in four acute adult psychiatric inpatient facilities in NSW, Australia (Metse *et al.* 2014, 2016). Six clinical units of similar size (average 20–25 beds each) were included across the four acute facilities, one of which provided specialized drug and alcohol services to patients with a comorbid psychiatric disorder. Crisis stabilization, safety, assessment, and treatment are common foci of acute psychiatric inpatient admissions (Sharfstein 2009). All facilities implemented a total smoking ban in October 2006, and policy guidelines directed staff to provide smoking care to all admitted patients, as detailed above (New South Wales Department of Health, 2002, 2005).

The research was approved by the Human Research Ethics Committees of Hunter New England Health (reference no: 11/12/14/4.02) and the University of Newcastle (reference no: H-2012-0061).

Sample and recruitment procedure

Participants were recruited while admitted to acute psychiatric facilities. Research staff who were independent of the hospitals approached all newly admitted patients daily to assess study eligibility and if applicable, obtain written informed consent. Eligible patients were aged 18 or above, smoked cigarettes in the month prior to admission, had a current telephone number, and were sufficiently clinically stable to provide informed consent. Eligible and consenting patients participated in a brief survey during hospitalization and at 1 month post-discharge. The participants in the study comprised those allocated to the control condition of the overarching trial (Metse *et al.* 2014, 2016).

Data collection procedures

The inpatient survey was undertaken via face-to-face interview after patient written informed consent was obtained. The survey was conducted by research staff between October 2012 and April 2014, and included measures of smoking care receipt and participant pre-admission smoking characteristics.

The post-discharge survey was conducted via computer assisted telephone interview 1 month following participants' hospital discharge date. The survey was administered by research staff between December 2012 and July

2014, and comprised measures of smoking care receipt throughout the full period of admission.

Participant clinical and demographic information was collected upon discharge, via the facility's electronic medical record system.

Measures

Receipt of smoking care

Measures of smoking care receipt collected in the inpatient survey were: offer of NRT (yes, no, was not offered but asked), used NRT (yes, no) and if applicable, types of NRT used (patches, inhaler, gum, lozenge, patch, and adjunctive; New South Wales Department of Health, 2002, 2005).

Measures of smoking care receipt collected in the post-discharge survey comprised: sufficient NRT provided across period of admission to reduce cravings (no, somewhat enough, mostly enough, yes), provision of information or advice to quit (yes, no), and smoked while in hospital (yes, no; New South Wales Department of Health, 2002, 2005).

Clinical and demographic information

Clinical and demographic information included: age, gender, relationship status (single/separated/divorced, married/de facto, other), Aboriginal and/or Torres Strait Islander status (Aboriginal and/or Torres Strait Islander, neither, did not state), primary mental health diagnosis (schizophrenia and related psychoses, anxiety- and stress-related disorders, mood disorders, substance-related disorders, personality, and other disorders), legal status on admission (voluntary, involuntary), length of time between admission and the initial survey (days), and total length of stay (number of days between admission and discharge).

Smoking characteristics

Pre-admission smoking characteristics were collected, including smoking status (daily smoker, weekly smoker, irregular smoker (smoked cigarettes less than weekly)), cigarettes per day, level of nicotine dependence (Fagerstrom Test for Nicotine Dependence (FTND); Heatherton *et al.* 1991), number of quit attempts in the last 6 months (0, 1, 2+), and 'readiness' to quit smoking (Readiness to Quit Smoking Questionnaire; Crittenden *et al.* 1994).

Variable transformation

The following variables were reduced to two levels for the purpose of association analyses: offer of NRT (yes,

no/had to ask), sufficient NRT provided to reduce cravings (no/somewhat enough, yes/mostly enough), nicotine dependence (low-moderate (FTND score ≤ 5), high (FTND score ≥ 6); Heatherton *et al.* 1991), diagnosis (psychotic (schizophrenia and related psychosis), non-psychotic (anxiety, mood, substance, personality, and other disorders)), and readiness to quit (pre-contemplative, contemplative or a more progressed stage).

Analysis

Analyses were conducted using IBM SPSS Statistics 22 (Armonk, NY, USA).

Descriptive statistics were used to report the receipt of smoking care during admission and patient clinical, demographic, and smoking characteristics. Multivariable logistic regression analyses, using both backward elimination and stepwise variable selection to ensure model stability, were undertaken to explore associations between measures of smoking care receipt and nicotine dependence, readiness to quit and mental health diagnosis. Assessment of multi-collinearity between independent variables was undertaken using the linear regression function in SPSS, and all variance inflation factors (VIF) were <2 . Length of stay and recruitment unit were included in all models to control for variation in the time available to receive care and potential differences in care provision across units, respectively. Separate models were developed for four dependent variables: offer of NRT, used NRT, sufficient NRT provided to reduce cravings, and advice to quit. Significance level was set at 0.05 for the inclusion of variables in the final models.

RESULTS

Sample

Three hundred and seventy-five patients were recruited into the study and 236 (63%) completed both surveys. Reasons for non-completion of the post-discharge survey included direct refusal ($n = 28$, 8%), inability to establish contact ($n = 66$, 18%) and an appropriate time for completion ($n = 45$, 12%). Clinical, demographic, and smoking characteristics of study participants are described in Table 1.

Receipt of smoking care

The prevalences of smoking care receipt are reported in Table 2. The majority of participants were offered

TABLE 1: Clinical and demographic information, and characteristics of smoking of participants recruited from psychiatric inpatient facilities in NSW, Australia

	Total ($N = 236$)
Gender (n (%)) [†]	
Male	147 (62)
Age (years) [†]	
Mean (SD)	39.1 (12.1)
Median (Range)	39 (50)
Primary mental health diagnosis (n (%)) [†]	
Schizophrenia and related psychosis	47 (20)
Anxiety- and stress-related disorders	37 (16)
Mood disorders	65 (28)
Substance-related disorders	49 (21)
Personality and other disorders	38 (16)
Aboriginal and/or Torres Strait Islander status (n (%)) ^{†,‡}	
Aboriginal and/or Torres Strait Islander	22 (9)
Neither Aboriginal or Torres Strait Islander/Not stated	214 (91)
Relationship status (n (%)) [†]	
Single/separated/divorced	171 (73)
Married/de facto	62 (26)
Other	3 (2)
Time between admission and initial survey (days) ^{†,§}	
Mean (SD)	4.9 (7.8)
Median (Range)	3 (74)
Legal status on admission (n (%)) [†]	
Involuntary	104 (44)
Length of stay (days) [†]	
Mean (SD)	12.6 (12.9)
Median (Range)	9 (114)
Smoking status (n (%)) [§]	
Daily	216 (92)
Weekly	11 (5)
Irregular	9 (4)
Cigarettes per day (n (%)) [§]	
1–10	71 (30)
11–20	81 (34)
21–30	50 (21)
>30	34 (14)
Level of nicotine dependence (n (%)) [§]	
High	118 (50)
Low-moderate	118 (50)
Quit attempt in past 6 months (n (%)) [§]	
0	158 (67)
1	41 (17)
2+	37 (16)
Readiness to quit (n (%)) [§]	
Pre-contemplative	133 (56)
Contemplative	57 (24)
Preparation/action	46 (20)

[†]Data collected via the facility's medical record system. [‡]There are significant health disparities between indigenous and non-indigenous populations in Australia. As a result, specific note/description is often made for indigenous participants in Australian health and medical research. [§]Data collected in the inpatient survey.

TABLE 2: Receipt of smoking care in psychiatric inpatient facilities in NSW, Australia

	n (%)
Offer of NRT ^{†,‡}	
No	36 (15)
Yes	184 (78)
Was not offered, but patient asked	15 (6)
Use of NRT [‡]	
Yes	184 (78)
Types of NRT used ^{§,‡}	
Patches	111 (60)
Inhaler	152 (83)
Gum	58 (32)
Lozenge	27 (15)
Patch and adjunctive	93 (51)
Sufficient NRT provided to reduce cravings ^{¶,††}	
No	21 (12)
Somewhat enough	20 (11)
Mostly enough	21 (12)
Yes	122 (66)
Provision of information or advice to quit ^{††}	
Yes	37 (16)
Smoked while in hospital ^{¶,††}	
Yes	75 (60)

[†]N = 235 due to missing data. [‡]Data collected in the inpatient survey. [§]Participants could select multiple response options. [¶]N = 126 as item was added to survey after commencement. ^{††}Data collected in the post-discharge survey. Analyses of care provision by facility revealed no significant differences, with the exception of use of nicotine gum.

(78%) and used (78%) NRT, with 66% of NRT-users reporting the amount provided was sufficient to reduce cravings. A minority of participants (16%) were provided with information or advice to quit smoking, and 60% reported smoking throughout their admission.

Associations between measures of smoking care and nicotine dependence, readiness to quit, and mental health diagnosis

Diagnosis and readiness to quit were significantly associated with receiving an offer of NRT while in hospital. Participants identified as having a psychotic disorder were approximately half as likely to receive an offer of NRT, relative to those with a non-psychotic disorder (odds ratio (OR) 0.45, 95% confidence interval (CI) 0.22 to 0.91, $P = 0.03$). Those not contemplating quitting (i.e. 'pre-contemplators') were two times more likely to receive an offer of NRT than those in a more progressed stage (OR 2.01, 95% CI 1.06 to 3.81, $P = 0.03$). Nicotine dependence was not associated with receiving an offer of NRT ($P > 0.05$).

No associations were found between diagnosis, readiness to quit or nicotine dependence, and any other measure of smoking care receipt (all P s > 0.05).

DISCUSSION

This study described the prevalence of smoking care receipt among smokers admitted to four Australian acute psychiatric facilities, and explored associations between such care and clinical/smoking characteristics. Offers of NRT were the most prevalent form of care provided (78%), with association analyses suggesting a higher likelihood of such an offer among smokers with non-psychotic disorders and those not contemplating making changes to their smoking behaviour. A majority (78%) of participants used NRT throughout admission, and approximately 50% of smokers reported receiving 'optimal' NRT (patch plus an adjunctive). Despite this, 66% believed that the NRT received was adequate to reduce their cravings, but 60% smoked while admitted. Few smokers received provision of advice to quit (16%), notwithstanding guidelines stating NRT prescription should be accompanied by such advice (New South Wales Department of Health, 2002). The findings suggest the provision of smoking care in Australian acute psychiatric units is sub-optimal overall, with an indication that care may be provided selectively to certain patients, rather than systematically to all.

The prevalences of smoking care receipt found in this study are comparable to those reported in the previous survey of psychiatric inpatients undertaken in NSW, Australia between 2009 and 2010 (Stockings *et al.* 2015). Similar prevalences of care receipt were reported for NRT use (75% vs 78%); however, a higher proportion of smokers in the current study reported receiving adequate NRT to reduce cravings (66% vs 44%; Stockings *et al.* 2015). In the current study, 16% of participants reported receiving advice to quit smoking while an inpatient, compared to 31% in the previous survey (Stockings *et al.* 2015). In overall terms, the results indicate too few patients receive adequate care during admission, suggesting that sub-optimal care provision continues despite the extended period of time the smoke-free policy has been in place. Such results highlight the need for the development, implementation, and dissemination of additional interventions to increase smoking care provision in inpatient psychiatric facilities.

Two studies have assessed the effectiveness of interventions to increase smoking care provision in psychiatric settings (Williams *et al.* 2015; Wye *et al.* 2017).

Wye *et al.* (2017) trialled an intervention to improve clinical practice in Australian psychiatric inpatient facilities. The intervention attempted to address previously identified barriers to smoking care provision in mental health settings, including staff beliefs regarding patients' rights to smoke, a lack of interest in addressing smoking, and lesser ability to quit (Lawn & Pols 2005). The intervention comprised the following strategies: leadership and consensus, enabling systems and procedures, training and education, practice change information, resources and support, and audit and feedback. At 6-month follow-up, the intervention increased documentation of smoking status assessment (36–52% of records), nicotine dependence assessment (5–11%), provision of advice to quit (1–9%), prescription of NRT (8–26%), and treatment of smoking at discharge (9–13%; Wye *et al.* 2017). In the second study, Williams *et al.* (2015) found a 2-day training course on tobacco treatment service delivery similarly increased documentation of smoking care provision by behavioural health professionals in the USA. The rate at which tobacco use was noted in patients' 'problem list' (35–74%) and was addressed in treatment plans (20–60%) was found to have increased at 6-month follow-up, as was documentation of provision of advice to quit (9–36%), and referral to individual education/treatment (12–40%). Despite suggested improvements in care provision in both studies, overall levels of care provision remained sub-optimal. Further research is warranted to ascertain the longer term sustainability of such intervention effects and for additional strategies to increase the proportion of patients that benefit from them. In addition, given the likely significant impact on smoking care provision in mental health settings, recent data on staff attitudes are also needed.

In the current study, the likelihood of patients receiving the large majority (4 of 5) of the smoking care elements was similar, irrespective of nicotine dependence, readiness to quit, and psychiatric diagnosis, with 'offer of NRT' as the exception. This finding suggests non-selective care provision to patients for the most part, and is incongruent with the previous US study where NRT use was more likely among those with higher nicotine dependence (Leyro *et al.* 2013). However, the finding that offers of NRT were more likely among patients who were not contemplating quitting and those with a non-psychotic disorder suggests such offers were provided selectively, and not systematically to all; with the former finding potentially explained by those contemplating quitting being more likely to ask for NRT. Previous research suggests

proactive and universal (non-selective) offers of smoking care to psychiatric inpatients increases the proportion who use evidence-based cessation supports (Metse *et al.* 2016), with use of supports in hospital found to predict uptake of supports post-discharge (Metse *et al.* 2016). Provision of all care elements in a universal manner would ensure all patients receive adequate care to treat immediate nicotine withdrawal, and may increase the proportion of smokers with a mental illness who use evidence-based cessation supports in hospital and following discharge (Metse *et al.* 2016). Research is needed to investigate potential causes of selective care provision and to explore effective approaches to promoting universal smoking care in inpatient psychiatric facilities.

The findings of this study should be interpreted in the context of its methodological characteristics, including that it was undertaken in the context of a larger RCT. Research staff collected data from participants via face-to-face interview while in hospital, where clinical staff were aware the survey addressed smoking and the provision of smoking care. The potential impact of the research on clinician provision of smoking care was not ascertained, although was likely mitigated by the long-term nature of the data collection.

CONCLUSION

This study highlights that the current provision of smoking care in Australian psychiatric units is sub-optimal, with an indication care is provided selectively, rather than systematically to all. The development and dissemination of interventions to support staff in psychiatric inpatient settings to increase such care provision are a priority.

RELEVANCE FOR CLINICAL PRACTICE

Compared to the general population, persons with a mental illness experience disproportionately high tobacco-related morbidity and mortality (Royal College of Physicians and Royal College of Psychiatrists, 2013) due to a higher smoking prevalence (de Leon & Diaz 2005; Metse *et al.* 2017), higher levels of nicotine dependence (de Leon & Diaz 2005; McClave *et al.* 2010), and greater difficulty in quitting (de Leon & Diaz 2005; McClave *et al.* 2010). Due to the notably high smoking rates among persons admitted to acute psychiatric facilities, and the positive impact of a supported smoke-free admission on post-discharge quitting behaviour (Stockings *et al.* 2014), a particular need has

been recognized for systematic and adequate smoking care while admitted to hospital (Royal College of Physicians and Royal College of Psychiatrists, 2013).

Guidelines for the district where this research was undertaken stipulate that all identified patients that smoke should be provided with brief advice to quit and adequate NRT (New South Wales Department of Health, 2002). This study suggests that such care elements are not currently provided systematically to all smokers admitted to acute psychiatric facilities. Opportunities to address patient smoking should be maximized by staff, with the importance of doing so supported by clinical leaders. Interventions to support staff to improve smoking care provision in psychiatric inpatient settings are needed.

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REFERENCES

- Anthenelli, R. M., Benowitz, N. L., West, R. *et al.* (2016). Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): A double-blind, randomised, placebo-controlled clinical trial. *Lancet*, 387, 2507–2520.
- Bailey, J., Bartlem, K., Wiggers, J. *et al.* (2016). Systematic review of the prevalence of preventive care provision for chronic disease risk behaviours in mental health services. *PROSPERO: CRD42016049889*.
- Banham, L. & Gilbody, S. (2010). Smoking cessation in severe mental illness: What works? *Addiction*, 105, 1176–1189.
- Crittenden, K. S., Manfredi, C., Lacey, L. *et al.* (1994). Measuring readiness and motivation to quit smoking among women in public health clinics. *Addictive Behaviors*, 19, 497–507.
- Heatherton, T. F., Kozlowski, L. T., Frecker, R. C. *et al.* (1991). The Fagerstrom test for nicotine dependence: A revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addiction*, 86, 1119–1127.
- House of Commons Health Committee (2005). *Smoking in Public Places: First Report of Session 2005–06*. London, UK: The Stationary Office Ltd.
- Lawn, S. & Pols, R. (2005). Smoking bans in psychiatric inpatient settings? A review of the research. *Australian and New Zealand Journal of Psychiatry*, 39, 866–885.
- de Leon, J. & Diaz, F. J. (2005). A meta-analysis of worldwide studies demonstrates an association between schizophrenia and tobacco smoking behaviors. *Schizophrenia Research*, 76, 135–157.
- Leyro, T. M., Hall, S. M., Hickman, N. *et al.* (2013). Clinical management of tobacco dependence in inpatient psychiatry: Provider practices and patient utilization. *Psychiatric Services*, 64, 1161–1165.
- Lim, S. S., Vos, T., Flaxman, A. D. *et al.* (2012). A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 380, 2224–2260.
- McClave, A. K., McKnight-Eily, L. R., Davis, S. P. *et al.* (2010). Smoking characteristics of adults with selected lifetime mental illnesses: Results from the 2007 National Health Interview Survey. *American Journal of Public Health*, 100, 2464–2472.
- Metse, A., Bowman, J., Wye, P. *et al.* (2014). Evaluating the efficacy of an integrated smoking cessation intervention for mental health patients: study protocol for a randomized controlled trial. *Asia-Pacific Journal of Clinical Oncology*, 15, 266.
- Metse, A. P., Wiggers, J., Wye, P. *et al.* (2016). Uptake of smoking cessation aids by smokers with a mental illness. *Journal of Behavioral Medicine*, 39, 876–886.
- Metse, A. P., Wiggers, J., Wye, P. *et al.* (2017). Efficacy of a universal smoking cessation intervention initiated in inpatient psychiatry and continued post-discharge: A randomised controlled trial. *Australian and New Zealand Journal of Psychiatry*, 51, 366–381.
- National Institute for Health and Care Excellence (2007). *How to Change Practice*. London, UK: NICE.
- New South Wales Department of Health (2002). *Guide for the Management of Nicotine Dependent Inpatients*. Sydney, NSW: State Government of New South Wales.
- New South Wales Department of Health (2005). *Smoke Free Workplace Policy Supplement, Circular 2004/51*. Sydney, NSW: State Government of New South Wales.
- Rigotti, N. A., Clair, C., Munafo, M. R. *et al.* (2012). Interventions for smoking cessation in hospitalised patients. *Cochrane Database of Systematic Reviews*, (5), CD001837.
- Royal College of Physicians and Royal College of Psychiatrists (2013). *Smoking and Mental Health*. London, UK: RCP Council Report CR178.
- Sarna, L., Bialous, S. A., Wells, M. J. *et al.* (2009). Smoking among psychiatric nurses: Does it hinder tobacco dependence treatment? *Journal of the American Psychiatric Nurses Association*, 15, 59–67.
- Sharfstein, S. S. (2009). Goals of inpatient treatment for psychiatric disorders. *Annual Review of Medicine*, 60, 393–403.
- Slattery, C., Freund, M., Gillham, K. *et al.* (2015). Increasing smoking cessation care across a network of hospitals: An implementation study. *Implementation Science*, 11, 28.
- Stead, L. F. & Lancaster, T. (2012). Combined pharmacotherapy and behavioural interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, (10), CD008286.

- Stockings, E. A., Bowman, J. A., Prochaska, J. J. *et al.* (2014). The impact of a smoke-free psychiatric hospitalization on patient smoking outcomes: A systematic review. *Australian and New Zealand Journal of Psychiatry*, *48*, 617–633.
- Stockings, E. A., Bowman, J. A., Bartlem, K. M. *et al.* (2015). Implementation of a smoke-free policy in an inpatient psychiatric facility: Patient-reported adherence, support, and receipt of nicotine-dependence treatment. *International Journal of Mental Health Nursing*, *24*, 342–349.
- Williams, J. M., Miskimen, T., Minsky, S. *et al.* (2015). Increasing tobacco dependence treatment through continuing education training for behavioral health professionals. *Psychiatric Services*, *66*, 21–26.
- Wye, P. M., Stockings, E. A., Bowman, J. A. *et al.* (2017). Effectiveness of a clinical practice change intervention in increasing the provision of nicotine dependence treatment in inpatient psychiatric facilities: An implementation trial. *BMC Psychiatry*, *17*, 56.