Title: Clinician provision of smoking cessation related care and its association with clinician support procedures within Australian community mental health services

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Disclosures: None for any author.

Abstract

Objective: To assess the prevalence of smoking cessation-related care (SCRC) in community mental health services and its association with supportive clinical systems and procedures.

Methods: All community mental health services in New South Wales, Australia were invited to participate in a survey.

Results: Fifty-six percent of services assessed smoking status, 34% reported providing “minimum acceptable SCRC” (recording of smoking status plus brief advice and/or referral for more than 60% of clients). One-third of services had specific SCRC guidelines/protocols; 65% had forms to record smoking status, and 52% always enforced smoking bans. Minimum acceptable SCRC was more likely to be provided if: staff were encouraged to use NRT to quit smoking (OR 9.42); specific forms were used to record smoking status (OR 5.80); and smoking bans were always enforced (OR 3.82).

Conclusion: Provision of SCRC was sub-optimal. Additional supportive systems and procedures are required to increase the prevalence of SCRC delivery.

Introduction

People with mental illness have markedly higher rates of smoking than the general population (1) and suffer more from smoking-related disease (2). Healthcare services are recommended to play a role in addressing the smoking cessation needs of all patients and clients on an opportunistic basis (3). Smokers who receive SCRC from health care providers are more likely to stop smoking (3,4), whilst smoking bans in healthcare settings protect people from environmental tobacco smoke and facilitate both client smoking cessation (5,6) and the provision of SCRC (6).

Despite clinical guidelines supporting the delivery of SCRC by health care providers (3,6,7,8), evidence suggests that provision of such care is infrequent and inconsistent (9,10). Characteristics of the clinical environment reported to support the provision of SCRC by healthcare providers include: the presence of supportive clinical guidelines/protocols and clinical tools; the presence of smoke free policies; clinicians being trained in smoking related care provision; and clinicians themselves being non-smokers (3,6,10). The prevalence of such supportive procedures and systems has been reported to be limited in health care facilities generally (9).

Community mental health services offer considerable potential to provide SCRC to people with mental illness. In Australia, it is estimated that care is

provided for over 330,000 clients annually through over six million service contacts (11). Sixty-two percent of such clients are estimated to be smokers, with 77% reporting an interest in cutting down or quitting (12). Despite this, little research has reported the extent to which community mental health services provide SCRC. One Canadian study has reported that only 31% of clients had their smoking status assessed, 16% of smokers had a discussion regarding smoking, 20% were provided smoking-related counselling, and 21% had their interest in quitting or cutting down assessed (13).An Australian survey of 324 mental health staff drawn from 45 diverse services (both inpatient and community-based) , reported that only one-quarter reported often raising the issue of tobacco use with their patients, with this most likely to do so in response to a specific health concern or if the patient initiated such a discussion (14).

No previous studies have reported the prevalence of clinical system and procedures that support the provision of SCRC in community mental health services, or the association of such supports and SCRC provision. To address this evidence gap a study was undertaken to determine:

1. the prevalence of SCRC provision in Australian community mental health services,
2. the prevalence of systems and procedures that support the provision of such care and,

3. the association between SCRC provision and the existence of such supportive systems and procedures.

Methods

A cross sectional survey of all community mental health services in the state of New South Wales, Australia was undertaken. Services were ineligible if they were residential services, or provided services solely to children, adolescents, or older people (i.e. 65+ years).

A paper-based questionnaire was mailed to the manager of each service. In terms of SCRC provision, managers were asked to report the proportion of clients that had their smoking status assessed, and the proportion of smokers that were provided different forms of SCRC. Managers were also asked whether such care was provided to clients systematically or at the discretion of clients.

In terms of the presence of supportive systems and procedures, managers were asked if the service: had guidelines/protocols that supported the provision of SCRC; used forms to record client smoking status; monitored/audited the provision of SCRC; provided SCRC training to staff in the last 12 months; encouraged staff who were smokers to quit; and had enforced smoking bans (Table 1).

Managers were asked to indicate: their profession, age, smoking status, length of employment in their current role, training in smoking-related care and for their service, how often clients would visit, and average length of client consultations.

Responses relating to the estimated proportion of clients receiving each form of care were collapsed into two categories: “60% of clients or less” and “more than 60% of clients”. A dichotomous variable, “minimum acceptable SCRC” was created defined as a service that recorded client smoking status and offered either smoking cessation brief advice and/or referral to more than 60% of clients (14). Pearson’s chi-square and bivariate logistic regression analyses were used to determine bivariate associations between the existence of supportive systems and procedures and the provision of minimum acceptable SCRC. All variables with a p-value less than .25 were subsequently entered into a multivariate logistic regression model, using a forward stepwise approach, with variables retained in the model if significant at $p < .05$.

Results

Participant and service characteristics

Ninety-four percent (n=79) of service managers completed the survey. The majority were: 40 years or older (83%); never or former smokers (81%); nurses (62%); and had been in their current role for a median of 5 years.

Eighty-seven percent of managers reported that clients were seen for an average of at least 30 minutes for each consultation, with over half of their clients (53%) estimated to visit the services fortnightly or at least monthly and 32% estimated to visit on a daily or weekly basis.

Prevalence of smoking-related care

Slightly more than half (56%) of managers reported that smoking status was recorded for more than 60% of their clients. Fifty-two percent reported that either brief advice and/or referral were provided, and 34% reported that minimum acceptable SCRC was provided to more than 60% of clients. Nineteen per cent of managers reported SCRC was frequently or always initiated as a systematic clinical procedure for all clients. Triggers initiating the provision of SCRC are shown in Table 1.

The following forms of SCRC were reported by managers as being provided to more than 60% of their clients: brief advice (47%), education about risks (37%), recommended use of Nicotine Replacement Therapy (NRT) (26%), monitor medication needs affected by changes in smoking (22%), referral elsewhere excluding Quitline (15%), referral to Quitline (14%), monitor quit attempts (12%), written materials on quitting (11%), monitor the effects of NRT use (11%), monitor withdrawal symptoms (11%), extended advice (8%), and provision of NRT (4%). Negotiating a quit date was not offered by any services to more than 60% of clients.

Prevalence of supportive systems and procedures

Thirty-four percent of managers reported having specific SCRC guidelines/protocols, 65% reported the use of forms to record client smoking status, and 3.8% monitored/audited the provision of SCRC (Table 1). Fifty-nine percent of managers reported no formal training in providing SCRC, whilst 44% reported that staff had received such training within the past 12 months, and 82% reported that staff were encouraged to quit smoking and provided with at least one form of quit support.

All managers reported having total smoking bans for indoor areas, and between 85% and 96% had smoking bans for verandas/balconies, courtyards, and all grounds. Forty-eight percent of managers reported the smoking bans were not always enforced.

In the final regression model, services that always used forms to assess and record smoking status were almost 6 times more likely to provide minimum acceptable SCRC, whilst services that encouraged staff to quit smoking by using NRT were more than 9 times more likely to do so, and services where smoking bans were always enforced were almost 4 times more likely to do so (Table 1).

Discussion

The findings suggest community mental health clinicians do not meet the SCRC needs of clients, as recommended by clinical guidelines. Only 56% of services reported the recording of smoking status for more than 60% of clients, with far fewer (14%) providing the form of care most likely to result in quitting, referral to a Quitline. Minimum acceptable SCRC was provided by only 34% of services, and then not systematically. No more than 34% of services were reported to have SCRC guidelines and only 4% monitored the provision of such care. Nonetheless, the findings suggest that SCRC is greater if services utilise smoking status assessment forms, enforce smoking bans and actively support staff to stop smoking by using NRT.

The low (34%) reported prevalence of minimal SCRC is consistent with previously reported studies in community mental health services (13, 14), and in general and mental health hospital settings (9,10). The finding that SCRC provision occurred most often in response to client factors rather than being systematically being offered is also consistent with the findings of previous studies conducted in mental health settings (10,14). Such findings support those previously reported that the provision of SCRC does not accord with recommendations that smoking be viewed as a chronic disease and treated as such through the opportunistic and systematic delivery of care to all smokers regardless of the presenting condition or client request (7,8).

The prevalence of SCRC guidelines was low (34%), as has been reported in other health service contexts (9,10). The observed lack of concordance with clinical guidelines may be further explained in part by services having limited supportive systems and procedures in place. Despite the benefits of training in aiding the provision of SCRC (3), only 44% of services reported staff receiving such training in the past 12 months, a finding also consistent with mental health inpatient facilities (10).

Despite a state-wide policy suggesting staff interested in quitting smoking should be provided with at least 4 weeks of free NRT (15), only about half of the services provided such support to staff. In contrast, the findings indicate that, in accordance with state policy, most services provided a predominantly smoke-free environment for their clients. Such bans however, appear to not always be enforced with almost half the managers reporting that clients smoked in their facilities. Similar findings have been reported for mental health inpatient settings (10).

Three system and procedural supports were found to be independently and positively associated with the provision of SCRC – the use of forms to record the smoking status of clients, encouraging staff to use NRT to stop smoking, and enforcement of bans. These strategies were associated with a four times or greater likelihood of smoking related care being provided. Such findings confirm those previously reported (10, 14), and reinforce recommendations

that systems-based approaches are required to support clinician delivery of SCRC (3). The frequency and length of consultations reported to characterise community mental health services appear ideally suited to enabling the adoption of such an approach (11).

The findings of this study need to be considered in the context of a number of its design characteristics. First, the study is the first to assess SCRC provision, care delivery supports and the association between care and such supports in community mental health services. Second, the study relies on managers self-report of care provision, a method that is likely to have resulted in an over estimate of care delivery due to social desirability response bias. If this was the case, the actual levels of SCRC are likely to be less than those reported, thereby suggesting that the need for change in clinical practice is even greater. Third, despite a very high participation rate (94%), the sample size (n=79) was small and may have contributed to some associations not being found to be significant due to inadequate statistical power. Fourth, as the sample was drawn from one Australian state (albeit the largest - 32% of the national population), the extent to which the findings generalise to other jurisdictions is unknown. However, as studies conducted in community mental health services in other Australian and international jurisdictions have reported similar sub-optimal care provision (13,14), such findings are unlikely to be restricted to this specific study context. The possibility exists however that differences in

jurisdictional policies and guidelines may be more likely to influence the prevalence of supportive systems and procedures.

In conclusion, the study has shown that the greater need for SCRC by clients of community mental health clients remains largely unmet. The findings suggest a greater adoption of supportive clinical procedures will enhance the provision of such care.

References

1. ABS. (2006). Mental Health in Australia: A Snapshot, 2004-05. Canberra. Report No.: 4824.0.55.001.

2. Sokal J, Messias E, Dickerson FB, et al: Comorbidity of medical illnesses among adults with serious mental illness who are receiving community psychiatric services. Journal of Nervous & Mental Disease 192: 421-7, 2004.

3. Fiore MC, Jaén CR, Baker TB, et al: Treating tobacco use and dependence: 2008 update. Clinical Practice Guideline. Rockville, MD, U.S. Department of Health and Human Services. Public Health Service, 2008.

4. Gorin SS, Heck JE: Meta-analysis of the efficacy of tobacco counseling by health care providers. Cancer Epidemiology, Biomarkers, & Prevention 13: 2012-22, 2004.

5. Callinan J, Clarke A, Doherty K, et al: Legislative smoking bans for reducing secondhand smoke exposure, smoking prevalence and tobacco consumption. Cochrane Database of Systematic Reviews, 2010.

6. Rigotti N, Clair C, Munafo MR et al: Interventions for smoking cessation in hospitalised patients. Cochrane Database of Systematic Reviews, 2012.; 5:CD001837.

7. NSW Department of Health: Guide for the management of nicotine dependent inpatients. Sydney, NSW Department of Health, 2002.

8. West R, McNeill A, Raw M: Smoking cessation guidelines for health professionals: An update. Thorax 55: 987-99, 2000.

9 Freund M, Campbell E, Paul C et al. Smoking care provision in hospitals: a review of prevalence**.** Nicotine & Tobacco Research. 10(5):757-74, 2008 May.

10. Wye PM, Bowman JA, Wiggers JH, et al: Smoking restrictions and treatment for smoking: Policies and procedures in psychiatric inpatient units in Australia. Psychiatric Services 60: 100-7, 2009.

11. AIHW. (2011). Mental health services in Australia, 2008-09. Canberra: AIHW. Retrieved 6 March 2012, from http://mhsa.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=2147484133&libID=2147484130.

12. Moeller-Saxone K: Cigarette smoking and interest in quitting among consumers at a psychiatric disability rehabilitation and support service in Victoria. Australian and New Zealand Journal of Public Health 32: 479-81, 2008.

13. Johnson JL, Malchy LA, Ratner PA, et al: Community mental healthcare providers' attitudes and practices related to smoking cessation interventions for people living with severe mental illness. Patient education and counseling 77: 289-95, 2009.

14 Ashton M, Lawn S, Hosking JR. Mental health workers' views on addressing tobacco use. Aust NZ J Psychiatry 44: 846-51, 2010.

15. Centre for Health Advancement: Smoke free workplace policy - Progression of the NSW Health. Sydney, Department of Health, 2005.

Table 1. Prevalence of SCRC, supportive systems and procedures and associations between care and systems and procedures

Service Characteristics	**Services %**	**Univariate[a] p-value**	**Multivariate[b] Odds Ratio**	**95% CI [b]**
Support for Staff to Quit Smoking N=79				
• Encouragement of NRT use	70	.01*	9.42	2.18-40.68
• Incentives	8	.17*	ns	
• Provision of free NRT	51	.16*	ns	
• Provision of subsidised NRT	24	.42	-	
• Support Groups	17	.76	-	
Smoking Behaviour at the Services				
• Staff smoke with clients at least occasionally n=74	26	1.00	-	
• Smoking bans always enforced N=79	52	.10*	3.82	1.22-11.98
Triggers of SCRC Provision occasionally/frequently/always (reference: never)				
• Staff discretion n=72	76	.39	-	
• Complaints about smoking at the service n=70	31	1.00	-	
• Client interest n=72	92	1.00	-	
• Client illness n=72	74	1.00	-	
Formal Training in SCRC provision				
• Staff Formal Training in Last 12 Months n=78	44	.34	-	
• Manager Formal Training in Last 5 Years n=73	30	.80	-	
Protocols and Support				

Systems N=79				
• Forms/records to assess/record smoking status	65	.01*	5.80	1.59-21.11
• Monitors/audits provision of care	4	.04*	ns	
• Specific smoking-related care guidelines	34	.21*	ns	
• Measures to assess level of nicotine dependence	9	.69	-	
• Monitors/audits recording of smoking status	17	.76	-	
• Total number of protocols/ support systems for care provision (n=78)	1.27±1.06	.02*	ns	

[a] Chi-square or univariate logistic regression to compare association with provision of minimum acceptable SCRC. [b] Multivariate logistic regression model using forward stepwise approach. * p<.25, entered into multivariate logistic regression. x = not included in multivariate analysis. ns = not significant (p<.05) in multivariate analysis.