New South Wales Health Promotion Demonstration Research Grants Scheme

THE CLEAN AIR FOR ALL PROJECT



MANAGING NICOTINE DEPENDENCE IN TWO MENTAL HEALTH UNITS IN SYDNEY SOUTH WEST

NSW HEALTH

NSW DEPARTMENT OF HEALTH

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Foreword

NSW Health is strongly committed to reducing tobacco smoking by people in New South Wales. This will greatly reduce the burden of chronic disease in NSW and result in a healthier population. In addition to the burden of their psychiatric condition people with mental health problems experience greater physical ill health from a range of smoking related diseases. The prevalence of smoking among people with some psychiatric conditions is two to three times higher than the general population.

In order to better protect the health of those who use health services, and in the interests of staff working in those services, NSW Health has introduced restrictions on smoking on NSW Health campuses. The aim of the NSW Health Smokefree Workplace Policy is to reduce the harms associated with tobacco use amongst staff, patients and visitors, especially exposure to passive smoking and to provide a clear and consistent message to the community about the hazards of smoking.

The *Clean Air For All* project was funded under the NSW Health Promotion Demonstration Research Grants Scheme as an innovative project aimed at establishing procedures to assess and treat nicotine dependence in patients admitted to mental health units in the Sydney South West Area Health Service. The project has demonstrated that with the support of staff in mental health units, patients who smoke can successfully use nicotine replacement therapy to deal with their nicotine dependence whilst an inpatient.

The recommendations of this project have great importance for the welfare of patients of mental health units across NSW during the introduction of entirely smoke free NSW Health campuses. Mental health units across NSW should consider the recommendations of this project and adopt actions to support mental health patients to quit smoking and so improve their health in the longer term.

I congratulate the work of Sydney South West Area Health Service in implementing this innovative research project and producing such an informative report. The project is a good example of the innovative research funded by the NSW Health Promotion Demonstration Research Grants Scheme and one that will undoubtedly inform health policy and service delivery in NSW.

Dr Denise Robinson Chief Health Officer and Deputy Director-General, Population Health

Executive summary

Tobacco smoking contributes significantly to morbidity and premature mortality from a range of physical conditions, and has also been linked to mental health problems and disorders. People with mental health problems and disorders suffer excess morbidity and mortality from a number of tobacco-related diseases. The prevalence of smoking among people with mental health problems and disorders is significantly higher than the general population and many of these people are heavy smokers.

The Project

The primary focus of the *Clean Air for All* (CAFA) project was on managing nicotine dependence in Liverpool and Bankstown mental health units in South Western Sydney to support the implementation of the fourth phase of the NSW Health Smoke Free Workplace Policy (SFWP). The SFWP plan aimed to have all health care facilities across NSW totally smoke free by September 2002. However, the Phase 3 review period was extended and the state wide deadline removed. A Policy Directive issued in September 2004 provides criteria for progression to Phase 4 – smoke free campuses.

The CAFA project was conducted over an 18-month period from July 2001 to December 2002. Nursing staff in the mental health units participated by informing patients who smoked of the SFWP and the CAFA project; assessing the nicotine dependence of smokers using the Fagerström Test for Nicotine Dependence (FTND); offering free nicotine replacement therapy (NRT) and/or advice and counselling as appropriate; and offering follow-up through General Practitioners (GPs) for those who requested to receive NRT post-discharge. Medical officers were responsible for the prescription of NRT, which was then dispensed by the hospital pharmacy.

A range of organisational development strategies such as having a management committee and working parties, process/protocol development, training/ education, monitoring and feedback, and informal rewards supported the intervention process.

Results

The records of 2407 patients were assessed during the project period. Follow-up interviews with patients who used NRT and surveys of nursing staff and GPs were also conducted. Just over half (56%) of the patients were identified as current smokers and assessment of nicotine dependence was completed for 35 per cent of patients who smoked. Of those patients who smoked who were also assessed for nicotine dependence, 81 per cent had medium, high or very high dependence scores (FTND \geq 5), which meant they were eligible to receive the NRT intervention.

The offer of NRT was made to 77 per cent of patients who were eligible to receive the NRT intervention, and 27 per cent of these patients chose to use NRT. Patches were the most common type of NRT used by patients (92%). Patients in Liverpool were nearly three times as likely to be offered and to use NRT compared to patients in Bankstown. Males were three times more likely than females to use NRT, and patients who used NRT had a longer stay in hospital than those who did not use NRT (19 days compared to 15 days). Some patients also used the opportunity presented by the CAFA project to attempt to quit smoking.

Although staff education was provided during the project, only a small number of those surveyed recalled receiving training in areas related to the management of nicotine dependence. High staff turnover may explain this discrepancy. Despite this, a high proportion of staff correctly identified the majority of the symptoms of nicotine withdrawal.

There were several system, staff and patient factors that impeded the intervention process. These included: the introduction of the Mental Health Outcomes Assessment Tool (MHOAT); lack of management and staff support; high staff vacancies; patient state of mind and unwillingness to comply; NRT not ordered by the doctor; and the impact of short lengths of stay. A number of suggestions are made that may improve the outcomes of similar programs in mental health settings.

Conclusions and recommendations

Findings from the project confirm that nicotine dependence is an important issue among patients of mental health units. The CAFA project demonstrated that NRT is acceptable to many staff and patients of mental health units and important for managing nicotine dependence in the context of a Smoke Free Workplace Policy. Patients also used NRT to assist them to attempt to quit smoking, even after discharge.

Where strong support for a smoke free mental health unit exists (such as the introduction of phase four of the SFWP), interventions to manage smoking behaviour are likely to be more pressing and also more successful. A greater focus on organisational change may also lead to better outcomes. The process and tools developed for the CAFA project can be adapted for implementation in other mental health settings.

Several specific recommendations are made in relation to the intervention process and the implementation of smoke free mental health units:

- In the absence of a firm policy, mental health units are unlikely to become smoke free.
 The implementation of a policy banning smoking in mental health units is therefore strongly advocated.
- Nicotine dependence should be routinely assessed in all tobacco users admitted to mental health units (consistent with the NSW Health publication, Guidelines for the Treatment of Nicotine Dependent Inpatients) and treatment should be offered and reviewed according to patient response.
- All mental health units should have clear protocols and procedures to manage nicotine dependence and smoking cessation. These need to address system, staff and patient factors.
- Mental health units need to support all patients who are motivated to quit smoking.
- Accountability for the management of nicotine dependence should be included in performance agreements and duty statements of managers and relevant staff.
- A range of responses should be available, based

on each patient's level of nicotine dependence. This should include pharmacological (ie NRT options including transdermal patch, lozenge and gum) and non-pharmacological supports (ie counselling, groups etc). Treatment matching guidelines should be used to inform the dosing of NRT.

- NRT should be delivered in a timely manner. This is likely to require the implementation of nurse-initiated NRT and the development of standing orders.
- Further research is required to provide a higher level of evidence of the effectiveness of nicotine replacement initiatives in mental health settings.

Abbreviations

List of abbreviations used:

AIHW	Australian Institute of Health and Welfare
CAFA	Clean Air for All
COPD	Chronic obstructive pulmonary disease
DALYs	Disability Adjusted Life Years
ETS	Environmental tobacco smoke
FTND	Fagerström Test for Nicotine Dependence
GP(s)	General Practitioner/s
IHD	Ischaemic heart disease
LOS	Length of stay
МНОАТ	Mental Health Outcomes Assessment Tool
NRT(s)	Nicotine replacement therapy/ies
NSW	New South Wales
NUM(s)	Nurse Unit Manager/s
SFWP	Smoke Free Workplace Policy
SWSAHS	South Western Sydney Area Health Service
wно	World Health Organisation

Introduction

1.1 Background

Tobacco smoking is a leading risk factor for disease, contributing significantly to premature mortality and morbidity both nationally and world wide. According to the World Health Report 2002, tobacco is the leading health risk factor for developed countries, accounting for about 12 per cent of all disease and injury burden as measured by Disability Adjusted Life Years (DALYs) (WHO, 2002). In Australia in 1996, tobacco was identified as the risk factor associated with the greatest burden of disease, accounting for approximately 9.7 per cent (242,138) of total DALYs. The majority of the disease burden is due to premature mortality (Years of Life Lost 76%; 183,380). Most of the health burden of tobacco is attributed to lung cancer (3.0%), chronic obstructive pulmonary disease (COPD) (2.4%) and ischaemic heart disease (IHD) (1.5%) (Mathers, Vos & Stevenson, 1999).

People with mental health problems and disorders experience poorer physical health than the general population and suffer excess morbidity and mortality from a range of physical conditions linked to smoking (Lawrence, Holman & Jablensky, 2001; Davidson et al, 2000; Brown, Inskip & Barraclough, 2000; Harris & Barraclough, 1998; Ruschena et al, 1998; Baxter, 1996). Mortality rates from cardiovascular and respiratory diseases are up to two to three times greater among patients with a psychiatric illness (Lawrence, Holman & Jablensky, 2001; Brown, Inskip & Barraclough, 2000; Ruschena et al, 1998; Brown, 1997; Amaddeo et al, 1995). A study by Brown, Inskip and Barraclough (2000) also found high mortality rates from neoplasms among patients with schizophrenia and that overall mortality rates were significantly raised for smokers and for smoking related disease.

A Western Australian study of physical illness in psychiatric patients by Lawrence, Holman and Jablensky (2001) found that although there has been a steady decline in IHD in the general population, rates of IHD in psychiatric patients have remained constant for males, but have increased for females (Lawrence, Holman & Jablensky, 2001; Lawrence et al, 2003). This study and others have highlighted the inequity in the delivery of health care for physical illnesses affecting people with mental health problems and disorders, identifying that they are more likely to go undiagnosed and untreated. They also highlight the need for interventions to ensure that people with mental health problems and disorders receive holistic care and the same health promotion interventions that are available to the wider community (Lawrence, Holman & Jablensky, 2001; Davidson et al, 2000).

1.1.1 Smoking prevalence

The 2001 National Drug Strategy Household Survey reported that 21.1 per cent of all Australians aged 14 years or older smoked daily or weekly (AIHW, 2002). The prevalence of current smoker (daily or occasional smoking) in residents of SWSAHS and NSW was estimated to be 27.3 per cent and 22.5 per cent respectively in 2003 (NSW Department of Health, 2004).

The prevalence of smoking among people with mental health problems and disorders is significantly higher than for the general population. Several studies have found that approximately 60 per cent of people with mental health problems smoke daily. The majority are heavy smokers, smoking more than 20 to 25 cigarettes per day (Kelly & McCreadie, 1999; Davidson et al, 2000, 2001; Brown et al, 1999). Among people with schizophrenia, smoking rates have been found to be as high as 88 per cent (Glassman, 1993).

1.1.2 Smoking and mental health

Research that attempts to explain the high prevalence of smoking among people with mental health problems and disorders has primarily focused on the interactions of nicotine and mental health, and the biological processes related to nicotine intake. One perspective presented in the literature is that nicotine is often used by people with mental health problems and disorders to self-medicate: this particularly applies to those with schizophrenia (McNeill, 2001). Several hypotheses have been identified that are consistent with a self medication view: that it helps alleviate some of the positive and negative symptoms of mental health problems; that it improves cognition; and that it may also help to alleviate the side effects associated with anti-psychotic medications (McNeill, 2001). The high prevalence of smoking among people with mental health problems and disorders may also be due to difficulties with tobacco cessation. However, there is increasing evidence that these people are able to stop smoking with substantial success (McNeill, 2001). A 1997 study by Addington et al (1997) of sixty individuals with schizophrenia found that more than half were interested in smoking cessation and if they were to consider quitting most of them were intrinsically motivated. In 1998, Addington and colleagues conducted another study to assess the efficacy of a smoking cessation group program for patients with schizophrenia. The study found that 42 per cent of the patients had stopped smoking at the end of the group sessions (Addington et al, 1998). A 2000 study by Lasser et al (2000) of adults with and without mental illness found that smokers with any history of mental illness or who reported suffering from a mental illness in the past month had self-reported guit rates of 37.1 per cent and 30.5 per cent respectively, compared with 42.5 per cent for smokers without mental illness.

There is increasing evidence that smoking may cause mental health problems and disorders. Several studies have found that regular and heavy smoking is associated with an increased risk of anxiety or panic attacks, particularly among young adults (McNeill, 2001; Johnson et al, 2000; Goodwin & Hamilton, 2002; Breslau & Klein, 1999; Isensee et al, 2003). A study conducted by Breslau et al (1998) found that a history of daily smoking significantly increased the risk of major depression in young adults.

1.1.3 Nicotine dependence and mental health

Nicotine dependence is a recognised psychiatric disorder, however it is often overlooked by mental health professionals (McNeill, 2001). It is also important to distinguish nicotine dependence from smoking given that not all smokers are nicotine dependent (Hughes, 2001).

In 2000, the US Department of Health issued guidelines for the management of tobacco dependence and included some information on smokers with psychiatric co-morbidity. The guidelines promote the following:

- documentation of each inpatient's tobacco use past and present
- inclusion of smoking as a health problem at admission and discharge

- the use of counselling (behavioural) and pharmacotherapy to assist smokers to maintain abstinence and manage withdrawal
- that smokers of more than 10 cigarettes per day be offered NRT, provision of advice, and assistance on steps to take to quit during hospitalisation and how to remain abstinent after discharge (Fiore et al, 2000).

These evidence-based guidelines formed the basis of most of the procedures used in this project.

1.1.4 Smoke free policies in mental health settings

Several studies have focused on the effects of smoke free policies within psychiatric inpatient units. A review of these studies by el-Guebaly et al (2002) found that total or partial smoking bans have no major longstanding untoward effects on patients, as measured by the behavioural indicators of unrest or compliance. A study by Patten et al (1995) found that smoke free policies produce significantly fewer adverse effects than staff anticipate and that they improve staff attitudes towards a smoke free environment. The smoke free policies implemented in these studies focused on indoor areas.

1.2 Rationale for the project

The greater smoking prevalence and risk of harm associated with tobacco led to people living with a mental health problem or disorder being identified as a priority population in the local tobacco strategic plan, *Tobacco Control in South Western Sydney: Strategic Plan for Improving Health 2000–2005* (SWSAHS, 1999). As part of the plan, the focus of the strategy for people living with a mental health problem or disorder was to develop and implement a smoking cessation intervention to decrease the prevalence of smoking. In 2000, a pilot project, Mental Health Goes Smoke Free was funded by the SWSAHS Health Promotion Unit through the Tobacco Control Grants Programme.

The *Mental Health Goes Smoke Free* pilot project aimed to facilitate the implementation of the NSW Health Smoke Free Workplace Policy (SFWP) in the Bankstown and Liverpool mental health units. A variety of strategies were implemented to assist staff and patients to reduce or quit smoking. Staff were provided with education on smoking and mental health and subsidised NRT was offered to both staff and patients (Rich, 2001). Nine staff and four consumer advocates attempted to quit smoking and 16 patients used NRT as part of the trial. Three staff, two consumer advocates and one patient successfully quit and were tobacco free for longer than three months (Rich, 2001). However, there was no systematic record keeping or formal development of procedures, and NRT was not routinely offered to all patients who smoked. The project did not follow up patients on discharge and further work was required to facilitate sustainability and to thoroughly evaluate both short and long-term effects and costs.

The overall recommendation from the pilot project report was that the interventions designed and trialled in the project should become standard hospital practice. In order for this to be effectively achieved, it was suggested that policies and procedures be amended to reflect the practices used in the CAFA project: designated staff members would undertake to ensure the new procedures were being implemented; training would be provided to community mental health staff so that the skills patients learnt would not be lost at discharge; and participation in the program and progress with using NRT or quitting smoking should be included in discharge summaries (Rich, 2001).

In September 2000, SWSAHS began the second phase of the NSW Health SFWP. The SFWP implementation plan initially aimed to make all premises of health care facilities (including outdoor areas) across NSW totally smoke free by September 2002. During the implementation of phases two and three of the policy, exemptions were available for specific patient groups and staff (NSW Health, 2000). These exemptions included the outdoor courtyard areas in both Liverpool and Bankstown mental health units. However, with the introduction of phase four, it was expected that these areas would no longer be exempt. Effectively this meant that mental health patients would not be able to smoke during their stay in hospital.

1.3 Clean Air for All (CAFA) project

The *Clean Air for All* (CAFA) project was conceived early in March 2000. Against the background of the SFWP and the pilot project, both the Area Clinical Nurse Consultant in dual disorders and the Staff Specialist of the Fairfield General Practice Unit separately applied for grants in late 2000. Both applicants sought to use the grants to initiate programs addressing the high incidence of smoking and subsequent health problems amongst mental health clients. The projects were sufficiently similar to benefit from amalgamation and the CAFA project is the result of negotiations between the original proposers. In December 2000 the CAFA project was successfully funded through the NSW Health Promotion Research Grants Scheme and received \$38,449.44.

An application to the SWSAHS Human Research Ethics Committee was submitted for the project and it was approved in December 2000. Application for extension on the ethics approval was submitted at 12-month intervals.

The primary focus of CAFA was on managing nicotine dependence in mental health units to support the implementation of the SFWP. However, support for patients wishing to attempt to quit was also incorporated into the study design. In addition, the project aimed to raise the profile of nicotine dependence as a manageable/treatable health problem in psychiatric inpatients, and to challenge the prevalent pro-smoking attitudes among some mental health staff and patients.

1.3.1 Project goals and objectives

Goals

- To achieve a smoke free environment in the inpatient mental health units of Liverpool/Fairfield and Bankstown hospitals by September 2002 in line with the NSW Health Smoke Free Workplace Policy.
- To trial and assess the effectiveness of an approach to managing nicotine dependence and/or quitting smoking for people with a mental health problem or disorder while they were inpatients of the Liverpool/Fairfield or Bankstown mental health units from March 2001 until September 2002.

Objectives

- 1. To develop policies and protocols regarding the management of nicotine dependence in a mental health inpatient facility, including:
 - appropriate recording of information on smoking status and level of nicotine dependence in the medical records of all inpatients on admission from March 2001
 - establishing and maintaining accurate records of each patient's psychiatric diagnosis, offer of NRT, acceptance of NRT, use of NRT, significant side effects including aggression, effects on other medication doses, and alteration (if any) of smoking behaviour.
- 2. To increase the skills of staff and consumer advocates in managing nicotine dependence.
- 3. To assess the uptake of NRT for patients in an inpatient unit over the following time frames:
 - those who try NRT during their admission
 - those who use NRT during their entire admission
 - those who continue with NRT after discharge.

1.3.2 Project management

A project officer was employed commencing May 2001 to oversee day-to-day activities, to support the management committee and working groups, and to generally manage CAFA. The project officer was employed to work part-time for 16 hours a week for the first eight months, increasing to 18 hours for the remainder of the project.

A management/advisory committee was convened to oversee and promote the project. It consisted of three project coordinators, a project officer and representatives from mental health, health promotion, general practice and NSW Health.

Working groups in Liverpool and Bankstown were convened to provide a forum to share information and allow staff to raise issues relating to the project. Issues raised would then be communicated to the management committee through project officer reports. The working groups included a Nurse Unit Manager (NUM), the project officer, a project coordinator, a consumer advocate and interested staff.

The intervention

The focus of the study was to assess the effectiveness of offering NRT to patients who were smokers when admitted to the Liverpool or Bankstown mental health units between March 2001 and September 2002 as a means of managing nicotine dependence and/or assisting patients to quit smoking. The SFWP implementation plan aimed to have all health care facilities including mental health units across NSW totally smoke free by September 2002.

In the period 2001–02 the Liverpool and Bankstown mental health units each had 30 inpatient beds and an average length of stay (LOS) of 10.75 and 12.72 days respectively (SWSAHS, 2003).

At the commencement of the project, the only NRTs registered for use in Australia were transdermal nicotine patches, nicotine chewing gum and nicotine inhalers. These products were available over-the-counter at pharmacies, without prescription. During the project, an eight-week supply of NRT (patches and/or gum) was available free of charge to eligible patients. This could be used while in hospital and post-discharge.

The CAFA project used an organisational development approach to encourage brief intervention to manage nicotine dependence. It was delivered by existing staff in addition to their usual duties. As part of the project, nursing staff were asked to conduct the following tasks in addition to their normal duties:

- inform patients who smoke of the SFWP and the CAFA project
- assess the nicotine dependence of smokers
- offer NRT and/or advice and counselling as appropriate
- offer follow-up through GPs for those attempting to quit smoking upon discharge.

It was intended that where possible the project would fit into existing systems to limit its impact on the usual duties of the staff.

In addition to staff attitudes, it was anticipated that the willingness of patients to try NRT would be an important factor affecting the outcome of the project.

2.1 Protocols developed for the project

A set of protocols was developed for the project, which was to be used by ward staff and GPs supporting patients discharged on NRT (Appendix 1). The project protocols for the mental health units and GPs included processes for admission; inpatient NRT; patients discharged on NRT; pharmacy systems on discharge; and post-discharge contact for patients choosing to remain smoke free. Management in each unit, including community health facilities, received the protocols as part of an information package. The GPs received the protocols when patients were discharged.

2.2 Information packages

Prior to the commencement of the project, each staff member working in the Liverpool and Bankstown mental health units received a personalised letter describing the project, how it would be implemented and its duration (Appendix 2). A flow chart highlighting the project processes was placed on the back of the letter to staff (Appendix 3). Each director, manager and senior health professional employed in the mental health units, and managers of Community Mental Health Teams employed in the areas covering Fairfield, Liverpool and Bankstown, received an information package regarding the project. The packages contained:

- a staff letter
- copies of protocols
- a project flow chart
- a patient information sheet
- a consent form
- the Fagerström Test For Nicotine Dependence (FTND)
- readings on NRT (Hurt et al, 1994; Fredrickson et al, 1995; Dale et al, 1995; Jorenby et al, 1995; Salin-Pascual et al, 1996; Benowtiz, Zevin & Jacob, 1998; Hughes et al, 1999; Batra, 2000)
- a copy of the letter sent to the GPs whose patients were being discharged on NRT.

Check lists reminding staff of the project were placed on the front of each patient record folder and copies of flow charts were placed in nursing stations to aid staff when assessing patients.

2.3 Staff education

As part of the pilot project a group of eight staff and two consumer advocates attended the University of Sydney Nicotine Addiction and Smoking Cessation training course. Attendance was conditional on the participants conducting training courses for their peers and providing assistance in the mental health units participating in CAFA.

In addition, the project officer, in conjunction with project coordinators and NUMs, provided more general tobacco-orientated education for staff participating in CAFA on smoking, smoking and health, smoking and mental illness, and nicotine/medication interactions. The project officer continued to educate staff individually throughout the project. Training and support was also provided to the staff of the pharmacies at both hospitals. Training sessions for community case managers and management staff were conducted to assist them when following up patients discharged on NRT and in informing pre-booked patients of the project before they were admitted to the units. The Academic Department of General Practice provided education and training in the management of nicotine addiction and prescription of NRT for junior and senior medical staff. Ongoing support and training was provided as required.

2.4 Patient recruitment

Figure 1 outlines the process of patient recruitment to the intervention. It provides an overview of the assessment of smoking status, provision of patient information, assessment of nicotine dependence, and acceptance of NRT.

2.4.1 Assessment of patient smoking status

During admission to the mental health unit, each patient was asked about their current smoking status. This was then recorded in patient records by nursing staff.

2.4.2 Patient information

As part of the admission procedure, all patients identified as current smokers were given a project information sheet by nursing staff (Appendix 4).

A pamphlet titled *Clean Air for All* was developed to inform relevant inpatients about the safety of NRT, how NRT works, and about the SFWP (Appendix 5). Contact numbers were included for patients wanting to find out more about NRT or the project. The pamphlet was placed in patient information stands in both mental health units. As these were in public areas it was hoped that some visitors would read them and encourage patients to take part in the project.

Posters promoting the project and the availability of free NRT were displayed in patient recreation areas, on patient notice boards and in nursing stations.

Each of the units involved with the project already employed a consumer advocate to assist with patient needs. Following discussion on how the project would operate, these advocates informed patients of the availability of free NRT and, during group meetings and their usual visits, provided leaflets. They also encouraged patients who wanted to try NRT to ask staff if it could be organised for them.

2.4.3 Assessment of nicotine dependence

During the admission procedure, all patients identified as current smokers were to be assessed for nicotine dependence by nursing staff using the Fagerström Test for Nicotine Dependence (FTND). Patients with a score of five or more (medium, high or very high nicotine dependence) were eligible to receive the NRT intervention. Patients who did not meet the criteria to receive the NRT intervention (those with a score of four or less, corresponding to very low to low nicotine dependence), were to receive advice and counselling from staff.

2.4.4 Offer and acceptance of NRT

Patients who were eligible to receive the NRT intervention were informed how NRT, in the form of patches or gum, could help them to manage the symptoms of withdrawal whilst they were an inpatient of the mental health unit. They were encouraged to try NRT at least once during their admission if there were no identified contraindications. No restriction was placed on the number of times a patient could try NRT and no coercion was used: it was communicated that there was no expectation that patients would quit permanently, unless they specifically desired to do so.

Those patients who accepted the offer of NRT were asked to complete a consent form or give verbal consent to be part of the project and for follow-up after discharge (Appendix 6). Patients were then

Figure 1. Recruitment of patients to the intervention



prescribed a suitable dosage of NRT by medical officers, and the prescription was then dispensed by the pharmacy. The treatment matching section added to the FTND was to be used as a guide to prescription of NRT. Patients with a medium to high nicotine dependence score (5–7) could be offered one 21 mg patch: patients with a very high nicotine dependence score (8+) could be offered up to two 21 mg patches plus 4 mg gum as required. Patients who declined the offer of NRT were offered advice and counselling.

Figure 2 provides an overview of the process for patients discharged on NRT.





The protocols distributed to patients' GPs upon discharge were to inform them of the project. It was intended that visits to the GP (and in some cases also a community case manager) would provide support and monitoring. Following discharge, the GP Staff Specialist contacted the patient's GP to tell them about the CAFA project and to inform them that their patient was being discharged with ongoing NRT. If the patient did not have a GP an attempt was made to link them to one through the SWSAHS GP Shared Care Mental Health Program. The GPs were asked to support their patient's attempt to quit smoking. All patients choosing to quit smoking had a medical discharge summary in addition to a discharge letter for the GP (Appendix 7).

In order to receive NRT after discharge, patients needed to meet the following criteria:

- consent to be followed up as part of the project (written and verbal consent were acceptable)
- used NRT continuously for at least three days prior to discharge.

Patients who met these criteria would be eligible to receive free NRT for up to eight weeks (including the NRT last used continuously during hospitalisation) to support their attempt to quit smoking. Patients were required to collect NRT from the hospital pharmacy on a weekly basis. The treatment course was terminated for patients who returned five or more days late to collect their weekly supply of NRT.

2.5 Progress reports

Regular progress reports were completed as a means of monitoring the implementation of the project and providing feedback on project outcomes. The project officer provided monthly reports to the management committee at each meeting. The report contained information relating to the project officer's activities, concerns raised at working parties, factors affecting the project, and steps taken to enhance the project and its outcomes. Quarterly project progress reports were submitted to NSW Health. These reports provided an update of the project outcomes. A progress report was provided to the General Managers of Liverpool and Bankstown hospitals after 12 months.

2.6 Factors affecting the implementation of the project

During the project period there were several factors that affected the implementation of the project. These included staffing issues, negative staff attitudes, and the introduction of a new state-wide mental health assessment and recording system

Throughout the project, high nursing staff turnover, high vacancy rates, and reliance on large numbers of casual nursing staff were ongoing issues. The rotation of medical registrars created a continuing need for education on the project. There were also losses of key staff trained to help facilitate the project and some experienced staff who were committed to the project left during the project period. State-wide industrial action by nursing staff may also have affected the project.

Negative staff attitudes were a major obstacle. Some staff indicated that they were already overworked without having to participate in CAFA. They also questioned the relevance of the project. A small minority of staff disadvantaged the data collection by removing FTND forms from the medical records.

The introduction of the Mental Health Outcomes Assessment Tool (MHOAT) had a significant impact on the project, as it appeared to divert staff attention and energy. It was seen as competing with CAFA for training and other resources – including time – and therefore the project was allocated a lower priority by some clinical staff and administrators. In Liverpool, a change in nursing practice from task-orientated duties to a primary nursing model of patient care during the project caused some distraction to nursing staff. During the project Liverpool also became an open (unlocked) unit, causing further short-term distraction to staff, patients and consumer advocates.

During the project, steps were taken to address some of the issues previously identified. Small incentives such as thankyou cards, cakes and chocolates were given to staff on a regular basis to encourage participation in the project and to acknowledge staff commitment and hard work. Newsletters were used to provide information to staff regarding the progress of the project, to update staff on project protocols, and to acknowledge staff contributions. The newsletters were distributed in February, July and October 2002. The project officer also provided positive verbal feedback during visits to each unit and a monthly report on project outcomes. In addition to the factors affecting the implementation of the project, there were some differences between the planned and the actual time frame for the project.

The project began in July 2001 and continued until December 2002. The anticipated introduction of phase four of the SFWP in September 2002 provided an opportunity to monitor project results after the introduction. It may also have enhanced staff motivation and participation. However, phase four of the SFWP was not implemented in September 2002 as planned. However, the Phase 3 review period was extended and the state-wide deadline removed. A Policy Directive issued in September 2004 provides criteria for progression to Phase 4 – smoke free campuses.

There were some discrepancies between the project processes outlined in the protocols and the flow chart disseminated to staff and the intended process. The process outlined in the protocols and the flow chart failed to inform patients of the SFWP, and did not ensure all contraindications were assessed prior to offering NRT.

Research methods

3.1 Study design

The study evaluated the feasibility of managing nicotine dependence and withdrawal by offering NRT.

3.2 Data collection-objective 1

During admission staff were expected to assess a patient's smoking status and level of nicotine dependence using the Fagerström Test for Nicotine Dependence (FTND), and record it in patient records. The project officer reviewed the patient records on a weekly basis and collated this and other relevant patient information into a data collection form.

3.2.1 Patient records

Nursing admission notes, MHOAT forms and patient continuation reports were used to collect information on patient smoking status. Medication sheets were used to collect information on pattern of NRT use.

Prior to the implementation of MHOAT in March 2002, patient smoking status was recorded either in the nursing admission notes or, if the patient had initially been admitted for a medical condition, in the medical officer admission notes. Nursing admission forms continued to be used in Bankstown, however in Liverpool, the MHOAT *A1: Assessment of Current Presentation Form* that gathered information on recent substance use (including nicotine use in the past month) was used.

Bankstown had been part of the trial of MHOAT; and its implementation began in Liverpool in March 2002. Since the nursing admission form was no longer used in Liverpool, the A1: Assessment of Current Presentation Form was used to identify smoking status. The medical officers were responsible for completing these forms. As the forms were implemented before training was provided to the medical officers, the information about smoking status was not completed. When the new system was introduced, the CAFA project information, consent form and FTND were no longer placed in the patient admission files. This created problems with the implementation of the project at Liverpool. An informal meeting was held with the NUM and the nurse educator at Liverpool and arrangements were made for the CAFA project information, consent

form and FTND to be placed in patient admission files once more. The medical officers also began to receive the MHOAT training, and the project resumed in Liverpool in April 2002.

3.2.2 Fagerström Test for Nicotine Dependence (FTND)

The FTND was used in the project to assess nicotine dependence, with a treatment matching schedule attached. The FTND is a standard method of determining nicotine dependence levels. The test was also chosen for its simplicity, ease of completion and validity in assessing nicotine dependence. The test consists of six questions identifying patterns of smoking. Each question is scored using a point system. A total score is then calculated and the level of dependence determined. The FTND scores are defined as follows:

- 0-2 = very low dependence
- 3-4 = low dependence
- 5 = medium dependence
- 6-7 = high dependence
- **8**+ = very high dependence (Heatherton et al, 1991).

At both units a FTND was placed in each file prior to patient admission. The test was administered by nursing staff during the admission interview process.

A treatment matching schedule was developed for the project and it was attached to the FTND in an effort to assist medical staff when prescribing NRT (Appendix 8).

The treatment matching section provided guidance and flexibility for offering and subsequently prescribing NRT; however there was an overlap of treatment options for patients with medium or high nicotine dependencies. The flexibility created problems with analysis and interpretation. As a result, the offer and prescription of NRT was analysed on the basis of categories previously outlined in Section 2.4: Offer and acceptance of NRT.

In April 2002 a check box was added to the FTND at the request of nursing staff, to identify whether the patient had been offered NRT and whether they had agreed to try it. Prior to this, the offer and acceptance was simply written on the FTND. In mid-2002, NSW Health released the *Guide for the management of nicotine dependent inpatients*. The guide recommends that where time and resources are limited, two items from the original FTND can be used to determine dependence (NSW health, 2002). The project coordinators decided not to change to the two-item FTND as the project was nearing completion and the change may have confused staff.

3.2.3 Data collection form

A data collection form was developed for the project and was used to collect information on patients who were identified smokers. The form contained four main sections with a total of 28 questions. Information collected included demographics; LOS; psychiatric diagnosis; medication; FTND score; contraindications to NRT; pattern of NRT use; and whether consent was given for follow-up (Appendix 9). The project officer completed the form using patient records.

Although it was planned to keep records on significant side effects of NRT, including aggression and the effect of NRT on other medication doses, this proved to be too difficult in the project context.

3.3 Data collection – objective 2

The training provided to staff involved in the pilot project aimed to increase their knowledge and skills in managing nicotine dependence. The eight staff and two consumer advocates trained as part of the pilot project were expected to conduct training for their peers and provide assistance in the mental health units participating in CAFA. In November 2001 the people who were trained were sent a self-assessment memo to identify the training they had conducted in the last six months. Three people responded to the memo, four people had left in the early stages of the project and three people did not respond. Of the three who responded, one reported that they had conducted three in-services with nursing staff and students, and the other two reported no activities.

Education sessions for staff were conducted by the project officer in conjunction with project coordinators, the Tobacco Control Coordinator and NUMs. Three education sessions were conducted for staff in Liverpool, and one in Bankstown. Two in-service training sessions were conducted to support the staff of the pharmacies at both hospitals. The Academic Department of General Practice conducted two training sessions in the management of nicotine addiction and prescription of NRT for junior and senior medical staff.

One of the Liverpool education sessions was used to brainstorm strategies staff might use to cope with nicotine dependence in a completely smoke free unit. A one-page summary of the outcomes of the session is included in Appendix 10.

There were several issues related to the monitoring of the changes in skill level of staff. There was no evaluation of the training conducted in terms of changes in knowledge and/or skills of participants. There was no centralised record keeping in relation to the training: for example, the number of staff trained. High staff turnover minimised the benefit of staff training to the project and training had to be frequently repeated for new staff. A post-project survey of nursing staff (hospital staff survey) explored staff members' knowledge of symptoms of nicotine withdrawal, contraindications of nicotine patches, and previous training relevant to the management of nicotine dependence (Appendix 13). However without baseline data, changes in skill levels could not be measured.

3.4 Data collection – objective 3

Assessment of the uptake of NRT by patients during admission was recorded in the data collection form (see Objective 1). Telephone or face-to-face interviews were conducted post-discharge with patients who had used NRT while in hospital.

3.4.1 Post-discharge follow-up

The post-discharge interview consisted of 13 questions. Information was collected on various aspects related to patch or gum use, behaviour related to exposure to smoke and smoking restrictions, and attitudes towards the SFWP. The project officer conducted the interviews approximately 12 weeks following discharge for those patients who had given consent (Appendix 11).

Up to three attempts were made to contact patients who provided a telephone number. For clients who could not be contacted on the first attempt, subsequent calls were made at different times of the day or at weekends. For patients unable to be contacted by telephone, a home visit was conducted. If the patient was unavailable, a repeat home visit was conducted at a different time of day, or another time was organised with whoever was home.

3.5 Additional information collected for the project

As the project progressed, four surveys were developed to assess the implementation of the project, particularly process or quality improvement issues. During the project, surveys were conducted with the GPs who were providing support to patients discharged on NRT and patients who refused NRT while in hospital. Post-project surveys were conducted with nursing staff and also with the GPs who provided support to patients after discharge.

3.5.1 General Practitioner (GP) survey A

A survey was developed to collect information from GPs who were nominated by patients discharged on NRT. The survey consisted of eight questions. These were designed to collect information on various aspects of practice such as discussion of smoking and the interventions that had been used or tried; attitudes towards the SFWP; and the CAFA project. The GP Staff Specialist (project coordinator) conducted the surveys in January 2003 by face to face interview (Appendix 12).

3.5.2 Patient survey - refusers of NRT

A patient survey was developed to assess the implementation of the project and to investigate the basis of refusal of NRT by patients eligible to be offered NRT while in hospital. The survey consisted of 11 questions which were designed to collect information about various aspects related to awareness of the SFWP and CAFA project, and the use of NRT. The project coordinators conducted the surveys by face-to-face interview over a five-day period in August 2002 (Appendix 13).

The interviews were conducted because information from the project officer's reports indicated that patients' nicotine dependence was not always assessed, and patients were not always informed about the project and the availability of free NRT.

3.5.3 Hospital staff survey

A hospital staff survey was developed to collect information from nursing staff in the mental health units. The 22 questions in the survey asked about various aspects related to employment history and smoking status, attitudes towards the SFWP and the CAFA project, knowledge and training relevant to the management of nicotine dependence, involvement in the CAFA project, and obstacles and/or barriers to managing nicotine dependence in a mental health unit. The forms were distributed by the NUMs in each unit for staff members to self-complete in January 2003: participation by staff was voluntary. The project officer collected the completed surveys from the units (Appendix 14).

3.5.4 General Practitioner (GP) survey B

A survey was developed to collect information from GPs who had been previously interviewed for survey A. The survey was adapted from the hospital staff survey and consisted of 14 questions. Information was collected on various aspects related to the practice history of GPs and smoking status, attitudes towards the SFWP and the CAFA project, knowledge relevant to the management of nicotine dependence, practices related to establishment of smoking status and encouragement of NRT use, and obstacles and/or barriers to managing nicotine dependence in a mental health unit. The GP Staff Specialist (project coordinator) conducted the surveys by telephone (Appendix 15).

3.6 Data analysis

The Statistical Package for the Social Sciences (SPSS) version 11.0 (SPSS,2000) was used for data analysis. The type of analysis conducted included descriptive statistics, particularly frequencies and crosstabs. The relationship between variables was analysed using the Chi-square Test of Independence (Pearson) and an Independent-Samples T Test was used to compare mean differences. Where levels of significance were assessed a value of $p \le 0.05$ was used.

Epi Info 2000 (Centres for Disease Control and Prevention, Atlanta, GA) was also used for data analysis. The type of analysis conducted included descriptive statistics, with particular emphasis on frequencies.

Results

Data were collected from 2407 patient records-1292 (53.7%) at Liverpool and 1115 (46.3%) at Bankstown – between July 17 2001 and December 15, 2002. There was an attempt to collect information from patients who spoke a language other than English and arrangements were made to use an interpreter. For less common languages, a telephone interpreter was used. Interpreters were required for 111 patients.

4.1 Findings – objective 1

Figure 3 shows the number of patients at the various stages of the recruitment process to the intervention.



Figure 3. Patient recruitment to the intervention

4.1.1 Smoking status

Of the 2407 patients, 55.6 per cent were identified as current smokers, and 29.8 per cent were identified as non-smokers. Smoking status was not available from the records of 14.6 per cent of patients (Table 1).

Table 1. Smoking status of patients (n = 2407)

Smoking	Liverpool	Bankstown	Total	
status	n	n	n	%
Smokers	694	644	1338	55.6
Non-smokers	379	339	718	29.8
Unknown	219	132	351	14.6
Total	1292	1115	2407	100

A high proportion of the 1338 smokers were male (61.7%), spoke English at home (88.7%), and had a diagnosis of schizophrenia or other psychotic disorder (45.4%). Approximately one third were aged between 21 and 30 years (33.7%) and had a LOS of three days or less (29.3%) (Table 2).

	Liverpool	Bankstown	To	tal
Characteristics	n	n	n	%
Gender				
Male	449	377	826	61.7
Female	245	267	512	38.3
Age (Groups)				
0–20	91	48	139	10.4
21–30	255	196	451	33.7
31–40	170	190	360	26.9
41–50	119	139	258	19.3
51–60	38	62	100	7.5
> 60	21	9	30	2.2
Language spoke	n at home			
English	606	581	1187	88.7
Arabic	11	21	32	2.4
Vietnamese	31	23	54	4.0
Other*	46	19	65	4.9
Diagnosis†				
Schizophrenia and				
other psychotic disorders	346	262	608	45.4
Bipolar disorders	63	53	116	8.7
Personality disorders	35	42	77	5.8
Mood disorders	49	86	135	10.1
Major depressive				
disorders	20	34	54	4.0
Anxiety	16	9	25	1.9
Adjustment disord	er 41	49	90	6.7
Drug and alcohol abuse	92	81	173	12.9
Suicide	18	18	36	2.7
Miscellaneous	14	10	24	1.8
Length of stay (days)‡				
≤ 3	185	207	392	29.3
4–7	167	142	309	23.1
8–14	157	120	277	20.7
15–28	128	111	239	17.9
≥ 29	56	63	119	8.9

Table 2. Characteristics of smokers (n = 1338)

* Only the most common languages were individually identified; the languages with smaller numbers were grouped into the *other* category.

 Mental disorders were classified by diagnostic group, as defined by the DSM-IV. *Miscellaneous* includes all other diagnoses not listed (Appendix 16).

+ Data missing for 2 (0.1%) patients.

4.1.2 Nicotine dependence

Of the 1338 patients who smoked, 35.4 per cent were known to have been assessed for nicotine dependence based on their FTND score, however for 64.6 per cent of patients assessment was unknown, not completed, or the completed assessment form was missing from the patient file (Table 3).

Table 3. Nicotine dependence status of smokers
(n = 1338)

	Liverpool	Bankstown	Total	
FTND Score	n	n	n	%
Very low 0–2	22	9	31	2.3
Low 3–4	35	25	60	4.5
Medium 5	34	14	48	3.6
High 6–7	110	47	157	11.7
Very high 8+	108	69	177	13.2
Total patients assessed 473				
Not completed	171	166	337	25.2
Not in file	211	314	525	39.2
Unknown*	3	0	3	0.2
Total patients unk		865		
Total	694	644	1338	100

* Unknown = missing data.

Of the 473 patients assessed, the 382 (80.7%) patients who were in the medium, high and very high range (FTND scores of 5 or more) were eligible to receive the NRT intervention. The 91 (19.3%) patients in the very low to low range (FTND scores of 4 or less) were eligible to receive counselling and advice (Table 4).

Table 4. Nicotine dependence status of patientsassessed (n = 473)

FTND Score	Liverpool n	Bankstown n	To [:] n	tal %
Very low 0–2	22	9	31	6.6
Low 3–4	35	25	60	12.7
Patients eligible for counselling & advice		91		
Medium 5	34	14	48	10.1
High 6–7	110	47	157	33.2
Very high 8+	108	69	177	37.4
Patients eligible for NRT		382		
Total	309	164	473	100



Figure 4. FTND forms completed by staff during the project period

Figure 4 shows the monthly pattern of FTND forms completed by staff in Liverpool and Bankstown. There were times during the project period where the completion of FTND forms declined in both Liverpool and Bankstown.

4.1.3 Offer of NRT

Of the 458 patients offered NRT, 71 per cent were known to have been assessed for nicotine dependence. Of the remaining 29 per cent, assessment status was unknown, not completed, or the completed assessment form was missing from the patient file (Table 5).

Table 5. Nicotine dependence status of patients offered NRT (n = 458)

FTND Score	Liverpool n	Bankstown n	To [.] n	tal %
<u>≤</u> 4	25	7	32	7.0
≥ 5	215	78	293	64.0
Not completed	19	4	23	5.0
Not in file	72	37	109	23.8
Unknown*	1	0	1	0.2
Total	332	126	458	100

* Unknown = missing data.

Of the 382 patients who were eligible for NRT based on their FTND score of \geq 5, 76.7 per cent were offered NRT and 23.3 per cent were not offered NRT. Of the 91 patients eligible to receive counselling and advice based on their FTND score of \geq 4, only 35.2 per cent were offered NRT (Table 6).

Table 6.	Offer of NRT	to patients	assessed for
nicotine	dependence	(n = 473)	

	Offe Yes	red NRT	No		Tota	ıl
FTND Score	n	%	n	%	n	%
≤ 4	32	35.2	59	64.8	91	100
≥5	293	76.7	89*	23.3	382	100

* Includes one case for offer unknown (missing data).

A high proportion of the 293 patients who had an FTND of 5 or more, and who were offered NRT, were male (57.7%), spoke English at home (91.1%) and had a diagnosis of schizophrenia or other psychotic disorder (49.8%). Approximately one third were aged between 21 and 30 years (31.7%) and a quarter had a LOS of 15 to 28 days (25.6%) (Table 7).

Table 7. Characteristics of patients offered NRT-FTND \ge 5 (n = 293)

	Liverpool Bankstown		Total		
Characteristics	n	n	n	%	
Gender					
Male	126	43	169	57.7	
Female	89	35	124	42.3	
Age (groups)					
0–20	17	5	22	7.5	
21–30	70	23	93	31.7	
31–40	58	19	77	26.3	
41–50	52	21	73	24.9	
51–60	14	9	23	7.8	
> 60	4	1	5	1.7	
Language spoke	n at home				
English	193	74	267	91.1	
Arabic	1	0	1	0.3	
Vietnamese	5	1	6	2.0	
Other*	16	3	19	6.5	
Diagnosis†					
Schizophrenia					
and other psychotic disorder	s 111	35	146	49.8	
Bipolar disorders	21	9	30	10.2	
Personality disorde	ers 11	3	14	4.8	
Mood disorders	13	13	26	8.9	
Major depressive					
disorders	6	8	14	4.8	
Anxiety	7	0	7	2.4	
Adjustment disorder	12	2	14	4.8	
Drug and alcohol abuse	28	7	35	11.9	
Suicide	4	0	4	1.4	
Miscellaneous	2	1	3	1.0	
Length of stay (d	avs)				
(u ≤ 3	37	6	43	14.7	
4–751	10	61	20.8		
8–1456	16	72	24.6		
15–2847	28	75	25.6		
≥ 29	24	18	42	14.3	

* Only the most common languages were individually identified; the languages with smaller numbers were grouped into the *other* category.

 Mental disorders were classified by diagnostic group, as defined by the DSM-IV. *Miscellaneous* includes all other diagnoses not listed (Appendix 15).

4.1.4 Use of NRT

The use of NRT by patients was determined by the type of NRT recorded on medication sheets. Overall, 102 patients used NRT while in hospital. Patches only were the most common type of NRT used (92.2%). The use of combined patches and gum or gum alone was minimal (Table 8).

Table 8. Type of NRT used by patients

Type of NRT	Liverpool n	Bankstown n	Total n	%
Patches	71	23	94	92.2
Patches and gum	7	0	7	6.9
Gum	1	0	1	1.0
Total	79	23	102	100

Of the 102 patients who used NRT, 77.5 per cent were known to have been assessed for nicotine dependence. However for the remaining 22.5 per cent assessment status was unknown, not completed, or the completed assessment form was missing from the patient file (Table 9).

Table 9. Nicotine dependence status of patients who used NRT (n = 102)

FTND Score	Liverpool n	Bankstown n	To ^r n	tal %
≤ 4	1	0	1	1.0
≥5	60	18	78	76.5
Not completed	10	2	12	11.8
Not in file	7	3	10	9.8
Unknown*	1	0	1	1.0
Total	79	23	102	100

* Unknown = missing data.

Of the 293 patients with an FTND of 5 or more and who were offered NRT, 26.6 per cent used NRT and 73.4 per cent did not use NRT. Of the 32 patients with an FTND of 4 or less who were offered NRT, only one used NRT (Table 10).

Table 10. Use of NRT by patients assessed fornicotine dependence and offered NRT (n = 325)

	Use Yes	d NRT No	Tota	I		
FTND Score	n	%	n	%	n	%
<u>≤</u> 4	1	3.1	31	96.9	32	100
≥ 5	78	26.6	215	73.4	293	100

A high proportion of the 78 patients with a FTND \geq 5 and who used NRT were male (75.6%), spoke English at home (92.3%) and had a diagnosis of schizophrenia or other psychotic disorders (51.3%). Approximately a third were aged between 31 and 40 years (33.3%) and had a LOS of 15 to 28 days (34.6%) (Table 11).

4.1.5 Offer and use of NRT

Of the 85 patients who consented to participate in the project and to be followed up post-discharge, 58 (68.2%) used NRT and 27 (31.8%) did not use NRT.

Analysis was conducted to further investigate the relationship between: offer of NRT and place of admission; gender; age; and LOS and use of NRT. The analysis was conducted using data from the 382 patients who had a FTND score of 5 or more (the analysis included 381 valid cases-one case was missing).

For both the offer and use of NRT, there was a significant difference between Liverpool and Bankstown mental health units (Chi² 29.7; p: < 0.000; df: 1 and Chi² 5.2; p: < 0.022; df: 1 respectively). Patients at Liverpool were nearly three times as likely to be offered NRT, and more than three times as likely to use NRT, compared to patients in Bankstown (Table 12).

Males and females were equally likely to be offered NRT. Males were more than three times as likely to use NRT as females. This was statistically significant (Chi² 11.0; p: < 0.001; df: 1). There was no significant difference between age groups and the offer or use of NRT (Table 12).

Length of stay (LOS) was not associated with the likelihood of being offered NRT, but patients who stayed longer in hospital were more likely to use NRT. The mean LOS for those who used NRT was 19.23 days compared with a mean LOS for those who did not use NRT of 14.77 days, which was statistically significant (t: 2.148; p: < 0.032; df: 379) (Table 12).

I	Liverpool	Bankstown	То	Total	
Characteristics	n	n	n	%	
Gender					
Male	47	12	59	75.6	
Female	13	6	19	24.4	
Age (groups)*					
0–20	4	2	6	7.7	
21–30	18	4	22	28.2	
31–40	21	5	26	33.3	
41–50	14	5	19	24.4	
51–60	3	2	5	6.4	
Language spoken	at home	*			
English	55	17	72	92.3	
Vietnamese	2	0	2	2.6	
Other†	3	1	4	5.1	
Diagnosis‡					
Schizophrenia and					
other psychotic	30	8	40	51 3	
Bipolar disorders	7	3	10	12.8	
Personality disorder	' 's 2	2	4	5 1	
Mood disorders	2	2	4	5.1	
Maior depressive	L	L		0.1	
disorders	1	1	2	2.6	
Anxiety	1	0	1	1.3	
Adjustment disorde	r 1	0	1	1.3	
Drug and alcohol					
abuse	11	2	13	16.7	
Suicide	1	0	1	1.3	
Miscellaneous	2	0	2	2.6	
Length of stay (da	ays)				
≤3	4	0	4	5.1	
4–7	12	2	14	17.9	
8–14	19	2	21	26.9	
15–28	17	10	27	34.6	
≥ 29	8	4	12	15.4	

* Categories including *age* > 60 and *language spoken at home* – *Arabic* previously included in the characteristics table have been excluded from this table as there was no data.

+ Only the most common languages were individually identified; the languages with smaller numbers were grouped into the *other* category.

Mental disorders were classified by diagnostic group, as defined by the DSM-IV. *Miscellaneous* includes all other diagnoses not listed (Appendix 15).

Table 12. Characteristics of patients eligible to receive the NRT intervention by offer and use of NRT (n = 381)

	Offered NRT n		Used r	NRT า	
Characteristics	Yes	No	Yes	No	
Place of admission (Unit)					
Liverpool	215	37	60	192	
Bankstown	78	51	18	112	
Gender					
Male	169	56	59	167	
Female	124	32	19	137	
Age (groups)					
0–20	22	9	6	26	
21–30	93	31	22	102	
31–40	77	27	26	78	
41–50	73	13	19	67	
51–60	23	5	5	23	
> 60	5	3	0	8	
Length of stay (days)					
Mean	16.35	13.25	19.23	14.77	

4.2 Findings-objective 2

As mentioned in Section 3.3 of this report, there was no evaluation of staff training in terms of changes in knowledge and/or skills. Therefore, any increase in the skills of staff and consumer advocates in managing nicotine dependence could not be determined in this study.

The results of the hospital staff survey relating to knowledge and previous training have been reported on. These results only give an indication of the knowledge base and education history of the 29 staff surveyed.

4.2.1 Hospital staff survey

Of the 29 nursing staff who responded to the survey, nearly half reported being educated in assisting patients to quit smoking (13) and a third reported being educated in identifying smokers (10). A small number of staff reported being educated in assessing nicotine dependence, recognising nicotine withdrawal symptoms, managing nicotine dependence, side effects of NRT, and contraindications of NRT (Figure 5).

A high proportion of staff correctly identified four out of the six true symptoms of nicotine withdrawal (irritability, restlessness, anxiety and insomnia). Few staff correctly identified the other two true symptoms of nicotine

Figure 5. Number of staff educated in areas related to nicotine dependence



withdrawal (depressed mood and decreased heart rate). A high proportion of staff also correctly identified the three false symptoms of nicotine withdrawal (itchy eyes, heartburn and nausea) (Figure 6).



Figure 6. Number of staff correctly identifying true and false symptoms of nicotine withdrawal

A high proportion of staff correctly identified two of the four true clinical situations where nicotine patches are contraindicated (non-tobacco users and severe arrhythmias). Few staff correctly identified the other two true clinical situations where nicotine patches are contraindicated (pregnancy and lactation). A high proportion of staff correctly identified the two false clinical situations (epilepsy and anorexia nervosa) (Figure 7).

Figure 7. Number of staff correctly identifying the true and false clinical situations where transdermal NRT is contraindicated



4.3 Findings-objective 3

4.3.1 Uptake of NRT

The uptake of NRT varied during admission and discharge. There were 102 patients who tried NRT during admission, however only three patients used NRT during their entire admission. Twenty patients were discharged on NRT (Table 13).

Table 13. Pattern of NRT Use

Use of NRT	Liverpool n	Bankstown n	Total n
Tried during admission	79	23	102
Used during entire admission	3	0	3
Post discharge	12	8	20

There were 47 patients who used NRT intermittently during admission. Of these, 12 (25.5%) had made at least four discrete attempts; 5 (10.6%) had made three attempts; 24 (51.1%) had made two attempts; and 3 (6.4%) had made one attempt. Three responses were missing (6.4%).

4.3.2 Post-discharge follow-up

Of the 58 patients eligible for follow-up post-discharge, 33 could not be contacted. Of the 25 patients who were contacted, two withdrew their consent to participate.

A high proportion of the 23 patients followed up post-discharge were male (69.6%), spoke English at home (82.6%) and had a diagnosis of schizophrenia or other psychotic disorder (65.2%). Approximately a third were aged between 41 and 50 years (30.4%) and 39.1 per cent had a LOS of eight to 14 days (Table 14).

	Liverpool	Bankstown	То	tal
Characteristics	n	n	n	%
Gender				
Male	13	3	16	69.6
Female	4	3	7	30.4
Age (groups)*				
0–20	3	0	3	13.0
21–30	4	1	5	21.7
31–40	4	2	6	26.1
41–50	4	3	7	30.4
51–60	2	0	2	8.7
Language spoke	en at home	k		
English	13	6	19	82.6
Vietnamese	2	0	2	8.7
Other†	2	0	2	8.7
Diagnosis*‡				
Schizophrenia and other psychotic	b			
disorders	12	3	15	65.2
Bipolar disorders	3	1	4	17.4
Personality disorders	0	1	1	4.3
Major depressive disorders	1	1	2	8.7
Miscellaneous	1	0	1	4.3
Length of stay (days)*			
4–7	2	1	3	13.0
8–14	7	2	9	39.1
15–28	4	3	7	30.4
> 29	4	0	4	17.4

Table 14. Characteristics of patients followed uppost-discharge (n = 23)

* Categories including age > 60; language spoken at home – Arabic; Diagnosis – mood disorders, anxiety, adjustment disorder, drug and alcohol abuse, suicide and length of stay ≤ three previously included in the characteristics table have been excluded from this table as there was no data.

† Only the most common languages were individually identified; the languages with smaller numbers were grouped into the *other* category.

Mental disorders were classified by diagnostic group, as defined by the DSM-IV. *Miscellaneous* includes all other diagnoses not listed (Appendix 15). The 23 patients followed up post-discharge were generally positive about the use of NRT, smoking cessation and the CAFA project, but they had mixed views about the SFWP.

Use of NRT

Nearly all of the 23 patients who were followed up post-discharge remembered using NRT while in hospital and reported that they would use NRT again (22). More than half thought NRT was a good idea (14), however some patients thought NRT was ineffective (8).

Smoking cessation

Nearly half of the patients reported that they used NRT to try and stop smoking (11) and some reported that they used NRT upon suggestion from staff or other patients (8). While just over half of the patients reported an intention to stop smoking (12), some patients indicated they had no intention to stop smoking (9). Some patients indicated that they would be mostly motivated to stop smoking for health reasons (8).

An unexpected result was that three patients had quit smoking at follow-up.

CAFA project

Just over half of the patients thought the CAFA project was a good idea (12).

SFWP

There were mixed feelings about the SFWP. Some patients considered that it was a good idea (4), while others thought that it was a bad idea (4). Some patients considered that NRT would be required as part of the SFWP (6). Just over three quarters of the patients reported that they just don't smoke where it is not permitted (18).

4.4 Additional information collected for the project

4.4.1 GP survey A

A follow-up survey was conducted with the 11 GPs nominated by patients who were discharged on NRT. All 11 GPs were contacted and agreed to participate. Most remembered that their patients had been discharged on free nicotine replacement patches (9) and that they had last seen their patient more than three months ago (8). Most GPs were aware that their patient was a smoker (9), and seven had discussed smoking with their patient-three using a counselling intervention. The four GPs who had not discussed smoking, did not do so because they were discussing other issues with their patients. Just over a quarter of the GPs recalled their patients telling them about using the nicotine patches (3), and commented that their patients were generally positive about the project. Just over half of the GPs were unaware of the pending SFWP in hospitals (6). Overall, most GPs were positive about hospitals going smoke free (8). The three negative comments about hospitals going smoke free related to concern about the impact on the patient. Most GPs made positive comments about CAFA (9).

4.4.2 Patient survey-refusers of NRT

A follow-up survey of patients who had refused NRT was conducted in both Liverpool and Bankstown mental health units. Of the 24 patients in Liverpool mental health unit, 14 were smokers. An FTND score was recorded for eight of these patients, and seven qualified for NRT. Two of these chose to use NRT, and five refused. Of the five patients who had refused NRT, three agreed to participate in the interview.

The data for Bankstown was misplaced and cannot be reported on.

Data from the patient survey has been excluded from the report given that only three patients participated and that data was only available for Liverpool.

4.4.3 Hospital staff survey

An attempt was made to survey all rostered nursing staff in each unit, however no records were kept on the number of nursing staff at the time the survey was distributed. A total of 29 completed questionnaires was returned by staff (Liverpool 15 and Bankstown 14).

Of the 29 staff who participated in the survey, 37.9 per cent had been employed for less than six months, or for between six months and two years: 82.8 per cent were permanent staff; 51.7 per cent were on a rotating roster and 58.6 per cent indicated that they had never smoked (Table 15).

Table 15. Characteristics of staff surveyed (n = 29)

	Liverpool	Bankstown	То	otal
Characteristics	n	n	n	%
Employment in MHU				
< 6 months	7	4	11	37.9
6 months-2 years	5	6	11	37.9
> 2 years	3	4	7	24.1
Employment status*†				
Permanent	15	9	24	82.8
Part time	0	2	2	6.9
Casual pool	0	2	2	6.9
Usual shift†				
Morning	4	3	7	24.1
Evening	2	1	3	10.3
Rotating	7	8	15	51.7
9–5 equivalent	2	2	4	13.8
Smoking status				
Daily smoker	5	2	7	24.1
Occasional smoke	er 1	1	2	6.9
Ex daily smoker	2	1	3	10.3
Never smoked	7	10	17	58.6

* 1 missing for Bankstown

Categories including *employment status* – *agency and usual shift night* have been excluded from this table as there was no data.

Attitudes

Nearly all staff strongly agreed or agreed that they have a right to work without exposure to environmental tobacco smoke (26), and strongly agreed or agreed that it is important to have an outdoor designated smoking area for inpatients (27).

Nearly half of the staff strongly agreed or agreed that the CAFA project is a way to make people quit smoking, masquerading as a smoke free workplace program (12); a small proportion of staff strongly disagreed or disagreed with this (5) and 11 staff neither agreed nor disagreed.

Obstacles

Staff were asked to comment on perceived obstacles to:

- identifying the smoking status of clients
- completing a FTND form (assessing dependence)
- using NRT as part of a treatment plan
- managing nicotine dependence in the unit.

The most common obstacles that staff identified included:

- lack of time to complete these tasks
- patient untruthfulness
- patient unwillingness to comply
- patients' tendency to change their minds
- inadequate recording of smoking status during admission
- NRT not ordered by the doctor when requested
- patches not sticking
- poor judgement, comprehension and understanding on the part of patients.

Positive and negative aspects of a smoke free mental health unit

Staff were asked to comment on perceived positive and negative aspects of a smoke free mental health unit. The most common positive aspects identified by staff related to improved air quality and that a cleaner environment would improve the health of patients and staff and encourage smokers to quit while in hospital. The most common negative aspects identified by staff related to:

- managing patients who do not want to quit
- increased aggression from patients, patient irritability and abuse of staff
- the possibility of illness escalating due to cravings for cigarettes
- lack of time; smoking as a way to relieve boredom
- the cost of providing NRT.

4.4.4 GP survey B

The 11 GPs who had previously been interviewed as part of the GP Survey A were contacted to participate in a post-project telephone interview. Four agreed to participate.

Data collected as part of the GP Survey B has been excluded from the report as only four GPs participated and therefore no conclusions can be made from the data.

Discussion

The CAFA project demonstrated that nicotine replacement therapy could be a useful tool to reduce the impact of tobacco abstinence in mental health units, acceptable to many clients even in the absence of a total ban on smoking. The results of CAFA indicate that there is a high proportion of smokers amongst patients admitted to mental health units, and of those who were assessed the majority are nicotine dependent. If mental health units become totally smoke free with the introduction of smoke free workplace policies, access to interventions like CAFA will be important as patients experience nicotine withdrawal.

5.1 Acceptability

The CAFA project demonstrated the acceptability of NRT through the engagement of many staff and patients in the intervention process. The majority of patients were assessed for smoking status; just over a third of smokers were assessed for nicotine dependence (suggesting the FTND tool was acceptable to some staff); and a large proportion of these were offered NRT. Some patients were willing to try NRT, even though designated smoking areas were available and in the absence of pressure to stop smoking. The majority of patients followed up post-discharge who had used NRT while in hospital, indicated that they would use NRT again, which suggests they accepted NRT as an intervention in this context.

Some patients used the opportunity presented by the CAFA project to attempt to quit smoking. However, it is not clear whether the patients who used NRT to quit were already motivated to do so, or whether the project prompted attempts to quit.

5.2 Length of stay

Patients with a greater length of stay were more likely to be offered and to use NRT. There are a number of possible explanations for this result: staff may have had more opportunities to intervene with longer-stay patients; patients who were floridly unwell, who were intoxicated or who were highly medicated around the point of admission may have had a formal nicotine assessment deferred on good clinical grounds; early discharge may have prevented assessment of nicotine dependence and provision of NRT to some patients; and patients who had shorter stays may not have been interested in NRT or were able to cope with the withdrawal symptoms. In the survey of patients who refused NRT it was also identified that, early in their stay, a patient's state of mind may not have been conducive to considering tobacco issues.

Patients who did not want to quit, and who did not expect to stay long, may not have seen any advantage in taking up NRT until they realised their stay was going to be longer than anticipated. Patients with shorter stays or who were admitted overnight or on a weekend may have had very limited contact with ward staff because their admission assessments were undertaken in the Emergency Department where the CAFA protocols were not followed. It would therefore be extremely unlikely that these patients would be offered NRT.

Factors that may have influenced the uptake of NRT in longer-stay patients include: greater contact with staff; being more likely to be offered NRT as their condition stabilised; tobacco use became more of an issue due to negative interactions with other clients ('botting', harassing, stealing) and with staff (absconding, irritability, demanding access to money or cigarettes), which may have prompted further reminders about the program; and exposure to information from other patients and CAFA signage that prompted them to approach staff for NRT. It is also possible that longer-stay patients were offered NRT on multiple occasions, thus increasing their rate of uptake. Although the time taken to implement the intervention (assess dependence, offer, prescribe and administer NRT) was not measured, in some cases the time taken to process patients may have exceeded the length of stay. Therefore strategies to improve the efficiency of the intervention process, reducing the time from assessment of dependence to administration of the first dose of NRT may improve uptake among shorter-stay patients. Possible strategies include a shorter assessment tool and nurse-initiated NRT. Addressing these factors will assist all patients who smoke, regardless of their length of stay, to have equal access to NRT.

5.3 Support for patients

The patient issues relating to managing nicotine dependence in a mental health unit were expected and it is unclear how they could be overcome. Nursing staff identified patient unwillingness to comply, poor judgement, lack of understanding or that patients changed their minds after asking for NRT as possible factors that influenced participation. Whilst CAFA showed that support for managing nicotine dependence can and should be provided in the inpatient setting, community mental health settings have the potential to reach a larger number of patients who are not acutely unwell and may therefore be more amenable to tobacco interventions. In relation to patient compliance, interventions should assess a patient's motivation to participate. Whilst this may not remain relevant for managing nicotine dependence if mental health units become smoke free, it will continue to be relevant in relation to smoking cessation. Anecdotally, both staff and patients reported that a lack of meaningful activity in the mental health unit may have been a reason why some patients chose to continue smoking rather than use NRT.

Interventions should also consider other strategies for supporting smokers in mental health units. Examples from other countries include tobacco users' groups, motivational and support groups and tobacco information groups (Pennsylvania Department of Public Welfare, 2004; American Psychiatric Association, 2004). If these were to be introduced, mental health clinical staff would require relevant training.

It was considered unrealistic within the context of this project to measure significant side effects such as aggression and the effect of NRT on other medications. However, anecdotal evidence suggests that there was no increase in significant side effects such as acting out behaviour or anxiety levels during the project period.

5.4 System and organisational factors

The CAFA project highlighted problems in the assessment and provision of NRT due to system and organisational factors. These were:

- 1) patients were not assessed for dependence
- 2) eligible (medium to very high dependence) patients were not offered NRT
- 3) patients offered NRT did not use it
- 4) patients were offered NRT when it was not clinically indicated.

5.5 Assessment of dependence and delivery of NRT

Smoking status was assessed for a majority of patients during the admission process. It is essential that this be completed for all patients. In the CAFA project, levels of nicotine dependence were not routinely assessed despite established protocols and staff training. Completion of the FTND was a key indicator and the most important addition to staff duties. It provided access to NRT and was linked to the dosing schedule. The completion rate for the FTND could have been higher than indicated by the project data due to premature removal of some completed FTND forms. Nevertheless, FTND scores indicated that a high proportion of the smokers assessed were nicotine dependent and would have benefited from NRT. This highlights the importance of assessing nicotine dependence as well as smoking status.

There are strategies that could improve the efficiency of the intervention process. For example, a shortened FTND would reduce the time required for assessment of dependence. In addition, systems must be set in place to ensure that protocols are followed in the delivery of high quality care to patients.

Other barriers that influenced the assessment and delivery of NRT included: the introduction of the Mental Health Outcomes Assessment Tool (MHOAT); high staff turnover; lack of understanding of the project; staff resistance; and lack of time. Place of admission also influenced the probability of patients being offered and using NRT, and variables such as age, gender and length of stay did not explain this difference. Strong support from management may have reduced the impact of these factors. The allocation of a dedicated staff member may also ensure routine assessment of patients and the timely delivery of NRT, however it is not sustainable in the long term. A more realistic solution is to strengthen the approach taken in CAFA where managing nicotine dependence is better integrated into standard practice, staff performance is monitored, and relevant training is provided. Increased support from management is necessary. Solutions from a higher level in the bureaucracy are required to reduce staff vacancies.

5.6 Provision of NRT for eligible patients

A majority of patients who were eligible to receive NRT were offered patches and gum. Only about a third took up the offer. There were procedural problems involved in acting on a patient request for NRT, particularly in getting medical staff to write up the NRT on treatment sheets. Nursing staff identified that some patients who asked for NRT later changed their minds before starting a course of treatment and that this may have been related to the delay between assessment and receipt of the first dose of NRT. Reducing the time taken between assessment of dependence to administration of NRT is likely to improve the uptake of NRT by eligible patients.

The project team identified problems with the CAFA protocols and tools that may have resulted in staff uncertainty regarding the assessment process, appropriate provision of NRT and treatment matching. Treatment matching guidelines should be used to ensure adequate dosing of NRT to manage withdrawal symptoms. A review process is required for dosing, particularly prior to administering double-dose or combination therapy. Advice and counselling is appropriate for all smokers regardless of the level of dependence. A more structured, evidence-based approach to support patients using NRT, such as group sessions, could facilitate this process.

5.7 Inappropriate use of NRT

A small number of patients who were offered NRT had FTND scores of \leq 4 and therefore did not require NRT on clinical grounds. This figure may be an underestimate, because a third of patients who were offered NRT did not have a completed FTND on file. NRT is not beneficial for people who smoke less than ten cigarettes per day and should not normally be offered (Fiore et al, 2000). Despite this, anecdotal observations suggest that there were no adverse events related to NRT for any patient.

5.8 Organisational factors

The CAFA project used an organisational development approach. This included strategies such as a management committee and working parties, process/ protocol development, training/education, monitoring and feedback, and informal rewards. Despite the committee and working parties having representation from management of both Bankstown and Liverpool mental health units, management support for the project at Bankstown was less than anticipated by the research team. The value of an organisational approach in enhancing implementation is important, however a broader range of strategies is required to enhance commitment. The inclusion of indicators relating to the management of nicotine dependence in performance agreements and job descriptions for managers and other relevant staff needs to be considered.

Educational strategies (such as training, newsletters and monthly reports to working groups) were implemented in an attempt to increase the skills of staff and consumer advocates. However, the majority of nursing staff surveyed reported that they did not receive any education about managing nicotine dependence. This may be explained by the high staff turnover during the project period. Despite this, a high proportion of nursing staff correctly identified the symptoms of nicotine withdrawal, with the exception of depressed mood and decreased heart rate. Failure to identify the impact of smoking on depressed mood is of particular concern, considering the staff who were surveyed manage patients experiencing mental health problems. Without a measure of pre- and post-knowledge, the impact of CAFA education strategies cannot be determined and it is unclear how they contributed to the outcomes of the project. It is unclear how education

strategies could more effectively support the assessment and provision of NRT in mental health units.

It is apparent that local support and/or external regulation are important prerequisites to achieving a totally smoke free environment. Staff and patients involved in the CAFA project had mixed views in relation to the introduction of the SFWP. While both units had exemptions during the project period, Bankstown hoped to retain their exemption to the SFWP permanently. This highlights the importance of formal support through policy to achieve smoke free mental health units. If mental health units become smoke free, the provision of NRT and other support mechanisms will become more urgent as many patients experience nicotine withdrawal.

There are a number of limitations relating to the project design and implementation. The project design was unable to determine the effectiveness of the intervention. There were gaps in the data collected, and therefore some variables that may have influenced outcomes could not be reported on. For example, data was not collected relating to: whether patients were informed of the SFWP and the CAFA project; provision of advice and counselling; and measures of nicotine withdrawal symptoms. The measurement of additional indicators did not proceed because the project team anticipated their collection would create an additional burden on staff.

The number of clients who took up NRT was small, limiting the opportunity for analysis. Several aspects of the project had to be abandoned because they produced insufficient data. This also affects the degree to which the results can be generalised. Interventions for smokers who did not qualify for NRT were not clearly defined, staff did not receive training in non-NRT interventions, and the impact of non-NRT interventions was not evaluated. The CAFA project had a number of strengths. It built on existing systems and was designed to be integrated into the usual duties of staff with minimal impact. It included an assessment of nicotine dependence in addition to smoking status, which assisted in the prescription of NRT. It provided an insight into the practical considerations of implementing an NRT intervention in mental health units.

5.9 Summary

The CAFA project confirmed that a high proportion of people with mental health problems admitted to hospital in south western Sydney are smokers. The majority of patients were assessed for smoking status and just over a third were assessed for nicotine dependence, suggesting the FTND tool is appropriate for use in this environment. Of those patients who were assessed for nicotine dependence, a large proportion were offered NRT and some patients tried NRT, even though designated smoking areas were available and there was no overt pressure to stop smoking.

NRT proved to be an acceptable intervention for those who tried it. Almost all the patients who used NRT while in hospital (and agreed to follow-up) said they would use NRT again.

The proportion of people living with a mental illness or disorder who want to quit smoking is similar to that of the general population, and nearly half of the patients in this study who tried NRT (and agreed to follow-up) made an attempt to quit smoking. Of the patients discharged on NRT, three patients reported still being abstinent at follow-up (three months), even though they had received no follow-up support from the project for their attempt to quit smoking.

Conclusions and recommendations

Findings from the project confirm that nicotine dependence is an issue among patients of mental health units. The CAFA project demonstrated that NRT is acceptable to many staff and patients of mental health units and that it is important for managing nicotine dependence in the context of a SFWP. Patients also used NRT to assist them to attempt to quit smoking, even after discharge. Where strong support for a smoke free mental health unit exists (such as the introduction of phase four of the SFWP), interventions to manage smoking behaviour are likely to be more pressing and also more successful. A greater focus on organisational change may also lead to better outcomes. The process and tools developed for the CAFA project can be adapted for implementation in other mental health settings.

6.1 Recommendations

- In the absence of a firm policy, mental health units are unlikely to become smoke free.
 The implementation of a policy banning smoking in mental health units is therefore strongly advocated.
- Nicotine dependence should be routinely assessed in all tobacco users admitted to mental health units (consistent with the NSW Health publication Guidelines for the Management of Nicotine Dependent Inpatients) and treatment should be offered and reviewed according to patient response.
- All mental health units should have clear protocols and procedures in place to manage nicotine dependence and smoking cessation. These need to address system, staff and patient factors.
- Mental health units need to support all patients who are motivated to quit smoking.

- Accountability for the management of nicotine dependence should be included in performance agreements and duty statements for managers and relevant staff.
- A range of responses should be available, based on each client's level of nicotine dependence. This should include pharmacological (ie NRT options including transdermal patch, lozenge and gum) and non-pharmacological supports (ie counselling, groups etc). Treatment matching guidelines should be used to inform the dosing of NRT.
- NRT should be delivered in a timely manner. This is likely to require the implementation of nurse-initiated NRT, involving the development of standing orders.

6.2 Suggestions for future research

- Assess the effectiveness of the provision of nicotine replacement in managing nicotine dependence in mental health units utilising a study design that will provide a higher level of evidence.
- Assess the impact of variables such as staff education, advice and counselling for patients, nicotine withdrawal symptoms and duration of use of NRT during admission.
- Investigate the use of dedicated staff to manage nicotine dependence in mental health units.
- Investigate the effectiveness and feasibility of smoking cessation interventions in community mental health settings.

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Project protocols

Bankstown

Project processes

Admission

- The project will start on 16 July.
- Only patients admitted after 12 midnight on the 16 July will be invited to be part of the project.
- Ask the patient their nicotine status during the admission process.

The following steps may only be possible after the patient is settled and able to concentrate

- Nurse to complete a Fagerström Test for Nicotine Dependence for all smokers.
- Ask smokers if they have a heart condition.
- Nurse to inform patients about the project and provide them with a project information sheet.
- Invite patients to participate in the project.
- Patients agreeing to participate in the project must sign a consent form or give witnessed verbal consent. Nicotine replacement therapy (NRT) is only available to those patients agreeing to participate in the project.
- NRT dose will be prescribed according to nicotine dependency score.

Nicotine replacement therapy-inpatients

 Inpatients will receive nicotine replacement therapy (NRT) from the PROJECT budget. This includes patches and gum

Nicotine replacement therapy-discharge

- To receive NRT on discharge the patient must have consented to the project, not be smoking and have shown a motivation to quit, demonstrated by a continuous use of NRT for three to four days and be on NRT at discharge.
- Those patients demonstrating a motivation to quit will be provided with a total of 54 days of NRT (counted from the date they commenced) to support their quitting attempt.

Pharmacy

- On discharge the hospital will provide the remainder of NRT and it will be charged to the **project budget**.
- A Notification of Supply Form must be completed (signed) by the doctor and forwarded to the pharmacy.
- The remaining NRT will then be provided to the patient on a weekly basis. Each time the patient collects their NRT the pharmacy will adjust the number of remaining NRT.
- If a patient is more than 5 days late in collecting their NRT they will be regarded as no longer being part of the project and no longer eligible for NRT.
- If the patient had signed a consent form, telephone follow-up will still occur.

Post-discharge contact for patients choosing to remain smoke free

- The Medical Discharge Summary must include the fact that:
 - the patient has received a post-discharge form letter
 - during admission the patient used NRT with the aim of quitting smoking
 - at the time the patient ceases taking nicotine their usual medication will need monitoring as nicotine will no longer be interacting with the medication and dosages may need adjustment.
- The medical discharge summary will be forwarded to the patient's GP and/or psychiatrist (where applicable and in accordance with Area Policy) and case manager.
- The patient will be given a post-discharge letter (completed by the discharging nurse) to take when seeing their GP, psychiatrist and/or case manager.
- Post discharge non-smoking support will be provided by the patient's GP and/or case manager.
- Where the patient does not have a GP, an attempt will be made to link them up with a GP.

Liverpool

Project processes

Admission

- The project will start on 16 July.
- Only patients admitted after 12 midnight on the 16 July will be invited to be part of the project.
- Ask the patient their nicotine status during the admission process.

The following steps may only be possible after the patient is settled and able to concentrate

- Nurse to complete a Fagerström Test for Nicotine Dependence for all smokers.
- Ask smokers if they have a heart condition.
- Nurse to inform patients about the project and provide them with a project information sheet.
- Invite patients to participate in the project.
- Patients agreeing to participate in the project must sign a consent form or give witnessed verbal consent. Those patients who request nicotine replacement therapy (NRT) but choose not to give consent to be part of the project may still receive NRT (NRT is part of standard treatment at Liverpool).
- NRT dose will be prescribed according to nicotine dependency score.

Nicotine replacement therapy-inpatients

 Inpatients will receive NRT from the hospital budget. This includes patches and gum.

Nicotine replacement therapy-discharge

- To receive NRT on discharge the patient must have consented to the project, not be smoking and have shown a motivation to quit, demonstrated by a continuous use of NRT for three to four days and be on NRT at discharge.
- Those patients demonstrating a motivation to quit will be provided with a course of 54 days (eight weeks) of NRT (counted from the date they commenced the latest course of NRT) to support their quitting attempt.

Pharmacy

- On discharge the hospital will provide three days supply of NRT, the remainder of NRT will be charged to the project budget.
- The separate NRT prescription identified with the notation 'MHU NRT' will be forwarded to the pharmacy. The remaining NRT will then be provided to the patient on a weekly basis. Each time the patient collects their NRT the pharmacy will adjust the number of remaining NRT.
- If a patient is more than 5 days late in collecting their NRT they will be regarded as no longer being part of the project and no longer eligible for NRT.
- If the patient had signed a consent form, telephone follow-up will still occur.

Post-discharge contact for patients choosing to remain smoke free

- The Medical Discharge Summary must include the fact that:
 - the patient has received a post-discharge form letter
 - during admission the patient used NRT with the aim of quitting smoking
 - at the time the patient ceases taking nicotine their usual medication will need monitoring as nicotine will no longer be interacting with the medication and dosages may need adjustment.
- The medical discharge summary will be forwarded to the patient's GP and/or psychiatrist (where applicable and in accordance with Area Policy) and case manager.
- The patient will be given a post-discharge letter (completed by the discharging nurse) to take when seeing their GP, psychiatrist and/or case manager.
- Post discharge non-smoking support will be provided by the patient's GP and/or case manager.
- Where the patient does not have a GP, an attempt will be made to link them up with a GP.

General Practitioners

Project processes

Admission

Ask the patient their nicotine status during the admission process.

The following steps may only be possible after the patient is settled and able to concentrate:

- Nurse to complete a Fagerström Test for Nicotine Dependence for all smokers.
- Ask smokers if they have a heart condition.
- Nurse to inform patients about the project and provide them with a project information sheet.
- Invite patients to participate in the project.
- Patients agreeing to participate in the project must sign a consent form or give witnessed verbal consent.
- NRT dose will be prescribed according to nicotine dependency score.

Nicotine replacement therapy-inpatients

 Inpatients will receive Nicotine replacement therapy (NRT), this includes patches and gum

Nicotine replacement therapy-discharge

- To receive NRT on discharge the patient must have consented to the project, not be smoking and have shown a motivation to quit, demonstrated by a continuous use of NRT for three to four days and be on NRT at discharge.
- Those patients demonstrating a motivation to quit will be provided with a total of 54 days of NRT (counted from the date they commenced) to support their quitting attempt.

Pharmacy

- On discharge the hospital will provide the remainder of NRT to the patient on a weekly basis. Each time the patient collects their NRT the pharmacy will adjust the number of remaining NRT.
- If a patient is more than 5 days late in collecting their NRT they will be regarded as no longer being part of the project and no longer eligible for NRT.
- If the patient had signed a consent form, telephone follow-up will still occur.

Post-discharge contact for patients choosing to remain smoke free

- The Medical Discharge Summary must include the fact that:
 - the patient has received a POST DISCHARGE
 LETTER
 - during admission the patient used NRT with the aim of quitting smoking
 - at the time the patient ceases taking nicotine their usual medication will need monitoring as nicotine will no longer be interacting with the medication and dosages may need adjustment
- The medical discharge summary will be forwarded to the patient's GP and/or psychiatrist (where applicable and in accordance with Area Policy) and case manager
- The patient will be given a post-discharge letter (completed by the discharging nurse) to take when seeing their GP, psychiatrist and/or case manager.
- Post-discharge support and encouragement to remain smoke free will be provided by the patient's GP and/or case manager.
- Where the patient does not have a GP, an attempt will be made to link them up with a GP.

APPENDIX 2

Staff information letter

9th July 2001

To: All Mental Health Staff Liverpool and Bankstown Hospitals

Dear Mental Health Staff Member,

Re: Clean Air for All-Reducing smoking in mental health units

NSW Health has funded a new project of Nicotine replacement therapy for smoking in-patients. From **midnight on July 16, 2001** nicotine patches and gum will be available in the mental health units of Liverpool and Bankstown for in-patient treatment of nicotine withdrawal symptoms.

The broad aim of this project is using the occasion of admission to hospital to show smokers that they have an alternative to smoking while they are in hospital and perhaps even to move them further along the road to becoming a non-smoker. This will achieve a smoke free workplace and therapeutic environment. The major strategy is to show smokers that by using nicotine replacement therapy there is a proven and safe way they are able to not smoke AND not be troubled by the nicotine withdrawal symptoms.

For those patients who wish to quit smoking or who find after using NRT that they would like to try quitting, further counselling and support will be available. All patients who use NRT for a substantial period of their admission will be offered NRT to use after discharge, up to eight weeks in all.

For this program to work most effectively you are asked to provide active support and encouragement for your patients to participate. An outline of the project protocols is attached for your information.

The project officer is Julie Eccles who will be available to answer any of your questions or concerns. Several staff members and the Consumer Advocates at both Units have been trained in smoking cessation and the use of NRT who would be happy to provide peer education and support. Or you could contact the project managers: David Rich, Sheila Knowlden or Joanne Karcz whose contact details are below.

This project is one of the first of its kind in the world. In the past people with mental illness were often encouraged to smoke by their health care providers in the mistaken belief that it relieved stress and other symptoms. Now we know that this merely puts mentally ill people at risk of respiratory and cardiovascular disease as well as sending a large part of their income up in smoke. Other research has shown that people with a mental illness want to give up smoking in the same proportion as much as the rest of the community.

We hope that we can count on your support for this innovative program.

Yours sincerely, Dr Sheila Knowlden 9616 8294 Sheila.Knowlden@swsahs.nsw.gov.au Ms Joanne Karcz 9828 6029 Joanne.Karcz@swsahs.nsw.gov.au

Mr David Rich 9780 2759 David.Rich@swsahs.nsw.gov.au Ms Julie Eccles 9828 6040 Julie.Eccles@swsahs.nsw.gov.au



SOUTH WESTERN SYDNEY AREA HEALTH SERVICE

Division of Population Health Health Promotion Unit

CAFA flow chart



Patient information sheet

Information sheet about the Mental Health and Tobacco project

Smoking is bad for your health whether you smoke the cigarette directly or smoke other peoples smoke in the air. Therefore the NSW Government has decided to make all areas of all hospitals smoke free by September, 2002. This will mean that soon no-one may be allowed to smoke in Banks House or the Liverpool Hospital Mental Health Unit, even in the areas where people can smoke now.

We are looking at ways to make sure that smokers who come into the Unit will not be uncomfortable or distressed when they come to the Unit and are not allowed to smoke. We are offering Nicotine Replacement Therapy-nicotine patches or nicotine chewing gum-to smokers who are in the Unit to see if this will help people cope with the new restrictions. The patches and the gum are very safe and have been used for many years. They are available from any pharmacy without a doctor's prescription.

The patches work by releasing nicotine directly into your blood through your skin. The chewing gum works by releasing nicotine that is absorbed through your mouth. Either way the nicotine gets to your brain, like it does when you smoke a cigarette. Because your brain receives the nicotine you will not feel the withdrawal effects of not smoking. The number of patches you need or the number of pieces of gum you need depends on how much you smoke. Your Health Care Worker will discuss how much you smoke and determine how many patches or pieces of gum you will need to use. We may not get the dose right first time so you will need to tell the nurses how you are feeling so we can give you more or less.

You do not have to want to quit smoking permanently to try the patches or the gum. You can try the patches or the gum at any time and go back to smoking at any time.

Because we want to find out whether this is an effective way to help people when the new rules come in we may ring you after you have gone home to see what you thought about our project.

For further information please contact the researchers for the project:

Dr Sheila Knowlden Department of General Practice Fairfield Hospital Tel. 9616 8520

Joanne Karcz Area Health Promotion Tel. 9828 5911

David Rich Midas Program Tel. 0414 513 050

APPENDIX 5

Clean Air for All pamphlet





MENTAL HEALTH AND TOBACCO

More than the area of a sour health whether you smoke the cigarette directly or smoke other peoples smoke in the air. Therefore the NSW Government has decided to make all areas of all hospitals smoke free by September, 2002. This will mean that soon no-one may be allowed to smoke in Banks House or the Liverpool Hospital Mental Health Unit, even in the areas where people can smoke now. When the proving a ways to make sure that smokers who come into the Unit will not be uncomfortable or distressed when they are admitted but can't smoke. We are offering nicotine patches or nicotine gum (Nicotine Replacement Therapy – NRT) to smokers who are in the Unit to see if this will help people cope with the new restrictions.



Patient consent form

CAFA Consent Form

I understand that I am being asked to participate in a study that is offering nicotine patches and/or gum to patients of this mental health unit who smoke. I understand that the aim of this study is to achieve a smoke free environment within the Unit.

I understand that no-one expects me to stop smoking if I don't want to, but if I do want to I will receive all the necessary help.

I understand that I can use nicotine patches and/or gum once or many times or all the time I am in the Unit and in some circumstances after I am discharged.

I understand that whether or not I choose to use nicotine patches and/or gum, or start to use them and then stop, this will not affect my current or future treatment or my relationship with any person who is providing treatment for me.

I understand that if I use nicotine patches and/or gum I should tell the nurses if I feel any unpleasant effects.

I understand that I may be contacted after I leave hospital to see how I am going with my smoking, whether or not I used the nicotine patches and/or gum in hospital and whether or not I continue to use it after I leave hospital.

Patient's signature	Witness's signature
Patient's name (please print)	Witness's name (please print)
OR	
Patient's name (please print)	Patient gives verbal consent: 🗌 yes 🗌 no
Signature of health care worker who receives the verbal consent	Name of health care worker who receives the verbal consent (please print)

Date _____

GP discharge letter

POST discharge letter

The **Clean Air for All** programme offers people who are in hospital an opportunity to use nicotine r eplacement therapy (NRT) to support their efforts to quit smoking.

______ has received NRT while an inpatient of the Mental Health Unit, and

is entitled to received a further ______ doses under this programme, with

the 8 week course of NRT ending on ______. The dose at discharge was ______

21 mg patches per day. They may also receive ______ pieces of 4 mg. NRT Gum per week.

At the completion of the course of NRT it will be necessary to monitor the patient's medication levels. If the patient is no longer smoking or using NRT, it is likely that the usual medication will need to be adjusted (possibly decreased).

Please not that to continue to receive NRT for *Clean Air for All*, clients have to use NRT consistently. Clients will lose their entitlement for free NRT if they have not picked up their supply within 5 days of it becoming due each week.

(Discharge	Nurse/Medical	Officer)
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(Date)

Fagerström test for Nicotine Dependence (FTND)

Has patient been offered NRT?	🗌 yes	🗌 no

Patient ID _____

Agreed to try?

Fagerström Test for Nicontine Dependence (FTND)

Questio	ns		Answers	Points	Score
1. How s	soon after waking do you sr	noke	Within 5 minutes	3	
your fi	rst cigarette?		6–30 minutes	2	
31-60	minutes		1 Mara than CO minutes	0	
			More than 60 minutes	0	
2. Do yo	u find it difficult to abstain fi	om	Yes		1
smoki	ng in places where it is forb	idden,	No		0
eg chi	urch, library, etc?				
3. Which	cigarette would you hate to	o give up?	The first one in the morning	1	
			Any other	0	
4. How r	nany cigarettes a day do yo	ou smoke?	10 or less	0	
			11–20	1	
			21–30	2	
			31 or more	3	
5. Do yo	u smoke more frequently in	the	Yes	1	
mornii	ng than in the rest of the da	y?	No	0	
6. Do yo	u smoke even though you a	are	Yes	1	
sick in	bed for most of the day?		No	0	
				TOTAL	
Scoring	Very low dependence	0–2			
	Low dependence	3–4			
	Medium dependence	5			
	High dependence	6–7			
	Very high dependence	8 +			

Reference: Heathertone T.F, Kozlowski L.T, Frecker R.C & Fagerström K.O. 1991. The Fagerström test for nicotine dependence: a revision of the Fagerström Tolerance Questionnaire. *British Journal of Addiction*, 86, 1119–1127

Sugg	gested Treatment Matching		NRT
Score	Э		
0–5	Low – medium:	Provide advice and counselling	Туре:
6–7	Medium – high dependency:	21 mg patch	
8+	High – very high dependency:	2x21 mg patch & gum as required	Dose:
In ce of NI	ertain circumstances it may be n RT in the form of two or more pa	ecessary to use a higher dose atches	

Data collection form

Clean Air for All Reduction of smoking in mental health units

Data collection form

1 1.1	Demographic info	rmation		Smoker Tick if patient is a current smoker 🛛
1.2	First name (to be delete	d after 3 month follow	/-up)	
1.3	Contact phone number			
1.4	Gender (M/F) a)) DOB	b) Age (years)	
1.5	Language spoken at ho	me		
1.5	a) Interpreter required (t	ick one box) 🗌 yes	🗆 no	
1.6	Admission Date a) Discharge Date	b) Length of Stay (numbe	er of nights)
1.7	Psychiatric diagnoses			
1.8	Medications at time NR	T is first prescribed (type	e and dosage)	
1.9	If NRT ordered, medicat	ions on discharge (type	and dosage)	

1.10	NRT prescribed on discharge		Patches per	day		mg
			Gum per da	ау		mg
2	Smoking status on admission	on				
2.1	Current smoker (tick one box) 1	yes	2 🗌 no	3 🗌 u	nknown	
2.2	Nicotine dependence (FTND) (tick one	box) 1	🗌 0–2 Ve	ery low depend	dence	
		2	2 ∐ 3–4 Lo	w dependenc	e	
			8 ∐ 5 M	edium depend	dence	
		2	⊢	gh dependend	ce	
			5 🗌 8+ Ve	ery high deper	ndence	
		6	FTND s	core not comp	oleted	
		7	′ ∟ FTND s	core not in file	5	
3	Other details					
3.1	Contraindications to NRT (tick one box) 1	🗌 a) File s	states no cont	raindication	S
		2	b) File	states contrair	ndications (p	lease note details below)
			а	Heart con	dition (unsp	ecified)
			b	Acute my	ocardial infa	rction
			С	Severe car	rdiac arrhyth	nmias
			d	Unstable/	worsening a	ngina
			e	Recent C\	/A (cerebrov	vascular accident)
			f	Pregnancy	/	
			g	Skin cond	ition	
			h	Other (plea	ase specify)	
			c) Not	recorded in file	e	

3.2 Name of treating doctor

3.3 Name of admission/primary nurse

4. F	Pattern of NRT Use				
4.1	Offered NRT during admissio	n (tick one box)	1 🗌 yes	2 🗌 no	
4.2	Consent form for NRT project	completed (tick one box)	1 🗌 yes	2 🗌 no	3 🗌 Patient declined
4.3	Type of NRT used (tick one box)	1 D Patches alone			
		2 Patches supplement	ted by gum		
		3 🗌 Gum alone			
4.4	Starting dose (tick one box)	1 🗌 1 patch			
		2 🗌 1 patch + gum			
		3 2 patches			
		4 🗌 2 patches + gum			
		5 🗌 3 patches			
		6 🗌 3 patches + gum			
		7 Other (Please specif	fy)		
					_
		8 Gum only	Pie	ces used on d	ay 1 (write number in box)
4.5	Lower dose increasing to hig	her dose 🗌 (tick box if ap	oplicable)		
Com	ments				
4.6	Higher dose decreased during	g admission [] (tick box	if applicable)		
Corr	ments				
47	Total number of days during	admission which NPT wa	s used		
4.7	(write number in box or tick if NRT us	ed throughout entire admission)	is used	da	avs
		,,,,,,,	Г		J -
				Fr	ntire admission
			L	E1	
4.8	(write number in appropriate box)	sea auring admission			
	(write number in appropriate box)				
			L	nı	umber of patches
			Γ		
			L	Pi	eces of gum

4.9	Was use of NRT continuous (tick one box)	1 🗌 yes 2 🗌 no
	If no, indicate the number of <i>discrete</i> att	empts (tick appropriate box)
	1 1 2 2 3 3 4 1	More than 3
NB.	A discrete attempt is defined as an attempt to	use NRT that occurs at least 24 hours after a previous attempt.
4.10	Patches discontinued due to: (tick appropriat	e boxes)
	a 🗌 Skin irritation	d 🗌 Insomnia
	b 🗌 Gastro-intestinal complaint	e 🗌 Change of mind
	c 🗌 Abnormal dreams	f \Box Other (please specify)
4.11	Gum discontinued due to: (tick appropriate be	(хо
	a 🗌 Gastro-intestinal complaint	d 🗌 Dislike taste
	b 🗌 Jaw-ache	e 🗌 Change of mind
	$_{ m C}$ \Box Sore mouth/throat	f \Box Other (please specify)
4.12	Continued to smoke while using NRT (tick	appropriate box)
	1 🗌 yes 2 🗌 no	
4.13	Comments	

Brainstorming session results – Liverpool



Post-discharge follow-up

Hello, May I speak to __________, I am calling from Liverpool/Bankstown Hospital.

When you were in hospital you tried using nicotine replacement therapy (the patches or the gum) so you didn't need to smoke. You said then that I could ring you up. Is it still alright with you to talk to me about smoking and using the patches or the gum? It should take about 10 minutes.

- 1. Do you remember using the patches/gum? \Box Yes \Box No
- 2. For how long did you use the patches/gum while you were in hospital?
 - less than one day. What made you stop?
 - □ Some of my stay. What made you stop?
 - □ Most of my stay. What made you stop?
 - All of my stay
- 3. Had you used patches or gum before this time? \Box Yes \Box No
- 4. What did you think about using the patches/gum while in hospital?
- 5. Why did you use the patches or gum while in hospital?
- 6. Would you use the patches/gum again? Yes No
- 7. Have you used any patches/gum since coming out of hospital?
 - □ Yes (for how many days?_____) □ No
- 8. Did you go home to an environment where other people smoke?
- 9. How do you manage at the present time when you are in places where you cannot smoke, like on the train, in the bank, etc?
- 10. Do you think that you will ever give up smoking?
 - ☐ Yes Why would you quit?
 - □ No Why not?
 - Maybe
- 11. How often have you tried to quit smoking?

Never	Once
1100101	Once

☐ Three times

More than three times

- 12. The reason the hospital wanted you to try the patches/gum was because soon the hospital will not be able to let anyone smoke anywhere in the hospital grounds. How do you feel about that?
- 13. Do you have anything else you would like to tell me about this project?

Twice

GP survey A

GP Survey Form

Q1: Do you remember that your patient ______ came home from an admission to Liverpool Mental Health Unit/Banks House on free nicotine replacement patches?

\Box Yes go to Q2

No go to Q1a

Q1a: We have been running a project in Liverpool and Bankstown mental health units offering patients who smoke the chance to use NRT during their admission, whether or not they wish to quit smoking. However your patient decided to try and quit smoking and so was given 8 weeks worth of NRT to use after they returned home.

Q2: When did you last see this patient?

- □ in last month
- □ in last 3 months
- more than 3 months ago
- Q3: How long have they been a patient of the practice?

- □ 1–2 years
- 2–5 years
- more than 5 years

Q4:	Were you aware that	at this patient was a s	smoker?	🗌 Yes	🗌 No	
Q5:	Have you discussed	smoking with them	at any time	in the past?		
	Discussed	Not discussed	Reasons wh	y not?		
	What have you tried	d? Interventions tried	: 🗌 Co	ounselling	□ NRT	□ Other

Q6: Did your patient tell you about using the patches? What were their feelings about this project?

Are they smoking now?

Q7: Did you know that the hospitals (including mental health units) will soon be smoke free and there will be no place for inpatients to go and smoke?
Yes No

Comments: ____

Q8: The aim of this project was to prevent symptoms of nicotine withdrawal in people who smoke while protecting all non-smokers from the effect of passive smoking. Those using NRT did not have to wish to give up smoking permanently. What do you think of such a project?

Patient survey

Patient Survey Form

MH nationts who have refused NRT

nt Name: Mikn Number:
Did any health worker talk to you about your smoking during your hospital stay?
□ No (go to question 2) □ Yes
When?
□ In emergency department or during admission
\Box In mental health ward
Prior to admission
Other (please specify)
Who?
□ Nurse
 Nurse Doctor
 Nurse Doctor Someone else (please specify) What did they say about your smoking?
 Nurse Doctor Someone else (please specify) What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No
 Nurse Doctor Someone else (please specify) What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital?
 Nurse Doctor Someone else (please specify) What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital? No (go to question 4) Yes
 Nurse Doctor Someone else (please specify) What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital? No (go to question 4) Yes When did you find out?
 Nurse Doctor Someone else (please specify) What did they say about your smoking? What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital? No (go to question 4) Yes When did you find out? At emergency department or during admission
 Nurse Doctor Someone else (please specify) What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital? No (go to question 4) Yes When did you find out? At emergency department or during admission In mental health ward
 Nurse Doctor Someone else (please specify) What did they say about your smoking? What did they say about your smoking? Did you know there is a smoke free workplace policy in the hospital? Yes No Did you know there is a nicotine replacement therapy program (providing fee patches/gum) in the hospital? No (go to question 4) Yes When did you find out? At emergency department or during admission In mental health ward Prior to admission

Someone else (please specify)

Appendix 13 Patient survey

4.	Have you ever used nicotine replacement therapy before this admission?
	└ Yes (go to question 5) └ No (go to question 6)
5.	What do you think of it?
6.	Were you offered NRT at any time during this stay?
	Yes No
7.	Are there any reasons why you didn't use NRT during your stay?
8.	If you've continued to smoke during your hospital stay, where do you go to smoke?
9.	What do you usually do when you go to places where you can't smoke?
10.	What will you do when the hospital does not allow smoking anywhere on the premises?
11.	Would you like to try NRT now?
	Second Se

Hospital staff survey

Clean Air for All staff survey

1.	How long have you been working in this men health unit? (circle one only)	tal
	More than 2 years	1
	6 months–2 years	2
	Less than 6 months	3
2.	What is your usual shift? (circle one only)	
	Morning	1
	Evening	2
	Night	3
	Rotating	4
	9–5 equivalent	5
3.	Please indicate your position. (circle one option of	only)
	Nurse	1
	Doctor	2
	Other	3
4.	Basis of employment. (circle one option only)	
	Permanent	1
	Part time	2
	Casual pool	3
	Agency	4
5.	What is your smoking status? (circle one option	only)
	Current regular (ie daily) smoker	1
	Current smoker (not regular)	2
	Ex-regular smoker	3
	Never smoked regularly	4
Ind nor iter	icate if you strongly agree, agree, neither a disagree, disagree or strongly disagree wi ns 6–9. (Circle only one option for each item)	agree th
6.	It is important to have a designated outdoor sm area for inpatients of the mental health unit.	noking
	Strongly agree	1
	Agree	2
	Neither agree nor disagree	3
	Disagree	4
	Strongly disagree	5

7.	Staff of the Mental Health Unit have the right to work without exposure to environmental tobacco smoke.	
	Strongly agree	1
	Agree	2
	Neither agree nor disagree	3
	Disagree	4
	Strongly disagree	5
8.	The Clean Air for all project is a way to make people quit smoking, masquerading as smoke t workplace program.	free
	Strongly agree	1
	Agree	2
	Neither agree nor disagree	3
	Disagree	4
	Strongly disagree	5
9.	It is important to me to know the smoking stat my patients.	us of
	Strongly agree	1
	Agree	2
	Neither agree nor disagree	3
	Disagree	4
	Strongly disagree	5
10.	Which of the following may be symptoms of nicotine withdrawal? (circle as many options as you think apply)	
	Irritability	1
	Depressed mood	2
	Heartburn	3
	Itchy eyes	4
	Anxiety	5
	Decreased heart rate	6
	Insomnia	7
	Nausea	8
	Restlessness	9

11.	In which of the following clinical situations are nicotine patches contraindicated?		
	Epilepsy	1	
	Pregnancy	2	
	Lactation	3	
	Anorexia nervosa	4	
	Severe arrhythmias	5	
	Non-tobacco users	6	
12.	Do you establish the smoking status of:		
	All of your patients?	1	
	Most of your patients?	2	
	Some of your patients?	3	
	None of your patients?	4	
13.	How often do you encourage smokers to consid using NRT to manage withdrawal symptoms dur their hospitalisation? (circle one option only)	age smokers to consider ndrawal symptoms during	
	Always mostly	1	
	Sometimes	2	
	Rarely	3	
	Never	4	
14.	Have you been educated in any of the following areas? (circle as many options as apply)		
	Identifying smokers	1	
	Assessing nicotine dependency	2	
	Recognising nicotine withdrawal symptoms	3	
	Managing nicotine dependency	4	
	Contraindications of NRT	5	
	Side effects of NRT	6	
	Assisting patients to quit smoking	7	
15.	How many times have you provided a nicotine patch to a patient in this unit		
	0–5 occasions	1	
	6–20 occasions	2	

21 or more		

16.	Do you perceive any obstacles to identifying the smoking status of your clients?	
	Yes	1
	No	2
	If yes, what are the obstacles you perceive?	
		_

17.	Do you perceive any obstacles to completing	
	a Fagerström form (assessing dependence)?	
	Yes	1
	No	2
	If yes, what are the obstacles you perceive?	

18. Do you perceive any obstacles to using NRT as part of a treatment plan?YesNoIf yes, what are the obstacles you perceive?

1 2

- 19. Do you perceive any additional barriers to managing nicotine dependency in this unit?
- 20. What do you perceive to be the positive aspects of a smoke free mental health unit?
- 21. What do you perceive to be the negative aspects of a smoke free mental health unit?
- 22. Additional comments:

3

GP survey B

GP telephone interview

1.	How long have you been working in general practice?		
	< 5 years	1	
	5–10 years	2	
	>10 years	3	
2.	What is your own smoking status? (circle one option only)		
	Never smoked regularly	1	
	Ex smoker	2	
	Occasional smoker	3	
	Daily smoker	4	

Indicate if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with the following statements. (Circle only one option for each item)

It is important to have a designated outdoor smoking area for inpatients of the mental health unit.
 Strongly agree

Strongly agree	1
Agree	2
Neither agree nor disagree	3
Disagree	4
Strongly disagree	5

4. Staff of the MH Unit have the right to work without exposure to environmental tobacco smoke.
Strongly agree 1
Agree 2
Neither agree nor disagree 3

- Disagree4Strongly disagree5
- 5. The Clean Air for All project is a way to get people to quit smoking, masquerading as a smoke free workplace program.

Strongly agree	1
Agree	2
Neither agree nor disagree	3
Disagree	4
Strongly disagree	5

6.	It is important to me to know the smoking status of my patients.		
	Strongly agree	1	
	Agree	2	
	Neither agree nor disagree	3	
	Disagree	4	
	Strongly disagree	5	
7.	Which of the following may be symptoms of nicotine withdrawal? (circle as many options as you think apply)		
	Irritability	1	
	Depressed mood	2	
	Heart burn	3	
	Itchy eyes	4	
	Anxiety	5	
	Decreased heart rate	6	
	Insomnia	7	
	Nausea	8	
	Restlessness	9	
8.	In which of the following clinical situations are nicotine patches contraindicated? (circle as many options as you think apply)		
	Epilepsy	1	
	Pregnancy	2	
	Lactation	3	
	Anorexia nervosa	4	
	Severe arrhythmias	5	
	Non-tobacco users	6	
9.	Do you establish the smoking status of: (Please circle one option only)		
	All of your patients?	1	
	Most of your patients?	2	
	Some of your patients?	3	
	None of your patients?	4	

 How often do you encourage smokers to consider using NRT to manage their nicotine withdrawal symptoms? (circle one option only)

Always/mostly	1
Sometimes	2
Rarely	3
Never	4

11. Do you perceive any obstacles to using NRT as part of a quit smoking treatment plan?

Yes	1
No	2

If yes, what are the obstacles you perceive?

- 12. Do you perceive any additional barriers to managing nicotine dependency in an inpatient mental health unit?
- 13. What do you perceive to be the positive aspects of a smoke free mental health unit?
- 14. What do you perceive to be the negative aspects of a smoke free mental health unit?

Thank you very much for your assistance.

For any questions about this survey or the project please contact Dr Sheila Knowlden on 9616 8520 or Mr David Rich on 9828 6723.

Grouping of mental health disorders

These groupings have been classified according to the Diagnostic and Statistical Manual of Mental Disorders 1994) (4th Edition), Published by The American Psychiatric Association, August 1994.

- Bipolar disorders, depressed, hypomanic, manic, mixed and unspecified.
- Personality disorders, all types.
- Mood disorders, dysthymic and depressive disorders unspecified.
- Major depressive disorders, single and recurrent episodes.
- Schizophrenia and other psychotic disorders, schizophreniform, schizoaffective, delusional and other psychotic disorders.

- Anxiety Disorders, panic attacks, agoraphobia, obsessive-compulsive behaviour, post-traumatic stress syndrome, acute stress disorder and general anxiety disorders.
- Adjustment disorders, with no other psychiatric diagnosis.
- Drug and alcohol abuse, intoxication and withdrawal symptoms with or without psychosis.
- Suicide, suicidal and self harm behaviour.
- Miscellaneous, none of the above.

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