

New South Wales Health Promotion Demonstration Research Grants Scheme

IMPLEMENTING THE GUIDE FOR THE MANAGEMENT OF NICOTINE DEPENDENT INPATIENTS



A QUASI-EXPERIMENTAL STUDY IN
REGIONAL ACUTE CARE HOSPITALS IN NSW

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Executive summary

Introduction

The provision of smoking care in hospitals is important to assist patient smoking cessation and for the management of patients experiencing nicotine withdrawal. Currently, only limited data are available that describe interventions to increase the provision of smoking care in hospitals.

Methods

A quasi-experimental study, involving two intervention and two control hospitals, investigated whether a 12-month multi-strategic intervention increased smoking care provision to nicotine dependent patients in intervention versus control hospitals. The study included regional acute care hospitals with more than 5000 admissions in NSW, Australia. Intervention strategies included local consensus and adaptation, linking into existing structures and processes, training, compliance monitoring, prompts and reminders, management support and communication. Smoking care outcome data were collected at baseline and follow-up using patient surveys, medical records audits and health professional surveys.

Results

Significantly greater increases in the intervention group compared to the control group were found for patient reported offers of Nicotine Replacement Therapy (NRT) and provision of NRT, and in medical records for smoking management discussed, NRT offered and written resources provided. Intervention group health professionals reported significantly greater increases in: smoking management discussed; NRT offered or provided; asked intention to smoke post-discharge; advised support post-discharge; and provided discharge NRT. Absolute increases in care varied between smoking care practices and between data collection tools. Patient reported offers of NRT increased 34 per cent from baseline to follow-up in intervention hospitals compared to an increase of 12 per cent in control hospitals.

Conclusions

Delivery of a multi-strategic intervention can be effective in increasing smoking care by routine hospital health professionals, particularly the provision of NRT. Future research should focus on methods to further increase the provision of NRT beyond the level achieved in this study, and to increase referral to quit services whilst minimising the burden of doing so for health professionals.

Introduction

Intervention by hospital health professionals with patients who smoke has the potential to reduce the morbidity and mortality associated with tobacco consumption.¹⁻³ Benefits of hospital patient cessation include reduced risk of disease, improved post-operative recovery, reduced length of stay and lower re-admission rates.⁴⁻⁷ The provision of smoking care in hospitals is relevant to the management of patient nicotine withdrawal whilst in a smoke-free environment.⁸⁻¹⁰

The United States (US) and the United Kingdom (UK) have recommendations for the delivery of smoking care to hospital patients that incorporate the five A's of smoking care: ask, advise, assess, assist and arrange.¹¹⁻¹² The US and UK guidelines contain recommendations for how hospitals can increase smoking care delivery through use of the following strategies: systematic identification and recording of smoking status; provision of education and resources to staff; feedback on care delivery performance; identification of health professionals to deliver care; reimbursement of providers; inclusion of nicotine dependence pharmacotherapy on formularies; and smoke-free site compliance.¹¹⁻¹² Although such guidelines have been available since the mid 1990s reported levels of hospital smoking care are often poor.^{1,13-14}

In 2002 The Guide for the Management of Nicotine Dependent Inpatients (The Guide) was released by New South Wales (NSW) Health.¹⁵ The Guide was developed to assist health professionals in their care of nicotine dependent patients in NSW Health facilities to cope with nicotine withdrawal in the context of a smoke free environment. The Guide outlines recommendations regarding the delivery of smoking care practices similar to those recommended in the US and UK guidelines.¹¹⁻¹² In particular the Guide recommends identification of every tobacco user, management of withdrawal symptoms including use of Nicotine Replacement Therapy (NRT), and linking care to discharge.

NRT is an important component of hospital smoking care.^{11-12,15} It has been demonstrated to approximately double quit rates in clinical trials¹⁶ and although there is limited evidence regarding the efficacy of NRT specifically in the hospital setting,¹⁷ its use has

been widely recommended for hospital patients.^{11-12,15} Recent recommendations have advised NRT can be used to aid temporary abstinence such as coping with withdrawal in a smoke-free hospital environment and there are few patient conditions for which continued smoking is preferable to abstinence and use of NRT.¹⁸

Reviews have identified effective clinical practice change strategies including educational outreach visits, reminders, interactive educational meetings and multi-faceted interventions.¹⁹⁻²⁴ An examination of the literature identified no reviews have been published regarding effective clinical practice change strategies designed to increase smoking care in hospital settings. However, a number of individual controlled studies designed to increase care in hospitals have been reported.²⁵⁻³⁷ The majority of these studies were undertaken prior to the release of the UK and US guidelines mentioned above,^{26,28-30,33-35,37} were conducted in the US^{25-26,32-34} and tended to address a single hospital unit or patients with a single diagnosis.^{25,27-32,35-37} The studies reported on a limited range of smoking care practices with a minority reporting on the provision of NRT, follow-up care or referral to further quitting assistance.^{34,36} The studies commonly used multiple intervention strategies, usually training in combination with other strategies such as organisational change, reminders, audit and feedback.

Previous studies have reported variable intervention effectiveness with some positive impacts. For example Ahluwalia et al²⁵ found increases in patient reported identification of smoking status (33 per cent), advice to quit (13 per cent) and referral and/or follow-up (6 per cent) but failed to find an intervention effect on two care practices: the setting of a quit date and assistance to quit. Bolman et al²⁷ reported a 35 per cent increase in patient reported advice to quit and an 8 per cent increase in cessation counselling. Hajek et al³¹ reported a 5 per cent increase in the provision of written resources and also reported a significant increase in eight of nine smoking care practices assessed. Walsh et al³⁵ found a 24 per cent increase in patient reported advice to quit provided by a medical officer, but could not demonstrate a significant effect when this care practice was measured by direct observation. Walsh et al³⁵ measured a number

of other smoking care practices, using patient report and direct observation, and found variable effectiveness dependent on the data collection tool used and the health professional type.

There is a need to further explore the effectiveness of interventions to increase the routine provision of smoking care in hospitals. Such a need exists for studies that address the full breadth of smoking care provision and have a whole of hospital approach.

Project aim

The project aimed to investigate the efficacy of a 12-month multi-strategic intervention in increasing the delivery of smoking care to nicotine dependent hospital patients.

The intervention

The Guide was sent to each of 17 NSW Area Health Service Chief Executive Officers who were instructed to provide The Guide to all hospital wards and workforce development units within each area.

Intervention hospitals

An advisory group was formed at each of two intervention hospitals that included members of the research team and key hospital staff. Six months prior to the intervention period, the advisory groups were provided briefing documents including baseline data on levels of smoking care provision and effective practice change strategies. The advisory groups were also provided an intervention planning template, which listed practice change strategies and included specific examples of practice change components. Each advisory group added or deleted intervention components, based on local acceptability and feasibility, resulting in the development of a hospital-specific action plan. Details of the intervention strategies, components delivered and an intervention timeline for each hospital are provided in Table 1.

Both hospitals were provided a budget (AUS \$30,000 or around US \$23,000) and a research team staff member (three days per week) to assist implementation. The interventions were piloted in one unit at each hospital prior to rollout.

Factors affecting implementation

Hospital Two commenced the intervention phase 12 months after Hospital One due to delays in ethics approval and low patient throughput, which prolonged patient surveys in this hospital.

A number of challenges were encountered during intervention implementation. First, there was consistent senior staff turnover and extended leave, as well as a low level of senior medical officer representation at Hospital One that hindered the local consensus and adaptation strategy. Further, both intervention hospitals found it difficult to progress some intervention components due to the busy clinical setting and availability of key senior staff.

Second, although four training sessions were planned for both intervention hospitals, the fourth training session at intervention Hospital One was only provided to a minimal number of nursing staff and only one summary training session was provided at intervention Hospital Two. Further, difficulties were experienced in implementing medical officer training. Allied Health staff only received a resource folder that included training session content.

Third, non-compliance at Hospital One with the general inpatient reminder stickers led to a medical forms amendment, which incorporated the sticker content. Lastly, Hospital One could not identify a position or committee responsible for ongoing monitoring and compliance of smoking care.

Control hospitals

The two control hospitals followed their usual approach to implementing The Guide.

Table 1: Intervention strategies, components delivered and timeline

Strategy and components	Month			
	1-3	4-6	7-9	10-12
1. Local consensus and adaptation				
- Advisory Group meetings x 9				
2. Linking into existing structures and processes				
- Hospital smoking care guideline* (not ratified until after 12mths Hospital 2)				
- NRT Standing Orders and protocol*		2		1
- NRT on hospital formulary*		2		1
- Quitline fax referral		2		
- Smoking care role of continuing D&A Nurse	1	1	1	1
3. Training				
- Nurse – Hospital 1: 4 sessions per nurse, Hospital 2: 1 session#				
- Medical Officer#				
Junior medical officer – brief one on one and at orientation				
Senior medical officer – information package				2
- Training package available on computer		2		
- Grand Rounds presentation	1	2		1
- Resource folders for all Units				
- Impromptu training and support by local clinical champions#				
4. Prompts and reminders				
- Bedside flow chart of smoking care				
- Medical form sticker				
- Forms amendment prompting smoking care*				1
- Computer screen saver			2	
5. Monitoring and compliance#				
- Medical records audit (x 10) and NRT data				
- Monitoring data feedback to Advisory Group and unit staff				
- Ongoing measures of smoking care identified (pharmacy NRT and patient satisfaction survey)				
6. Management support				
- Attendance at Advisory Group meetings				
- Cost of NRT met by existing hospital budget	1	1	1	1
- Cost price NRT for staff			2	2
- Application to local quality awards			2	
- Senior manager memo to staff				
- Staff lunch promotions half funded by hospital				2
7. Communication				
- Staff: hospital newsletter x 3				
- Community: local television item, local newspaper				
- General Practitioner: Newsletter articles x 2				
- Patient: information flyer for ward, mailout to pre-booked patients, amendment to Maternity booklet, smoking facts sheets, NRT availability posters				

Implementation of these strategies was undertaken by the Drug and Alcohol Nurse at Intervention Hospital 1 and by staff released from normal duties at Intervention Hospital 2 using the \$30,000 resource allocation (Hospital 2 used only \$20,000 of the resource allocated)

*Sustainable strategy component in place

occurred at both intervention hospitals 1 and 2

1 occurred at intervention hospital 1 only

2 occurred at intervention hospital 2 only

Methods

Design and participants

Design

A quasi-experimental, matched pair trial was conducted involving four hospitals in NSW, Australia, two of which were allocated to the experimental condition and two to a control condition. Baseline and follow-up data of smoking care delivery was collected using cross sectional patient telephone interviews, medical record audits for recently discharged patients, and cross sectional surveys of health professionals. Data collection was undertaken prior to implementation of the intervention (baseline) and approximately 12 months after the intervention period commenced (follow-up) at each hospital. Approval was obtained from relevant ethics committees.

Participants

Hospitals

The four hospitals were selected from a pool of 21 regional acute care hospitals in NSW with more than 5000 annual admissions. Hospitals were allocated to the experimental condition because of their established links with one or more members of the research group. A control hospital was matched to each intervention site (Pair One and Pair Two) based on patient admissions per year, health professional to inpatient activity ratios,³⁸ and similar levels of smoking care.³⁹ All four hospitals agreed to participate. A description of the four hospitals is provided in Table 2.

Patients

Eligible patients selected from hospital electronic records were: 18 years of age or over; had a length of stay of at least two nights (to allow opportunity for smoking care provision),³³ were not discharged to a nursing home or from a psychiatric bed; had not experienced a stillbirth; were capable of completing the survey in English; and reported being nicotine dependent (smoking more than ten cigarettes per day) either at the time of their last preadmission visit or two days prior to admission.

Health professionals

All nurses, doctors and allied health staff with patient contact in each hospital were eligible, with the exception of those who exclusively cared for day-stay patients or special needs patient groups, for example, palliative care.

Measures and procedures

Smoking care outcomes

Outcome measures were based on the care practices described in The Guide.¹⁵ Outcome assessment included smoking care that occurred during preadmission or admission.

Proportion of patients receiving smoking care

Patient reported smoking care

Approximately one week after discharge patients received an information letter describing the study and procedures for data collection (Appendix 1).

Table 2: Description of participating hospitals^a

	Intervention Hospitals			Control Hospitals		
	1	2	Total	1	2	Total
Major ^b /District ^c	District	Major	–	District	Major	–
Admissions per annum	11,641	13,398	25,039	12,242	18,487	30,729
Available beds	168	188	356	135	250	385
Health professional to inpatient activity ratio ^d	2.4	3.1	–	2.4	3.2	–

a NSW Health Services Comparison Data 1998/99³⁸

b Hospitals in rural areas providing acute specialist and referral services for a catchment population from a large geographical area³⁸

c Acute hospitals, treating 5,000 or more acute separations³⁸

d A measure of hospital workload calculated by dividing the equivalent full-time staff by the average daily patient workload³⁸

Patients could call a toll-free number to opt off the survey. The remaining patients were called to complete a computer assisted telephone survey (Appendix 2). The survey period extended for five to eight months per hospital at both baseline and follow-up.

The surveys assessed patient recall of the following smoking care practices (yes, no or unsure): having their smoking status identified; being informed they cannot smoke; having management of smoking discussed; being offered NRT during their stay; having used NRT during their stay; having nicotine withdrawal symptoms monitored; being advised to quit permanently; being asked intent to smoke post-discharge; being advised to seek quitting support post-discharge; being provided written resources; and being provided NRT for the post-discharge period.

Patient descriptors collected in the survey included number of cigarettes smoked per day and demographic characteristics such as marital status and level of education. Other descriptors including gender, age, ward of discharge, length of stay and the presence of a smoking related illness,⁴⁰⁻⁴¹ were obtained for each patient from electronic hospital records.

Medical records audit of smoking care

All patients participating in the survey were asked permission to have their medical records audited for notation of smoking care provision. A consent form and reply-paid envelope was mailed to those who agreed. Auditors recorded notation of smoking care on any form contained within consenting patients' records. The smoking care variables assessed were equivalent to those in the patient survey. Inter-rater reliability was examined by re-auditing a sub-sample (20 per cent) of follow-up records.⁴² The audit information letter, consent form, audit tool and audit protocol are included in Appendices 3 to 5.

Health professional reported smoking care

A pen and paper survey of health professionals was conducted across all staff shifts over three days. Staff were provided a study information letter one week prior to the survey period (Appendix 6). Surveys were distributed by varying methods including distribution by nurse managers and internal mail (Appendix 7). Health professionals completed surveys during work time and returned them to local collection boxes or a designated staff member.

Respondents indicated on a scale (0–100 per cent) an estimated proportion of their patients that were provided each care practice in the previous three months. Care variables were equivalent to those previously outlined in the patient survey, with the addition of recording smoking status, assessing nicotine dependence and recording nicotine dependence. Pharmacotherapy variables included having offered and/or provided NRT and provided NRT at discharge to smokers trying to quit. The survey included staff characteristics: gender, age, health professional type, hours worked, shifts worked, hospital unit most frequently worked and smoking status.

Sample size

A sample size of 240 patients per experimental group was estimated to be sufficient to detect a difference of 13 per cent between intervention and control groups at follow-up for each smoking care practice reported by patients ($\alpha=0.05$, power=80 per cent). An assumed 60 per cent consent rate to the medical records audit was estimated to provide 144 patient audits per experimental condition at follow-up, sufficient to detect a 16 per cent difference in smoking care outcomes. An estimated 60 per cent response rate to the health professional survey, providing 240 health professionals per experimental condition, was estimated to detect a 9 per cent difference in the mean proportion of patients reported to have received each smoking care practice at follow-up (standard deviation of 0.35 based on baseline). All sample size estimates assumed no baseline differences in smoking care levels between intervention and control hospitals.

Analysis

Sample characteristics

Patients completing surveys were compared to non-contactable and non-consenting patients based on patient descriptors available from hospital electronic records. Patients consenting to the medical records audit were compared to non-consenters based on available patient sample descriptors.

Patient survey, medical records audit and staff survey samples were examined for differences between intervention and control hospitals at baseline and follow-up based on available sample descriptors. All such comparisons were undertaken using chi-square analyses. Identified differences in patient survey, medical records audit and staff survey samples were adjusted for in subsequent smoking care outcome analyses.

Smoking care outcomes

For all three measures (patient survey, medical records audit, health professional survey) a logistic regression was undertaken for each smoking care item to examine change in smoking care from baseline to follow-up in intervention hospitals compared to control hospitals. In order to account for baseline levels of care delivery an interaction term between experimental condition and time was included in the regression model. Change in care delivery was determined to be significantly different in intervention hospitals compared to control hospitals if the interaction term was significant in the regression model ($p < 0.05$). The regression model also included the variable hospital pair to adjust for clustering.

All analyses were undertaken using SAS Version 8.2.⁴³

Results

Hospital, patient and health care professional samples and sample characteristics

The sample size and consent rates for the patient survey, medical records audit and health professional survey are provided in Table 3. Overall response rates (consenting patients divided by consenting, non-consenting and non-contactable patients) for patient surveys ranged from 69 per cent to 81 per cent across the four hospitals and yielded 274 to 347 nicotine dependent patients per condition. Consenters to the patient survey differed from non-consenters, with older patients (>75 years) and those with a longer length of stay (>10 days) less likely to participate ($p<0.0001$). Due to large sample sizes, small (<10 per cent), but significant differences were also found with males, patients discharged from medical units and patients with a smoking related disease being less likely to participate ($p<0.0001$). The majority of nicotine dependent patients (85–92 per cent) completed surveys within six weeks of discharge.

Of those nicotine dependent patients completing the survey, 81 to 134 patients per hospital consented to the medical records audit (55–68 per cent). Consenters to the medical records audit differed from non-consenters: younger patients ($p<0.0001$), those discharged from a maternity unit ($p=0.001$), those born in Australia ($p=0.02$), those from a non-Aboriginal background ($p=0.001$), those reporting undertaking home duties ($p<0.0001$), and those who had never married ($p=0.003$) were less likely to consent. Due to large sample sizes, small, but significant differences were also found with females ($p=0.01$), those having a shorter length of stay ($p=0.01$) and those smoking 11 to 20 cigarettes per day ($p=0.02$) less likely to consent.

Consent rates for health professional surveys ranged from 54 per cent to 64 per cent yielding sample sizes from 79 to 219 health professionals per hospital.

Table 3: Summary of measurement samples for patient survey, medical records audit and health professional survey

Study samples	Intervention Hospitals			Control Hospitals		
	1	2	Total	1	2	Total
Patient survey						
<i>Baseline</i>						
Patients from electronic record	1422	2395	3817	1453	1827	3280
Non-eligible patients n (%)	44(3)	168(7)	212(6)	139(10)	97(5)	236(7)
Non-consenting patients n (%)	73(5)	98(4)	171(4)	89(6)	92(5)	181(6)
Non-contactable patients n (%)	156(11)	326(14)	482(13)	192(13)	241(13)	433(13)
Patients completing survey n (% eligible)	1149(81)	1803(75)	2952(77)	1033(71)	1397(76)	2430(74)
Smokers n (% consenting patients)	260(23)	334(19)	594(20)	216(21)	266(19)	482(20)
ND ^a smokers n (% consenting patients)	146(13)	197(11)	343(12)	123(12)	151(11)	274(11)
<i>Follow up</i>						
Patients from electronic record	1991	2255	4246	1592	2424	4016
Non-eligible patients n (%)	130(7)	157(7)	287(7)	189(12)	154(6)	343(9)
Non-consenting patients n (%)	90(5)	119(5)	209(5)	122(8)	134(6)	256(6)
Non-contactable patients n (%)	258(13)	375(17)	633(15)	176(11)	393(16)	569(14)
Patients completing survey n (% eligible)	1513(76)	1604(71)	3117(73)	1105(69)	1743(72)	2848(71)
All smokers n (% patients)	292(19)	320(20)	612(20)	234(21)	352(20)	586(21)
ND ^a smokers n (% patients)	154(10)	193(12)	347(11)	137(12)	210(12)	347(12)

Table 3:continued

Study samples	Intervention Hospitals			Control Hospitals		
	1	2	Total	1	2	Total
Medical records audit						
<i>Baseline</i>						
ND ^a smokers n (% ND ^a completing survey)	94(64)	134(68)	228(66)	81(66)	100(66)	181(66)
<i>Follow up</i>						
ND ^a smokers n (% ND ^a completing survey)	84(55)	132(68)	216(62)	90(66)	131(63)	221(64)
Health professional survey						
<i>Baseline</i>						
Total health professionals n (% eligible)	119(64)	124(59) ^b	243(62) ^b	79(56)	185(57) ^b	264(56) ^b
Nurses n (% nurses eligible)	93(67)	98(68)	191(67)	62(67)	149(61)	211(62)
Doctors n (% doctors eligible)	13(46)	14(30)	27(36)	13(31)	16(32)	29(32)
Allied health n (% allied health eligible)	13(72)	12(71)	25(71)	4(67)	20(63)	24(63)
<i>Follow-up</i>						
Total health professionals n (% eligible)	109(55)	120(59) ^c	229(57) ^c	82(54)	220(62) ^d	302(60) ^d
Nurses n (% nurses eligible)	81(57)	103(68)	184(63)	69(58)	179(66)	248(64)
Doctors n (% doctors eligible)	16(39)	12(34)	28(37)	8(30)	23(45)	31(40)
Allied health n (% allied health eligible)	12(71)	5(29)	17(50)	5(83)	18(56)	23(61)

a nicotine dependent patients (smoked >10 cigarettes per day at last preadmission visit or two days prior to admission)

b one health professional did not indicate health professional type

c five health professionals did not indicate health professional type

d three health professionals did not indicate health professional type

Characteristics of the study samples for the patient and health professional surveys are provided in Table 4. Nicotine dependent patients in intervention and control hospitals that completed the survey were similar with the exception of intervention patients being more likely to be discharged from a surgical unit at baseline ($p=0.01$), to be born in Australia at baseline and follow-up ($p<0.001$ and $p=0.03$ respectively), to have had at least one quit attempt in the past 12 months ($p=0.05$) and be more than 54 years of age ($p=0.003$) at follow-up. Intervention and control nicotine dependent patients consenting to the audit were

similar with the exception of intervention patients being more likely to be discharged from a surgical unit ($p=0.02$) and to be born in Australia ($p=0.001$) at baseline and to have a length of stay of less than five days ($p=0.02$) at follow-up. Intervention and control health professionals completing the survey were also similar with the exception of the ward most frequently worked; control group staff were more likely to work in wards classified as "other" at baseline and follow-up, which included wards such as emergency and critical care units ($p=0.0007$ and $p<0.0001$ respectively).

Table 4: Summary of participant descriptors for the patient and health professional surveys

Descriptor	Number of participants (%)			
	Intervention Hospitals		Control Hospitals	
	Baseline	Follow-up	Baseline	Follow-up
Patient survey	343(100)	347(100)	274(100)	347(100)
<i>Gender</i>				
Female	173(50)	188(54)	147(54)	201(58)
<i>Age**</i>				
18–34	97(29)	97(28)	68(25)	70(20)
35–54	145(42)	129(37)	114(42)	172(50)
55–75	84(24)	112(32)	81(30)	91(26)
75+	17(5)	9(3)	11(4)	14(4)
<i>Length of Stay (days)</i>				
2–4	218(64)	227(65)	158(58)	210(61)
5–10	102(30)	88(25)	87(32)	111(32)
10+	23(7)	32(9)	29(11)	26(7)
<i>Ward of Discharge*</i>				
Medical	64(19)	65(19)	78(29)	77(22)
Surgical	195(57)	194(56)	123(45)	176(51)
Maternity	57(17)	53(15)	52(19)	43(12)
Other	27(8)	35(10)	21(8)	51(15)
<i>Education</i>				
Up to completion of year 10	233(68) ^a	214(62)	177(65) ^a	255(65) ^a
Completed high school	26(8)	17(5)	25(9)	24(7)
Trade certificate	62(18)	98(28)	52(19)	75(22)
University	21(6)	18(5)	15(5)	22(6)
<i>Employment</i>				
Full time	85(25) ^a	87(25)	51(19) ^a	92(27) ^a
Home duties	61(18)	70(20)	61(22)	68(20)
Retired	62(18)	61(18)	58(21)	58(17)
Other	134(39)	129(37)	103(38)	128(37)
<i>Country of Birth***</i>				
Australia	322(94) ^a	318(92)	233(85) ^a	295(85) ^a
Aboriginal or Torres Strait Islander	26(8) ^a	22(6)	20(7) ^a	27(8) ^a
<i>Marital Status</i>				
Married/De facto	192(56) ^a	190(55)	135(49) ^a	184(53) ^a
<i>Cigarettes smoked</i>				
11–20	180(52)	179(52)	159(58)	194(56)
21–30	110(32)	113(33)	79(29)	106(31)
31 or more	53(15)	55(16)	36(13)	47(14)
<i>Quit attempts in past 12 months**</i>				
none	209(61)	191(55)	168(61)	216(62)
one	50(15)	56(16)	37(14)	56(16)
two or more	84(24)	100(29)	69(25)	75(22)
<i>Smoking related disease</i>	144(42) ^a	145(42) ^a	104(38) ^a	149(43) ^a
Health professional survey	n=243	n=229	n=264	n=302
<i>Gender</i>				
Female	210(86)	199(85) ^a	228(86) ^a	251(83) ^a
<i>Age</i>				
20–29	63(26)	45(19) ^a	66(25) ^a	72(24) ^a
30–39	64(26)	66(28)	72(27)	77(25)
40–49	81(33)	82(35)	94(35)	101(33)
50+	36(15)	39(17)	31(12)	47(16)

Table 4: Continued

Descriptor	Number of participants (%)			
	Intervention Hospitals		Control Hospitals	
	Baseline	Follow-up	Baseline	Follow-up
<i>Health professional type</i>				
Nurse	191(78) ^a	185(79) ^a	211(80) ^a	246(81) ^a
Doctor	27(11)	28(12)	29(11)	31(10)
Allied Health	25(10)	17(7)	24(9)	23(8)
<i>Hours worked</i>				
Full time	155(64)	146(62) ^a	174(66) ^a	186(61) ^a
Part-time/Casual	89(36)	86(37)	90(34)	115(38)
<i>Shifts worked</i>				
Days	70(29)	61(26) ^a	74(28) ^a	81(27) ^a
Nights/Rotation	174(72)	168(73)	190(72)	218(72)
<i>Unit most frequently worked</i>				
Emergency	46(19) ^a	42(18) ^a	43(16) ^a	56(19) ^a
Medical	67(28)	73(31)	65(25)	86(28)
Surgical	46(19)	47(20)	37(14)	30(10)
Maternity	30(12)	25(11)	21(8)	27(9)
Other***	54(22)	42(18)	98(37)	103(34)
<i>Smoking status</i>				
Current smoker	42(17)	46(20) ^a	47(18) ^a	50(17) ^a
Ex-smoker	65(27)	64(27)	68(26)	72(24)

a Totals for each grouping may vary due to missing demographic values

* Significant difference at Baseline

** Significant difference at Follow-up

*** Significant difference at Baseline and Follow-up

Smoking care outcomes

Outcomes measured by the patient survey and medical records audit are provided in Table 5. The smoking care outcomes reported by health professionals are provided in Table 6.

Patient reported smoking care

At baseline there was no difference between the intervention and control hospitals in patient reported smoking care.

Of the 11 smoking care practice outcomes addressed, two care practices were found to have a significantly different change in care delivery in intervention hospitals compared to control hospitals. There was a greater increase in patients reporting being offered NRT ($p < 0.0001$) and being provided NRT ($p = 0.009$) from baseline to follow-up in the intervention group compared to the control group. The intervention group offer of NRT increased 34 per cent and the provision of NRT increased 16 per cent, compared to 12 per cent and 4 per cent respectively in the control group.

Medical records audit of smoking care

At follow-up the medical records audit inter-rater reliability was acceptable with prevalence and bias adjusted kappa of 0.64 to 1.00 (perfect agreement 82 per cent to 100 per cent) per hospital. The number of medical records not available for audit per hospital at baseline and follow-up ranged from 2–11.

At baseline there were significantly higher levels of management discussed ($p = 0.01$), intention to smoke post-discharge ($p < 0.0001$), provision of post-discharge NRT ($p = 0.03$) and advice to seek post-discharge support ($p = 0.02$) in control hospitals compared to intervention hospitals when measured by the medical records audit.

Of the nine smoking care practice outcomes, five practices were found to have a significantly different change in care delivery in intervention hospitals compared to controls. There was a greater increase in care recorded from baseline to follow-up in the intervention group than the control group for: management of smoking discussed ($p = 0.01$); offered NRT ($p < 0.001$); provided NRT ($p < 0.01$); provided

written resources ($p < 0.01$); and provided post-discharge NRT ($p = 0.03$). The intervention group increased 13 per cent for management discussed, 23 per cent for offered NRT, 21 per cent for provided NRT, 7 per cent for provided written resources and 1 per cent for provided

discharge NRT, compared with control hospitals change in care delivery from baseline to follow-up of 3 per cent, 3 per cent, 5 per cent, 0 per cent and -4 per cent respectively.

Table 5: Proportion of patients provided smoking care as measured by patient survey and medical records audit in intervention and control hospitals at baseline and follow-up

Smoking care practice	Intervention hospital patients				Control hospital patients				p Value ^a
	Baseline		Follow-up		Baseline		Follow-up		
	n	%	n	%	n	%	n	%	
Smoking status identified									
patient survey	272	79	297	86	214	78	275	79	0.22
medical records audit	200	88	198	92	151	83	199	90	0.25
Informed cannot smoke									
patient survey	105	31	140	40	94	34	140	40	0.51
Management discussed									
patient survey	122	36	200	58	95	35	160	46	0.07
medical records audit	14	7	43	20	23	13	36	16	0.01
Offered NRT									
patient survey	58	17	178	51	53	19	108	31	<0.01
medical records audit	15	7	65	30	18	10	28	13	<0.01
Provided NRT									
patient survey	25	7	81	23	22	8	43	12	<0.01
medical records audit	15	7	60	28	15	8	28	13	<0.01
Monitored withdrawal									
patient survey	48	14	68	20	30	11	52	15	0.83
medical records audit	7	3	1	0	3	2	3	1	0.15
Advised to quit for good									
patient survey	168	49	192	55	121	44	176	51	0.76
Provided written resources									
patient survey	50	15	90	26	37	14	55	16	0.12
medical records audit	1	0	15	7	4	2	4	2	0.01
Asked intent post-discharge									
patient survey	24	7	35	10	19 ^b	7	36	10	0.92
medical records audit	0	0	2	1	14	8	3	1	0.95
Advised discharge support									
patient survey	13	4	37	11	13 ^b	5	33	10	0.58
medical records audit	0	0	0	0	7	4	2	1	0.99
Provided discharge NRT									
patient survey	3	1	16	5	5 ^b	2	7	2	0.09
medical records audit	2	1	5	2	7	4	1	0	0.03

a p value of logistic regression interaction term

b one missing

Health professional reported smoking care

At baseline the health professional survey found significantly higher levels of offered NRT ($p=0.01$) and provision of post-discharge NRT ($p=0.01$) in control hospitals compared to intervention hospitals.

At follow-up four of the thirteen smoking care practice outcomes were found to have a significantly different change in care delivery in intervention hospitals compared to control hospitals. There was a significantly greater increase in the mean health professional estimate of patients provided care from baseline to follow-up in the intervention group than control group for: management discussed ($p=0.01$); offered or provided

NRT ($p=0.01$); asked intention to smoke post-discharge ($p=0.01$); advised to seek post-discharge support ($p=0.05$) and provided discharge NRT ($p<0.0001$). There was a trend toward an increase in monitored withdrawal ($p=0.052$). The intervention group increased 28 per cent for discussed management, 30 per cent for offered or provided NRT, 22 per cent for asked intention to smoke post-discharge, 23 per cent for advised to seek post-discharge support and 21 per cent for provided discharge NRT compared with control hospitals change in care delivery from baseline to follow-up which was 17 per cent, 18 per cent, 10 per cent, 12 per cent and 4 per cent respectively.

Table 6: Comparison of health professional reported mean proportion of patients provided smoking care in intervention and control hospitals at baseline and follow-up

Care item	Intervention % (Standard deviation)		Control % (Standard deviation)		p value ^e
	Baseline ^a	Follow-up ^b	Baseline ^c	Follow-up ^d	
Aware smoking status	52(36.8)	61(34.8)	54(37.8)	57(36.5)	0.17
Record smoking status	33(39.3)	48(40.4)	33(40.7)	47(39.3)	0.49
Assessed dependence	28(36.9)	45(39.9)	30(39.0)	40(38.6)	0.08
Recorded dependence	26(35.6)	41(40.0)	24(36.0)	36(38.3)	0.35
Discussed management	17(27.3)	45(36.5)	21(31.9)	38(36.9)	0.01
Advised to quit	31(37.9)	47(39.4)	29(37.4)	43(39.0)	0.62
Offered and/or provided NRT	7(16.6)	37(41.2)	13(26.8)	31(39.0)	0.01
Monitored withdrawal	13(24.1)	30(36.0)	15(27.8)	24(33.9)	0.052
Recorded withdrawal	11(22.9)	23(33.7)	12(25.0)	22(33.6)	0.48
Asked intention discharge	9(20.8)	31(36.5)	10(22.6)	20(30.7)	0.01
Advised support discharge	14(26.0)	37(38.2)	17(30.1)	29(36.0)	0.05
Treatment in discharge plan	3(13.2)	14(29.3)	3(11.3)	8(21.3)	0.08
Provided NRT discharge	2(9.5)	23(35.8)	7(19.6)	11(25.0)	<0.0001

Sample sizes varied because not all questions were relevant to all health professional or questions were unanswered.

a sample size 139–241

b sample size 138–228

c sample size 180–263

d sample size 156–297

e p value of logistic regression interaction term

Discussion

This study is the first controlled trial to examine the effectiveness of an intervention in increasing hospital-wide provision of a range of recommended smoking cessation care practices across more than one hospital. The study demonstrated such a multi-strategic intervention was effective in increasing key aspects of smoking cessation care provided routinely by hospital health professionals.

In particular, a consistent effect was found across all three data collection methods for the recommended offer and provision of inpatient NRT.^{11–12,15–18} Abstinence during admission is predictive of post-discharge quitting,^{9,44} and as NRT would support such abstinence, the ability of this study to markedly increase NRT provision is an important outcome. The finding of such an effect across all three data collection tools, demonstrates the strength of the intervention effect for these care practices.⁴⁵

Further to the consistent positive effect regarding NRT, the current study also demonstrated a significant improvement on a number of other care practices including smoking management discussed (medical records audit and health professional survey), provided written resources (medical records audit), asked intent to smoke post-discharge (health professional survey), and provided NRT post-discharge (health professional survey). The positive effects found regarding discussion of smoking management and provision of written resources when measured by medical records audit are of interest. Despite the known limitations of audit accuracy,⁴⁶ the audit findings suggest a change in clinical practice, even if simply in the recording of an important care practice uncommonly noted in medical records.^{47–48} Given health professionals tend to over-report aggregate levels of care,⁴⁹ the positive outcomes found when measured by health professional self-report alone should be interpreted cautiously.^{49–50}

The findings from this study should be considered in light of some limitations. First, a quasi-experimental design was used, and although not the strongest design available, it is considered appropriate for an effectiveness trial where routine care delivery is the outcome.⁶⁰ Second, some differences between consented and non-consented sample descriptors were found that may have resulted in an over-representation of some patient groups. A strength of this study however,

was the reasonable consent rates for the patient survey, medical records audit and health professional survey, with the exception of medical officers. Third, differences were found between some intervention and control sample characteristics. Such differences did not include variables previously demonstrated to be predictive of smoking care provision,^{64–65} or in the case of the follow-up audit, shorter length of stay likely under-estimated intervention group care provision. Lastly, the intervention was undertaken in medium-sized, regional hospitals and it is not known whether the findings are applicable to larger facilities.

Although the positive outcomes and large effect sizes found are encouraging, the levels of care achieved are clearly less than optimal. For example, only 20 per cent of patients had discussion of smoking management recorded in their medical records at follow-up. Similarly, despite NRT being appropriate for the majority of patients,^{18,51–52} the increase in its provision resulted in only 23 per cent of patients reporting being provided NRT at follow-up. In one of two previous studies also examining provision of NRT, Schnoll et al³⁴ provided training and patient resources across 17 oncology clinics, and increased patient reported NRT provision by 15 per cent, to a level of 34 per cent; a result similar to the current study. In contrast, Wolfenden et al³⁶ increased patient reported and medical notes recorded NRT provision by a much larger 74–89 per cent, to a level of 82–89 per cent. The Wolfenden et al³⁶ study was confined to a single pre-surgical clinic rather than a whole-hospital environment. Patients were directed by a research assistant to a touch-screen computer. The computer assessed patients suitability for NRT, provided extended cessation counselling and provided a patient specific prompt for brief advice, and NRT provision in the clinic and on ward.³⁶ The contrasting results suggest that despite the positive effects of the intervention in the current study, interventions that more directly address the system and procedures of clinical care may produce high levels of clinical practice change.^{1,53–55} This may be more easily achieved in smaller, less complex organisations.^{39,56–57}

Despite the high levels of patient smoking status identification found in the current study (78–88 per cent), it failed to demonstrate larger increases in care provision. These contrasting findings suggest that the now relatively common practice of recording smoking status may occur more as an administrative process, along with the recording of patient identification and demographic details, rather than a process undertaken for the purpose of clinical diagnosis and treatment.^{49,58} Further investigation of strategies to enhance the translation of such information into appropriate clinical-decision making is warranted.

The differential effects between smoking care practices found in this study is concerning. Evidence suggests the provision of a multi-faceted package of smoking cessation care practices is optimal for assisting hospitalised patients to quit smoking.^{17,59} In this context, the lack of effect regarding provision of advice to quit and monitoring of withdrawal, and the limited evidence of an effect on care related to discharge found in this study requires further consideration. A number of factors may have contributed to such differential intervention effectiveness.

Firstly, in comparison to the provision of pharmacotherapy, some aspects of smoking care are reported to be a

less familiar clinical response and therefore more difficult to change.⁶⁰ For example, advising a patient to quit can be perceived by nursing staff as confrontational and has been identified as a significant barrier to smoking care provision.⁶¹ Secondly, some practice change intervention components impacted differentially on smoking care practices. For example, given the ready source of electronic data, the performance feedback strategy focused on monthly NRT dispensing data. In contrast, the difficulties associated with the regular collection of performance data for other care practices precluded sound assessment of such care levels, and hence reduced the ability to advocate for increased care delivery throughout the study.

Thirdly, although prompts and resources (for example forms amendment, medical records sticker, Quitline fax referral form) were implemented, the extent of compliance was not measured. Anecdotal data suggests compliance was variable. Such findings strengthen the need for systems to be developed, including automated prompts designed to maximise compliance with clinical practice guidelines,^{1,11,49,62–63} a strategy emphasised by the previously discussed findings of Wolfenden et al.³⁶ The planned introduction of electronic medical records in the future may facilitate this.^{49,62}

Conclusions and recommendations

This study demonstrated that significant gains can be made in the routine provision of smoking care in hospitals. Despite this, further initiatives are required to advance levels of NRT offer and use, and other smoking care practices, particularly advice to quit, monitoring of withdrawal and care related to post-discharge, such that all smokers have access to appropriate care.⁶⁶ The incorporation of the intervention strategies into routine clinical and

organisation performance management and accreditation processes has the potential to achieve such an outcome.⁶² Previous findings of relatively low levels of smoking care provision,³⁹ and the findings of this study indicate an intensive and organisationally-supported approach to the dissemination of clinical care guidelines in NSW is required if their intended benefits are to be achieved and sustained.

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Patient information letter

Dear XXXXXX

You may be aware in 1999, NSW Health introduced the Smoke-free Workplace Policy. The policy aimed to reduce the harm associated with tobacco use among staff, patients and others. This policy means that patients, visitors and staff are not allowed to smoke inside the hospital or anywhere on the hospital grounds. As this can make a hospital stay a difficult time for inpatients who are smokers, NSW Health has developed a guide for hospitals for the care of inpatients who are smokers.

The XXXXXX Hospital is working with Hunter Centre for Health Advancement (HCHA), a unit of Hunter Health, and the Centre for Health Research and Psycho-oncology (CHeRP), to develop a project that will increase the number of inpatient smokers who are supported during their stay in hospital. As you have recently been discharged from the XXXXXX Hospital you may be contacted by phone to ask you about how the Smoke Free Workplace Policy affected you and the care that was given to you during your stay in hospital. The information obtained from the phone survey and information from another survey of patients in one and a half years will be used to help identify whether the project has changed the care the XXXXXX Hospital provides.

Who will be contacted?

We will be contacting adult patients discharged from most wards at the XXXXXX Hospital. We will not be contacting patients discharged from psychiatric and palliative care wards or beds. We would like to talk with both smokers and non-smokers.

What is the survey about?

The survey will ask you some questions about what you have heard about the Smoke Free Workplace Policy, how it affected you, your smoking status and the care you received during your hospital stay.

What will happen to the information you give us?

All the answers you provide us will be treated in STRICT CONFIDENCE. These answers will be entered onto our computer and stored securely. Your name and personal information will not be stored in the same place as the answers you give to the survey. When the survey is completed for all people the names and contact details will be destroyed. The reports written based on this information will only refer to the entire group of people surveyed (all participating patients discharged from the XXXXXX Hospital). Individual people or their answers will NOT be identified in survey results. The data collected in this study is intended to be used by the Hunter Centre for Health Advancement, and in a thesis by a PhD student, XXXXXX, under the supervision of XXXXXX. Individual people will NOT be identified in audit results.

Do you have to talk to us?

Participation in this survey is voluntary, and you do not have to answer our questions if you do not want to. If you decide to not participate or withdraw from this study at any time, it will not affect your relationship with any staff member or the treatment you receive from any of the services offered by the Hunter Area Health Service. If you do not wish to receive a call, you have the option of calling this toll free number 1800 004 025 where a message can be left 24 hours a day. Clearly state your first name and surname. Your name will then be withdrawn from the survey list and you will NOT be contacted by phone. It will not be assumed that you have consented to the interview if you do not call the toll free number. Alternatively, you can tell the interviewer that you do not wish to participate when they call you.

What happens now?

Some time over the next two weeks, an interviewer from the XXXXXX Hospital will contact you at your home. The interviewer will ask you if you would like to participate in the survey. You may refuse to participate at this point. If you do agree to participate the interviewer will ask you if it is convenient to talk and if not arrange a suitable time to call back. The survey will be conducted over the telephone and should take about 20 minutes.

At the time of the survey the interviewer may also ask if you would consent to a clinical staff member checking the medical record of your last admission for any notation of smoking care provided to you. If you do indicate that it is acceptable, we are required by the Hunter Area Research Ethics Committee to obtain written consent. After the phone survey we will mail you a consent form for you to sign and return in a reply paid envelope provided.

If you have any questions about this survey, please do not hesitate to contact XXXXXX, Project Officer on XXXXXX or XXXXXX, Projects Manager on XXXXXX.

Thank you for your time and consideration.

Yours sincerely

XXXXXX
Director of Nursing
XXXXXX Hospital

XXXXXX
Executive Officer
XXXXXX Hospital

XXXXXX
Director
Hunter Centre for Health Advancement

The University/Hospital requires that all participants are informed that if they have any complaint concerning the manner in which a research project is conducted then it may be given to the researcher or if an independent person is preferred it can be forwarded to either of the following people:

- The University's Human Research Ethics Officer, Research Branch, The Chancellor, University of Newcastle, Callaghan NSW 2308 or Telephone (02) 4921 6333.
- The Professional Officer, Hunter Area Research Ethics Committee, Hunter Area Health Service, Locked Bag 1, New Lambton NSW 2305 or Telephone (02) 4921 4950.

Patient survey

Patient phone survey interview (CATI)

The first set of questions ask about the Smoke free Workplace Policy at XXXXXX Hospital

1. Prior to admission to XXXXXX Hospital were you aware that patients, staff and visitors are not allowed to smoke within the hospital building?
 - 1 yes
 - 2 no
 - 3 unsure

2. Prior to admission to XXXXXX Hospital were you aware that patients, staff and visitors are not allowed to smoke within any part of the hospital grounds except for special designated areas?
 - 1 yes
 - 2 no
 - 3 unsure

3. Do you think that it is appropriate that patients, staff and visitors at XXXXXX Hospital are not allowed to smoke within the hospital building, or any part of the hospital grounds except for special designated areas?
 - 1 yes
 - 2 no
 - 3 unsure

The next questions ask about the time before your admission to XXXXXX Hospital.

4. Did you attend a pre-admission or antenatal clinic at XXXXXX Hospital prior to your latest stay in hospital?
 - 4a. *If answered 3 to Q4.*
Pre-admission or antenatal clinics are visits to the hospital that you needed to make to see a doctor or nurse before you were admitted to hospital.

Do you think that you attended a pre-admission clinic prior to your latest stay in hospital
 - 1 yes
 - 2 no
 - 3 unsure

- 4b. If yes, which one of the following clinics did you attend? *Read out options*
 - 1 antenatal
 - 2 pre-surgical
 - 3 other (specify)

 - 4 unsure

If answered yes at Q4 or 4a go to Q5, if answered no/unsure go to Q17

5. When you attended the pre-admission/antenatal clinic were you asked whether you were a smoker?
 - 1 yes
 - 2 no
 - 3 unsure

6. When you attended the pre-admission/antenatal clinic how many cigarettes per day did you smoke? If you attended a pre-admission clinic a number of times, we would like to know about your smoking at the time of your last clinic visit. *Read out options*
 - 1 none, never smoked
 - 2 none, quit more than 4 months ago
 - 3 none, I was trying to quit
 - 4 10 or less
 - 5 11–20
 - 6 21–30
 - 7 31 or more
 - 8 unsure

- 6a. If answered 3 at Q6, prior to this quit attempt how many cigarettes per day did you usually smoke? *Read out options*
 - 1 10 or less
 - 2 11–20
 - 3 21–30
 - 4 31 or more

- 6b. If answered 3–7 at Q6, how soon after waking did you usually smoke your first cigarette? *Read out options*
 - 1 within 5 minutes
 - 2 6–30
 - 3 31–60
 - 4 61+

7. Did the pre-admission/antenatal clinic staff let you know that when you were admitted your visitors would not be allowed to smoke in the hospital or within the hospital grounds except for special designated areas?

- 1 yes
- 2 no
- 3 unsure

If answered 1,2,8 at Q6 then go to Q17

8. Did the pre-admission clinic staff let you know that **you** would not be allowed to smoke in the hospital or within the hospital grounds except for special designated areas?

- 1 yes
- 2 no
- 3 unsure

9. Did the pre-admission staff discuss any of the following ways of how you might manage your smoking when you were admitted to hospital?
Choose as many as applicable. Read out options

- 1 not smoking but using nicotine patches or gum
 - 2 just not smoking, that is cold turkey
 - 3 not smoking but try some other things to distract you
 - 4 smoking in outdoor designated areas
 - 5 smoking off the hospital site
 - 6 other (specify)
-
- 7 no ways to manage discussed

10. Did the pre-admission staff advise you to stop smoking for the period prior to your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

11. Did the pre-admission staff advise you to go to your local chemist or doctor to obtain nicotine patches or gum prior to your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

12. Did the pre-admission staff offer to give or prescribe you nicotine patches or gum for the period prior to your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

13. Did the pre-admission staff offer you any information resources (eg quit kits, booklets or pamphlets)?

- 1 yes
- 2 no
- 3 unsure

14. Did the pre-admission staff advise you to seek support from someone to help you stop smoking prior to your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

15. Did you try to change your smoking between your clinic visit and your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

15a. If yes, which of the following ways did you change your smoking? *Read out options*

- 1 cut down number of cigs
- 2 quit smoking for good
- 3 quit smoking until after discharge from hospital
- 4 quit smoking until recovered
- 5 other
- 6 unsure

15b. Did you use any nicotine patches or gum in the period between your pre-admission/antenatal clinic visit and your admission to hospital?

- 1 yes
- 2 no
- 3 unsure

16. Did the pre-admission/antenatal clinic staff advise you to quit smoking for good?

- 1 yes
- 2 no
- 3 unsure

The next questions ask about your smoking 2 days before your last admission to XXXXXX Hospital.

17. Two days prior to your admission to hospital how many cigarettes per day did you smoke?
Read out options but not the unsure option, just offer this if they cannot answer 1–7.

- 1 none, never smoked
- 2 none, quit more than 4 months ago
- 3 none, I was trying to quit
- 4 10 or less
- 5 11–20
- 6 21–30
- 7 31 or more
- 8 unsure

17a. If answered 3 at Q17, prior to this current quit attempt how many cigarettes did you usually smoke per day? *Read out options*

- 1 10 or less
- 2 11–20
- 3 21–30
- 4 31 or more

17b. Two days before your latest admission how soon after waking did you usually smoke your first cigarette? *Read out options*

- 1 within 5 minutes
- 2 6–30
- 3 31–60
- 4 61+

18. If answered 3–7 at Q17. How many quit attempts had you made in the 12 months prior to your admission to hospital? *Read out options*

- 1 none
- 2 one
- 3 two
- 4 three
- 5 four
- 6 five or more

18a. If answered 3–6 at Q18, for how many of these quit attempts did you use nicotine gum or patches? *Read out options*

- 1 none
- 2 one
- 3 two
- 4 three
- 5 four
- 6 five or more

18b. If answered 2 at Q18, Did you use nicotine patches or gum for this quit attempt?

- 1 yes
- 2 no
- 3 unsure

18c. If answered 3–6 at Q18, for how many of these quit attempts did you use Zyban? *Read out options*

- 1 none
- 2 one
- 3 two
- 4 three
- 5 four
- 6 five or more

18d. If answered 2 at Q18, Did you use Zyban for this quit attempt?

- 1 yes
- 2 no
- 3 unsure

The next questions ask about the time of your stay in hospital.

19. During your stay in hospital, do you recall someone asking if you were a smoker?

- 1 yes
- 2 no
- 3 unsure

19a. If yes, which of the following staff members asked you? Choose as many as applicable. *Read out options*

- 1 nurse
- 2 doctor
- 3 administrative person/reception
- 4 allied health eg physiotherapist
- 5 other
- 6 unsure

19b. If yes at Q19 and 3–7 at Q17, Do you recall staff talking to you about any of the following things. Choose as many as applicable. *Read out options*

- 1 if you smoke
- 2 how many you smoke
- 3 tell you can't smoke while in hospital
- 4 encourage you to not smoke while you were in hospital
- 5 encourage you to quit for good
- 6 other
- 7 unsure
- 8 no things talked about

20. When you were admitted to hospital do you recall writing down on a form whether you were a smoker?

- 1 yes
- 2 no
- 3 unsure

21. During your stay in hospital were you informed that your visitors would not be allowed to smoke in the hospital or within the hospital grounds except for special designated areas?

- 1 yes
- 2 no
- 3 unsure

If answered 1,2 or 8 at Q17 then go to Q45 Demographics

22. During your stay in hospital were you informed that you would not be allowed to smoke in the hospital or within the hospital grounds except for special designated areas?

- 1 yes
- 2 no
- 3 unsure

22a. If yes, which of the following staff members informed you? *Choose as many as needed. Read out options*

- 1 nurse
- 2 doctor
- 3 administrative person/reception
- 4 allied health eg physiotherapist
- 5 other

23 During your stay in hospital were you told of any of the following options for managing your smoking you were told about? *Choose as many as needed Read out options.*

- 1 not smoking but using nicotine patches or gum
- 2 just not smoking, that is cold turkey
- 3 not smoking but try some other things to distract you
- 4 smoking in outdoor designated areas
- 5 smoking off the hospital site
- 6 other, specify
- 7 no ways discussed

23a. If 1–6 at Q23, which of the following staff members discussed managing your smoking with you? *Choose as many as needed. Read out options*

- 1 nurse
- 2 doctor
- 3 administrative person/reception
- 4 allied health eg physiotherapist
- 5 other

24. Did you experience any of the following tobacco withdrawal symptoms from not being able to smoke during your hospital stay? This means symptoms experienced that you felt were a result of not being able to smoke. *Choose as many options as needed. Read out options*

- 1 cravings for cigarettes
- 2 depressed mood
- 3 not able to sleep
- 4 irritability, frustration or anxiety
- 5 anger
- 6 difficulty in concentrating
- 7 restlessness
- 8 decreased heart rate
- 9 increased appetite
- 10 other
- 11 no symptoms

25. Which of the following option/s would you have preferred in order to manage your smoking during your hospital stay? *Choose as many options as needed Read out options except unsure. If doesn't want to choose any then record unsure*

- 1 not smoking but using nicotine patches or gum
- 2 just not smoking, that is cold turkey
- 3 not smoking but try some other things to distract you
- 4 smoking in outdoor designated areas
- 5 smoking off the hospital site
- 6 other, specify
- 7 unsure

26. During you stay did you use any nicotine patches or gum that you brought to hospital with you?

- 1 yes
- 2 no
- 3 unsure

27. Did the staff at the hospital offer nicotine patches or gum to help you cope with not smoking while in hospital?

- 1 yes
- 2 no
- 3 unsure

27a. If no, would you have liked to have nicotine patches or gum explained to you so you could decide if it may have helped you to cope?

- 1 yes
- 2 no
- 3 unsure

27b. Do you feel that nicotine patches or gum were explained well enough for you to decide if you wanted to try them to help you cope with not smoking?

- 1 yes
- 2 no
- 3 unsure

27c. If yes Q27, did you take up the offer and use the nicotine patches or gum during your hospital stay?

- 1 yes
- 2 no
- 3 unsure

27d. If yes to 27b or Q26=1, did using the nicotine patches or gum help you cope with withdrawal symptoms of not being able to smoke during your hospital stay? Withdrawal symptoms may include cravings, depressed mood, not being able to smoke, irritability, frustration, anger, anxiety, difficulty in concentrating, restlessness, decreased heart rate, or an increased appetite. *Read out options*

- 1 yes, a lot
- 2 yes, a little
- 3 no
- 4 unsure

27e. If yes to 27b, for how many days of your hospital stay did you use nicotine patches or gum?

No. _____

28. Did the staff check to see if you were coping with not being able to smoke during your hospital stay?

- 1 yes
- 2 no
- 3 unsure

28a. If yes, which staff members checked to see if you were coping? Choose as many as needed.

Read out options

- 1 nurse
- 2 doctor
- 3 allied health
- 4 other, specify
- 5 unsure

28b. If yes at Q28, which of the following ways did the hospital staff check that you were coping?

Read out options

- 1 observed you
- 2 asked you
- 3 other
- 4 unsure

28c. If yes Q28, how often did they check that you were coping?

- 1 less than once a day
- 2 once a day
- 3 twice a day
- 4 more than twice a day
- 5 unsure

30. During your hospital stay did any hospital staff member advise you to quit smoking for good?

- 1 yes
- 2 no
- 3 unsure

30a. If yes, which of the following staff members gave you that advice? Choose as many as applicable

Read out options

- 1 nurse
- 2 doctor
- 3 administrative
- 4 allied health eg physiotherapist
- 5 other
- 6 unsure

31. Did any hospital staff member offer you any information resources eg quit kits, quit pamphlets, booklets during your hospital stay?

- 1 yes
- 2 no
- 3 unsure

32. These questions ask about your smoking behaviour during the time of your stay in hospital. Remember your answers are confidential.

Did you smoke during your hospital stay?

- 1 yes
- 2 no
- 3 refuse

32a. If yes, where did you smoke during your hospital stay? *Choose as many as applicable*

- 1 in room
- 2 toilets
- 3 stairwell
- 4 elsewhere inside hospital building
- 5 outside nearest exit
- 6 off site
- 7 designated area
- 8 other

32b. If yes to Q32 and answered 5–7, Did the hospital staff help you outside to smoke?

- 1 yes
- 2 no
- 3 unsure

32c. If yes to Q32 and answered 1–5, 8 at Q32a, did the hospital staff talk to you about smoking in places where it is not allowed?

- 1 yes
- 2 no
- 3 unsure

32d. If yes to Q32, how many days of your hospital stay did you smoke at least one cigarette?

No. _____

32e. If yes to Q32, During your stay in hospital, on average how many cigarettes per day did you smoke?

Read out options

- 1 1
- 2 2–5
- 3 5–10
- 4 11–20
- 5 21–30
- 6 31–60
- 7 more than 60
- 8 variable eg none on day of operation

33. If Q32=2 How well were you able to cope with not being able to smoke during your hospital stay?

Read out options

- 1 very well
- 2 moderately well
- 3 not very well
- 4 unsure

33a. If Q32=1. How well were you able to cope with the restrictions placed on your smoking during your stay in hospital? *Read out options*

- 1 very well
- 2 moderately well
- 3 not very well
- 4 unsure

The next questions ask about your discharge from hospital and your smoking now that you are home

34. Before being discharged from hospital did hospital staff ask you if you were planning to smoke when you went home?

- 1 yes
- 2 no
- 3 unsure

35. Did you intend to smoke when you went home from hospital?

- 1 yes
- 2 no
- 3 unsure

36. Did you receive some nicotine patches or gum to take home with you?

- 1 yes
- 2 no
- 3 unsure

36a. If yes, did you use the nicotine patches or gum from hospital when you went home?

- 1 yes
- 2 no
- 3 unsure

36b. If yes, how many of the patches or gum from hospital did you use?

No. _____

37. Did you use nicotine patches or gum from another source eg chemist when you went home?

Read out options

- 1 yes, am still using
- 2 yes, but stopped
- 3 no
- 4 unsure

38. Did the discharge nurse advise you to seek help to quit from someone when you went home?

- 1 yes
- 2 no
- 3 unsure

38a. If yes, which of the following places did they advise to seek help from? Choose as many as needed

Read out options

- 1 GP
- 2 other doctor
- 3 pharmacist
- 4 Quitline (quit smoking telephone line)
- 5 friend
- 6 family member
- 7 self help group
- 8 internet help site
- 9 other

39. Did you talk with someone about either continuing to not smoke or to try another quit attempt after you were discharged from hospital?

- 1 yes
- 2 no
- 3 unsure

39a. If yes at Q39, which of the following people did you talk with? Choose as many as needed.

Read out options

- 1 GP
- 2 other doctor
- 3 pharmacist
- 4 Quitline (quit smoking telephone line)
- 5 friend
- 6 family member
- 7 self help group
- 8 internet help site
- 9 other

40. How many cigarettes do you smoke now that you are home from hospital?

- 1 none, never smoked
- 2 none, quit more than 4 months ago
- 3 none, I'm trying to quit
- 4 10 or less
- 5 11–20
- 6 21–30
- 7 31 or more
- 8 unsure

40b. If Q40=3–7, Now that you are home from hospital, how soon after waking would you usually smoke your first cigarette?

- 1 within 5 minutes
- 2 6–30 minutes
- 3 31–60
- 4 61+

These questions ask you how strongly you agree or disagree with some statements about the care you received at XXXXXX Hospital.

41. It is acceptable for the hospital staff to ask and advise you about your smoking while you are in hospital.

Read out options

- 1 strongly disagree
- 2 disagree
- 3 unsure
- 4 agree
- 5 strongly agree

42. It is acceptable for the hospital staff to offer you nicotine patches to help you cope with not smoking during your hospital stay. *Read out options*

- 1 strongly disagree
- 2 disagree
- 3 unsure
- 4 agree
- 5 strongly agree

43. The hospital staff were committed to helping you cope with not smoking during your hospital stay.

Read out options

- 1 strongly disagree
- 2 disagree
- 3 unsure
- 4 agree
- 5 strongly agree

These last set of questions ask about you.

44. What is the highest level of education you have achieved? *Read out options*

- 1 Never attended school
- 2 Some primary school
- 3 Completed primary school
- 4 Some high school
- 5 Completed school certificate or Intermediate or Year 10 or Forth form
- 6 Completed HSC or Leaving or Year 12 or 6th Form
- 7 TAFE Certificate or diploma
- 8 University or CAE or Degree or higher

45. What is your current employment status?

Read out options

- 1 Employed full time
- 2 Employed part time/casual
- 3 Unemployed
- 4 Can't work – health reasons
- 5 Home duties
- 6 Student
- 7 Retired
- 8 other

46. Which country were you born in?

- 1 Australia
- 2 UK and Ireland
- 3 Italy
- 4 Greece
- 5 Netherlands
- 6 Germany
- 7 New Zealand
- 8 Vietnam
- 9 Poland
- 10 Other

47. Are you of Aboriginal or Torres Strait Islander origin?

- 1 Yes
- 2 No
- 3 Refused

48. What is your present marital status?

- 1 Never married
- 2 Married or living together in a relationship
- 3 Separated
- 4 Divorced
- 5 Widowed
- 6 Refused

Now there is one more thing I would like to talk to you about. As a part of this project we would also like to check patient medical records to see if the notes that are recorded by hospital staff agree with what patients say about the care they receive while in hospital.

It is a requirement of the Hunter Ethics Committee that we have written consent to conduct the audit of your medical record.

Q55. Would it be OK for us to send you an information and consent letter for a medical audit of your patient notes for your last admission to XXXXXX Hospital?

1 Yes

That's great.

Could I please confirm your address details?

When you receive the information letter and consent form please read them and if you are willing to consent please sign the consent form and return in the reply paid envelope provided.

2 No

That's the end of the survey but I have a few things to tell you about.

If you wish you can ring our Projects Listing on (02) 4924 6166 to confirm this is a genuine research survey.

If you have any other queries regarding this survey then please call XXXXXX on XXXXXX or XXXXXX on XXXXXX. These numbers are also listed on the bottom of the information letter you received from the hospital telling you about this survey.

My supervisor may ring you within 48 hours to check what you thought of this interview and my work.

That's it for this phone interview. Thanks again for agreeing to help with the survey. Goodbye.

END

Audit information letter and consent form

Dear Patient

Recently you participated in a phone survey being conducted by XXXXXX Hospital that asked you questions about the NSW Health Smoke Free Workplace Policy, how this policy affected you and the care you received during your stay at XXXXXX Hospital.

As you would recall, XXXXXX Hospital is working with the Hunter Centre for Health Advancement (HCHA) and the Cancer Education and Research Program (CERP) to develop a project that will increase the number of inpatient smokers who are supported during their stay in hospital.

At the time of your phone survey you indicated that it would be alright for us to mail you an information letter and consent form for the medical record of your last hospital stay to be audited for hospital notes of care relating to smoking. Notes would include identification of smoking status (whether you are smoker or non-smoker) and, if you were a smoker, the care you received to manage your inability to smoke within the hospital or the surrounding grounds. No other medical information will be recorded. Your participation in the study is voluntary and you may choose not to participate, or stop participating at any time and request that any information that was recorded is destroyed. If you decide to not participate or withdraw from this study at any time, it will not affect your relationship with any staff member or the treatment you receive from any of the services offered by the Hunter Area Health Service.

The information obtained from the audit will be treated in STRICT CONFIDENCE. The information will be recorded and then entered onto our computer with an identification number, analysed and stored securely at XXXXXX Hospital. Your name and personal information will not be stored in the same place as the information recorded in the audit. When the information is collected for all people the names and contact details will be destroyed. The reports written based on this information will only refer to the entire group of medical records audited (all consenting eligible patients discharged from XXXXXX Hospital). Individual people will NOT be identified in audit results. The data collected in this study is intended to be used by the Hunter Centre for Health Advancement, and in a thesis by a PhD student, XXXXXX, under the supervision of XXXXXX. Individual people will NOT be identified in audit results.

What to do now?

Attached is a consent form that will allow a clinical staff member to audit the medical record of your last hospital stay. Your participation will be greatly appreciated. If you agree to participate, please sign the attached consent form and return in the reply paid envelope provided.

Please keep this letter for your information. If you have any queries about the project, please contact XXXXXX on XXXXXX or XXXXXX on XXXXXX.

Yours sincerely

XXXXXX
Director of Nursing
XXXXXX Hospital

XXXXXX
Executive Officer
XXXXXX Hospital

XXXXXX
Director
Hunter Centre for Health Advancement

The University/Hospital requires that all participants are informed that if they have any complaint concerning the manner in which a research project is conducted then it may be given to the researcher or if an independent person is preferred it can be forwarded to either of the following people:

- The University's Human Research Ethics Officer, Research Branch, The Chancellery, University of Newcastle, Callaghan NSW 2308 or Telephone (02) 4921 6333.
- The Professional Officer, Hunter Area Research Ethics Committee, Hunter Area Health Service, Locked Bag 1, New Lambton NSW 2305 or Telephone (02) 4921 4950.

Implementation of *The guide for the treatment of nicotine dependent inpatients project consent form*

Study ID _____

I understand the purpose of this study.

I give permission for my medical records to be accessed to provide information about the care I received relating to smoking whilst an inpatient in XXXXXX Hospital.

I understand that I have the right to withdraw from the study at any time and do not have to give a reason for withdrawing.

I understand that the information I provide will be confidential, and that only the research team will have access to it.

I agree to participate in this project

Please print name _____

Signature _____ Date ____/____/____

Address _____

Audit protocol

Audit of Medical Record Protocol

Post-test

Aims

- To identify recording of smoking care provision at XXXXXX Hospital in line with The Guide for the Management of Nicotine Dependent Inpatients including the following care items:
 - smoking status identification
 - assessment of nicotine dependence
 - management of smoking options
 - whether NRT was offered, prescribed, dose/type
 - smoking behaviour during stay
 - monitoring of nicotine withdrawal symptoms
 - patients intention to smoke post-discharge
 - recommendation or provision of post-discharge NRT
 - if smoking cessation resources were provided (eg Quit kit or video)
 - any other comments related to smoking.
- To identify which type of clinical staff are providing and recording appropriate care.

Procedure

- Baseline audit of medical records of patients giving signed consent will commence following completion of the patient survey.
- Every form from the patients' last admission before the date of their interview will be checked for smoking notation. Note that the patient may have been re-admitted following the interview. Only check the notes/forms from their latest admission prior to the interview.

- The following medical notes components are to be included in the pilot audit:
 - a) Pre-Procedure Form
 - b) Patient Assessment Planning Form
 - c) Patient History
 - d) Front Sheet
 - e) Progress Notes
 - f) Medication Chart
 - g) Nursing Discharge Summary
 - h) Interim Discharge Letter
 - i) Labour Ward Assessment
 - j) Any other forms including notation of smoking care (eg Nicotine dependence chart, or Withdrawal form, or Midwives data collection form).
- We need to know who recorded care in patient notes, eg Nurse, doctor, patient, or Allied Health. Complete audit sheet as follows – If a nurse provided care, record a '1' in the relevant box; record a '2' if a medical officer, '3' if a patient recorded; '4' if unsure of who recorded/provided and '5' if there was no notation in that form. If notation recorded by an Allied health staff member, eg physiotherapist, place a '6' in the box. If notation is recorded by the Drug and Alcohol nurse, place a '7' in the box. If notation is recorded by more than one type of practitioner then place more than one number in the box i.e. if recorded by a medical officer and a nurse then place a 1 and a 2 in that box. If a particular form is missing from patient notes, then leave that column blank.
- **Other forms:** When recording smoking notation from forms not listed on the first page of the Audit Recording Sheet (columns B to J), please write name of other form in the top of column in space provided in column K to P.
- If the patient is a non-smoker at Q2, then only Row 3 "Smoking status identified" should be completed.
- Column A "DATA CODING" is for data entry purposes only (not for audit notations) and must be left blank.

Care item notation included in the audit

Pre-admission clinic attendance

From the forms included in the medical record it should be evident if the patient has attended a pre-admission clinic (including Pre-Surgical and Antenatal clinics) at the XXXXXX Hospital prior to being admitted. Circle '1' if the patient has attended a pre-admission clinic and write which clinic attended underneath. Circle '2' if patient did not attend a pre-admission clinic.

Smoking status

If it is evident from the medical notes that the patient is a smoker (eg from self report in the Patient Health Questionnaire form), then record '1'. Patient should also be recorded as a smoker if it is evident that the patient has ceased smoking in the period immediately prior to their admission or on admission. Record '2' if it is recorded in the patient's notes that person is a non-smoker. Patient should only be recorded as a non-smoker if they have never smoked or if they quit smoking more than 4 months prior to admission. If smoking status is unclear, that is, neither non-smoker nor smoker is recorded in the notes, then record '3'.

Smoking status identified

For each of the appropriate medical note forms included in the medical record, record if smoking status has been recorded. As per previous instructions, if smoking status notation has been recorded by a nurse, place a '1' in that box, a '2' if recorded by a medical officer, a '3' if recorded by a patient, '4' if unsure who made the notation and a '5' if there is no notation of smoking status in that form. If patient is a non-smoker, only this row of the audit sheet should be completed. If a particular form is missing, leave that box blank.

Assessed nicotine dependence

For each of the appropriate medical note forms included in the medical record, record if nicotine dependence assessment has been recorded. Record if the number of cigs/day has been noted and by who (4.1) (eg place '1' in the box if number of cigs/day noted by nurse) and how many cigs per day were recorded. Also note if the patient has been classified as nicotine dependent and by who (4.2). **This means that someone has noted in the medical record the words 'nicotine dependent' or similar.**

Management discussed

For each of the appropriate medical note forms included in the medical record, record if management of nicotine dependence has been discussed with the patient. Management discussion includes the following options: abstinence; abstinence + NRT; or smoking offsite/designated areas. Please write in 'other' column any other management options were discussed or any problems arising from a smoking management discussion eg patient became aggressive when told couldn't smoke.

NRT

For each of the appropriate medical note forms included in the medical record, record if NRT has been offered (6.1) by any staff member (eg record '1' if offered by nurse), prescribed (6.2) and if prescribed if the dose has been recorded (6.3). If the patient was offered NRT but refused, please record in 6.1 and 6.4 (eg record '1' if offered by nurse but patient refused in both box 6.1 and 6.2).

Smoking during stay

For each of the appropriate medical note forms included in the medical record, record if any notation of patient smoking during their stay has been recorded. For example, if the patient is absent for treatment or monitoring because they were outside smoking.

Withdrawal monitored

For each of the appropriate medical note forms included in the medical record, record if withdrawal monitored was noted. Record if withdrawal symptoms were noted eg cravings, restlessness (8.1), if care was altered because of withdrawal symptoms (8.2), and any other notation relating to withdrawal eg aggressiveness (8.3).

Intention to smoke post discharge recorded

For each of the appropriate medical note forms included in the medical record, record if the patients intention to smoke post discharge was noted by staff (eg '1' if recorded by nurse). Also record for each form where notation was made by a staff member, in the second box a '1' if the patient intended to continue to smoke on discharge, '2' if the patient did not intend to smoke and '3' if the patient intended to cut down the number of cigarettes they smoke.

Post discharge NRT provided

For each of the appropriate medical note forms included in the medical record, record if post discharge NRT was provided to the patient. For the purposes of this audit it would be expected that the patient would take home the remainder of the box of seven that should have been provided to those who smoke more than 10 cigs/day on admission. If NRT provision from discharge deviates from this protocol please record how it deviates in the 'other' column.

Advised to seek post discharge support

For each of the appropriate medical note forms included in the medical record, record if the patient has been advised to seek cessation support post discharge has been noted by a staff member. In the first box (11.1) record which staff member advised (eg 1= nurse, 2=doctor etc). In the second box (11.2) record who the patient was referred to, eg Quitline, GP, pharmacist, or friends.

Written information resources provided

For each of the appropriate medical note forms included in the medical record, record if written information provided to patients by a staff member has been noted. Written information may include any smoking related resource eg Quit kit, Information for Patients who Smoke flier, Tobacco pamphlet and Pocket Guide to Quitting. Please write in 'other' column what other written material has been provided, if any.

Other comments smoking related

Please record any other smoking related comments in this box, eg patient advised to quit smoking.

Audit tool

Study ID Number _____ Date audit completed ____/____/____ XXXXXX Hospital – Medical Record Audit Recording Sheet-Post-test

1. Attended pre-admission clinic

1 / 2

Yes / No

If yes, which clinic

Place appropriate number in box if notation is evident:

Nurse=1, Medical officer=2, Patient=3, Unsure=4, Not recorded=5, Allied Health=6, D&A nurse=7

If notation is recorded by more than one type of practitioner then place more than one number in the box ie if recorded by a medical officer and a nurse then place a 1 and a 2 in that box.

	a) DATA CODING	b) Pre-procedure Form		c) Patient Assessment Planning		d) Patient History		e) Front Sheet		f) Progress Notes		g) Medication Chart		h) Nursing Discharge Summary		i) Interim Discharge Letter	
		4a1	4b1	4bNo	4c1	4cNo	4d1	4dNo	4e1	4eNo	4f1	4fNo	4g1	4h1	4hNo	4i1	4iNo
3. Smoking status identified (if patient is a non-smoker only complete this row)																	
4.1 Nicotine dependence assessed	4a1																
4No Number cigs/day recorded			4b2		4c2	4d2		4e2		4f2			4h2		4i2		
4.2 "Nicotine dependent" recorded																	
5. Management discussed																	
6. NRT:																	
6.1 offered	6a1	6b1		6c1		6d1		6e1		6f1		6g1		6h1		6i1	
6.2 prescribed	6a2	6b2		6c2		6d2		6e2		6f2		6g2		6h2		6i2	
6.3 dose/type	6a3	6b3		6c3		6d3		6e3		6f3		6g3		6h3		6i3	
6.4 patient refused	6a4	6b4		6c4		6d4		6e4		6f4		6g4		6h4		6i4	
7. Smoking during stay																	
8. Withdrawal monitored																	
8.1 withdrawal symptoms	8a1			8c1		8d1		8e1		8f1				8h1		8i1	
8.2 care altered	8a2			8c2		8d2		8e2		8f2				8h2		8i2	
8.3 other	8a3			8c3		8d3		8e3		8f3				8h3		8i3	
9.1 Intention to smoke post-discharge recorded	9a1			9c1		9d1		9e1		9f1				9h1		9i1	
9.2 Intent: 1-Y,2-N,3-Cut Down	9a2			9c2		9d2		9e2		9f2				9h2		9i2	
10. Post discharge NRT provided																	
11.1 Advised to seek post-discharge support																	
11.2 From Who:	11a1			11c1	11c2	11d1	11d2	11e1	11e2	11f1	11f2		11h1	11h2	11i1	11i2	
12. Information resources provided (eg Quit kit, Video)																	
13. Other Comments Smoking																	

Health professional information letter

Information letter for staff at XXXXXX Hospital

Dear Staff Member,

XXXXXX Hospital is committed to providing staff with a supportive environment that promotes healthy lifestyles for staff and patients, and improving care services. As you would be aware XXXXXX Hospital has been collaborating with Hunter Population Health (HPH), and the Centre for Health Research and Psycho-oncology (CHeRP), in an intervention that facilitates compliance with the NSW Health Guide for the Management of Nicotine Dependent Inpatients. The Guide was developed in recognition of the difficulties the Smoke Free Workplace Policy creates for inpatients who are smokers and the health professionals who care for them. Twelve months ago, as a first step in this endeavour, a survey of clinical staff was conducted to obtain some information with regard to care of inpatients who are smokers. Now, 2 years since the last survey, another pen and paper survey is to be conducted. The information collected now, and information from the survey 2 years ago, will be used to help identify whether intervention strategies have made an impact on the care provided for inpatients who are smokers.

Who will be contacted?

All clinical staff on all shifts over three days (28th, 29th, 30th of September) will be invited by the Nursing Unit Manager of their ward to complete the survey by the end of their shift.

What is the survey about?

The survey will ask you some questions about the current care provided for inpatients who are smokers, and your awareness of The Guide. It will also ask about your perceptions of your role in supporting smoking abstinence amongst patients.

What will happen to the information you give us?

All the answers you provide us will be treated in STRICT CONFIDENCE. The survey will be anonymous. These answers will be entered onto our computer and stored securely at the Hunter Population Health. The reports written based on this information will only refer to the entire group of people surveyed (all participating staff in XXXXXX Hospital). Individual people will NOT be identified in survey results.

Do you have to complete a survey?

Participation in this survey is voluntary, and you do not have to complete the survey if you don't want to. If you decide to not participate or withdraw from this study at any time, it will not affect your relationship with any staff member or the treatment you receive from any of the services offered by the Hunter Area Health Service.

What happens now?

The Nursing Unit Manager of the ward in which you are working will distribute a survey for you to complete. Alternatively for medical staff, the Roster Administrator will distribute a survey. Approval for the completion of the survey at work has been authorised by your Management. The survey should be completed before the end of your shift and should only take about 10 minutes. The survey can be placed in the marked box in your ward.

What happens with this information?

The data will be used by Hunter Population Health and The Centre for Health Research and Psycho-oncology in reports to the project funding agency (NSW Health) and XXXXXX Hospital as well as in a thesis by a PhD student, XXXXXX, under the supervision of XXXXXX and XXXXXX. Individual people will NOT be identified in audit results.

If you have any queries about the project, please contact XXXXXX on XXXXXX or XXXXXX, at Hunter Population Health, on XXXXXX.

Thank you for your time and consideration.

Yours sincerely

XXXXXX	XXXXXX	XXXXXX
Acting Director of Nursing	Executive Officer	Director
XXXXXX Hospital	XXXXXX Hospital	Hunter Population Health

The University/Hospital requires that all participants are informed that if they have any complaint concerning the manner in which a research project is conducted then it may be given to the researcher or if an independent person is preferred it can be forwarded to either of the following people:

- The University's Human Research Ethics Officer, Research Branch, The Chancellery, University of Newcastle, Callaghan NSW 2308 or Telephone (02) 4921 6333.
- The Professional Officer, Hunter Area Research Ethics Committee, Hunter Area Health Service, Locked Bag 1, New Lambton NSW 2305 or Telephone (02) 4921 4950.

Health professional survey

Managing Nicotine Dependent Inpatients Project (MNDI)

Staff survey

This survey is to be completed by all clinical staff (doctors, nurses, and allied health staff) that have patient contact. This questionnaire asks about your attitude toward the care of smokers and about the care you have provided for inpatients who are smokers *in the last three months*.

Your answers are strictly CONFIDENTIAL. The survey is anonymous. No one from the hospital will ever see your individual responses. Please place your survey in the box provided.

When the survey refers to patients, it means those who are over 18 years, and are not in mental health, intensive care, palliative care, nursing home, or long-term rehab beds.

Part A: First, we would like to ask some questions about you to help us better understand our results. Please tick your response.

1. What is your gender?

- 1 Male
- 2 Female

2. What is your age in years?

- 1 20–29
- 2 30–39
- 3 40–49
- 4 50–59
- 5 60+

3. What is your job category?

- 1 Enrolled Nurse
- 2 Registered Nurse
- 3 Visiting Medical Officer/Staff specialist
- 4 Career Medical Officer/Registrars
- 5 Resident Medical Officer/Junior Medical Officer/Intern
- 6 Allied health team/service
- 7 Other (specify) _____

4. Do you work:

- 1 Full time
- 2 Part time/Casual

5. What shifts do you usually work?

- 1 Days
- 2 Evenings
- 3 Nights
- 4 Rotation

6. What ward/s do you work in most frequently? (tick as many as apply)

- 1 Accident and Emergency
- 2 Antenatal Clinic
- 3 Day Stay/Recovery
- 4 High Dependency Unit/Intensive Care/Coronary Care
- 5 Maternity
- 6 Medical
- 7 Paediatric
- 8 Pre-Op Clinic
- 9 Operating Theatres
- 10 Rehabilitation
- 11 Renal and dialysis
- 12 Surgery
- 13 Other (specify) _____

7. Do you currently smoke any tobacco products?

- 1 Daily
- 2 At least once a week
- 3 Less than once a week
- 4 Not at all (quit less than 4 months ago)
- 5 Not at all (quit over 4 months ago)
- 6 Never smoked

8. Are you aware of the NSW Health Guide for the Management of Nicotine Dependent Inpatients (The Guide)?

- 1 Yes
- 2 No **go to Part B on next page**

9. If yes to question 8, have you used The Guide?

- 1 Yes
- 2 No

10. If yes to question 8, do you have any comments on The Guide? (continue on back if needed)

Part B: These questions ask about your perceptions of care for patients who are smokers in the hospital setting. For each statement, circle the number that best represents how you feel, with "1" meaning that you strongly disagree with the statement and "5" meaning that you strongly agree.

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
11. All staff should encourage patients to comply with the Smoke Free Workplace Policy (not smoking in hospital building or grounds, except for exempted areas).	1	2	3	4	5
12. Most patients who are smokers comply with the Smoke Free Workplace Policy (not smoking in hospital building or grounds, except for exempted areas).	1	2	3	4	5
13. My manager believes that it is important to give smokers appropriate care to manage nicotine dependence during their hospital stay.	1	2	3	4	5
14. Managing patients' nicotine dependence is not important to the majority of clinical staff at this hospital.	1	2	3	4	5
15. Helping patients cope with not smoking leaves me with insufficient time to do other more important patient care tasks.	1	2	3	4	5
16. I believe the nicotine in Nicotine Replacement Therapy (NRT), eg patches and gum, causes health problems, so it is better to stop smoking without NRT.	1	2	3	4	5
17. I believe Nicotine Replacement Therapy (eg patches, gum) will help patients who smoke deal with nicotine withdrawal symptoms during their hospital stay.	1	2	3	4	5
18. I have sufficient knowledge of Nicotine Replacement Therapy (eg patches, gum) to advise/discuss their use with patients.	1	2	3	4	5
19. I do not have sufficient knowledge of the signs and symptoms of nicotine withdrawal.	1	2	3	4	5
20. I am confident in my ability to provide advice and treatment to smokers to help them cope with not smoking during their hospital stay.	1	2	3	4	5
21. I am committed to helping patients cope with not smoking during their hospital stay.	1	2	3	4	5
22. I do not see a reason to change the way I care for patients who are smokers.	1	2	3	4	5

Part C: These questions ask about the care you provide to patients who are smokers.

Circle the number that best estimates the proportion of patients with whom you have performed the following patient care tasks in the last 3 months. It may be difficult to give a precise answer. Please circle your best estimate. If you don't know the answer, write "don't know" next to that question. If you don't do a task, circle 0 per cent for that item.

For what proportion of patients that you cared for in the last 3 months, did you do the following:

23. I ensured patients were informed of the hospital's Smoke Free Workplace Policy.



24. I was aware of patients' smoking status.



If you circled 0% for question 24, go to question 43.

25. I recorded patients' smoking status.



26. I assessed nicotine dependence for patients who were smokers (eg number cigarettes smoked a day).



27. I recorded nicotine dependence for patients who were smokers.



28. I discussed options for management of nicotine dependence during hospital stay with patients who were smokers.



29. If so, what options did you discuss?

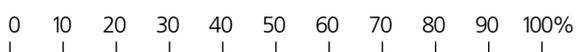
(tick as many as apply)

- 1 Abstinence
- 2 Abstinence + NRT (eg patches), unless contraindicated
- 3 Smoking at "own risk"
- 4 Other (specify) _____

30. I advised patients who were smokers to quit for good.



31. I helped patients who were smokers to go outside to smoke.



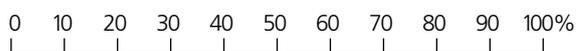
32. If so, where did you take them?

- 1 Exempted smoking areas
- 2 Offsite
- 3 Other (specify) _____

33. Do you work exclusively in the Antenatal Clinic, or Accident and Emergency?

- 1 Yes **If yes, go to question 43**
- 2 No

34. I offered and/or arranged prescription of Nicotine Replacement Therapy (eg patches, gum), unless contraindicated, for patients who were smokers.



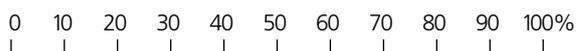
35. Do you work exclusively in the Pre-op clinic?

- 1 Yes **If yes, go to question 43**
- 2 No

36. I monitored nicotine withdrawal symptoms of patients who were smokers (eg insomnia, irritability, anxiety).



37. I recorded nicotine withdrawal symptoms, if any, of patients who were smokers



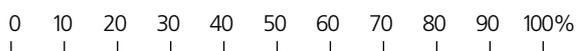
38. Are you involved with patient discharge?

- 1 Yes
- 2 No **If no, go to question 43**

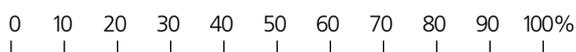
39. On discharge, I advised patients who were smokers to seek support for continued abstinence or quit attempts (eg from GP, pharmacist, or quitline).



40. I included a nicotine management/treatment summary in the discharge plan of patients who were smokers.



41. On discharge, I ensured patients who were smokers received Nicotine Replacement Therapy (eg patches, gum) to use at home, unless contraindicated.



Part D: These questions relate to staff training and the resources available to help you care for patients who are smokers.

43. Over the last 3 months, has the fact that smoking is not allowed in hospital buildings or on grounds (except in exempted areas) caused you any difficulties with respect to patient care?

- 1 Yes
 2 No **If no, go to question 45**

44. If yes, what types of difficulties (tick as many as apply)?

If you would like to explain any of these in more detail, please continue on back of page.

- 1 Patient not available for treatment, as elsewhere smoking
 2 Patients difficult/angry when told they couldn't smoke
 3 Visitors becoming difficult/angry when told of policy
 4 Patient irritable/difficult because of nicotine withdrawal
 5 Taking patient outside compromises patient safety
 6 Other (specify) _____

45. In the last 12 months, have you taken part in hospital training or education for the care of patients who are smokers?

- 1 Yes
 2 No **If no, go to question 48**

46. If yes, what type of training? (tick as many as apply)

- 1 In-service training
 2 Video
 3 Self-directed
 4 Other (specify) _____

47. If yes, what was the total length of time of training? (choose the closest)

- 1 30 mins or less
 2 1 hour
 3 2 hours
 4 3 hours
 5 Over 3 hours (specify) _____

48. What organisational support does the hospital provide to help you care for the special needs of patients who are smokers? (tick as many as apply)

- 1 Training
 2 Resources (eg pamphlets, quit kits, stickers)
 3 Endorsement from management
 4 Access to NRT to offer to patients (eg patches, gum)
 5 Information and prompts (eg flowcharts)
 6 Appropriate forms and documentation
 7 Policies and guidelines
 8 Other (specify) _____
 9 The hospital does not provide organisational support

49. What do you feel you need to provide better care for patients who are smokers? (tick as many as apply)

- 1 Training
 2 Resources (eg pamphlets, quit kits, stickers)
 3 Endorsement from management
 4 Increased access to NRT (eg patches, gum)
 5 Information and prompts (eg flowcharts)
 6 Appropriate forms and documentation
 7 Policies and guidelines
 8 Other (specify) _____
 9 I have received sufficient training, resources, and support to provide care for patients who are smokers.

**Thank you for your participation
– please place in box provided.**

