

Smoking cessation for hospital inpatients

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Abstract

People who smoke make up a significant number of those admitted to hospital (NICE 2014). Being admitted to hospital can present a unique opportunity to attempt to stop smoking. Many smokers find quitting very difficult (Rigotti et al 2007), in large part due to them living and working in environments that contain many cues and triggers associated with nicotine consumption and smoking behaviours. Hospitals generally do not contain such environmental prompts to smoke. In the community, smokers have access to numerous types of support including GP's, pharmacies and Stop Smoking Services (SSS). Once admitted to hospital access to such support is significantly diminished. Given that many patients may be highly motivated to attempt to stop smoking due to heightened concerns about their health and being in an environment not associated with their smoking habits, it seems prudent to ensure there is access to all the levels of smoking cessation support available outside of the hospital. Not providing such support neglects implementing an evidence based, cost-effective health intervention in a major health setting (NICE 2014). A SSS pathway was designed that enabled existing hospital healthcare staff to be trained to identify patients that smoke, ask if the patient is considering quitting or abstaining whilst in hospital. If motivated to quit or abstain, to complete an assessment. This being based around dependence to nicotine and motivation to quit. Access to all available stop smoking medications should be included. Medication should only be provided alongside some level of motivational support up to discharge. Training core staff was felt to be the best option. They are available outside of office hours and access hospital systems such as pharmacy more readily than satellite staff.

On discharge the patient is 'handed over' to SSS for continued contact and support once at home. Over 200 staff are trained to complete the assessment and support inpatients to stop or abstain. Approximately 30-35 referrals are made to the local SSS each month, the quit rate at 4 weeks averaging around 40-45%. Most referrals are seen from cardiology and respiratory. All hospital departments should identify staff to be trained to offer cessation support to their patients .

Problem

Smoking cessation has generally been a primary care driven service. Secondary care has often not been considered a significant place to develop cessation practices. This may be due to reasons such as; short hospital stays in which to get quit attempts initiated, lack of access to medications, hospitalisation being stressful, issues around agreed effective timelines for cessation for surgery, etc. Smokers were expected to engage with support themselves after discharge or at best they could be referred to the local SSS who may manage to contact the patient after discharge to discuss options. This contact though was often outside the window of opportunity, as the smoker was back in their home or work environment with associated smoking cues and triggers and often by then had recommenced smoking.

Hospitals are being encouraged to become smokefree sites, this can be more problematic if there is no system in place to help inpatients abstain or quit during their stay.

Resources were not sufficient to provide a full time Smoking Cessation Advisor to be based in the hospital. Even if there was, the hours would tend to be office hours thereby leaving large gaps of time where smokers could not access support. So the likelihood of smokers not receiving advice and support outside office hours can be significant.

Background

One of the initial concerns from the hospital pharmacy was that if nicotine replacement therapy (NRT) was made widely available it would be prescribed in large amounts without any of the licensing indicated support options being put in place. If not following the licensing requirements for support with pharmacotherapy, the pharmacy was aware it would not be an evidence based practice to simply prescribe NRT to help or to 'make' someone stop smoking. This could lead to a significant financial impact on the pharmacy budget. In order for the pharmacy to be assured this would not occur, an pathway was needed which would limit prescriptions of pharmacotherapy to those inpatients who also got some motivational support. The pathway ensured evidence based practice was integral to each prescription by using accepted cessation assessment criteria in areas such as dependency to nicotine (time to first cigarette) and motivation to quit (Ready to quit now/). It also ensured a more rigorous system of referral to continued community based cessation support.

Baseline measurement

It has been difficult to record the number of inpatients that are or could be smokers. Whilst some assessment of inpatient smoking status existed it was not common or widespread practice. Estimates of inpatient smoking populations are generally based on local prevalence data. So Bolton possibly had about 23-26% of patients

being smokers, though this is likely to be an underestimate as smokers generally make up higher hospital patient numbers (NICE 2014). Basic referrals into the local SSS, (that is not patients who were being helped to quit but merely those identified as willing to attempt to quit with some support), showed that many smokers were being identified via outpatient as well as inpatient contacts. Referrals to SSS were seen in huge numbers. Over 1200 basic referrals were received over one year. As there was no system in existence within the hospital for offering inpatients support to quit whilst there, the SSS received no referrals for continued support after an initiation into a quit attempt. So the baseline measure was zero for this type of initiated quit attempt referral.

See supplementary file: ds3369.pdf - "767946-002- CH544 Level II form"

Design

The pathway was designed and developed by consulting with hospital healthcare staff to see how they felt about providing a more intensive smoking intervention. Once it was clear that the staff were keen to develop such a pathway, we asked for their input into the design and to look at possible time issues if adding this to their current workload. Using available evidence of key questions to ask patients, how this assessment could provide an indication of the cessation support required (including any pharmacotherapy) and act as a prompt to ask and record responses. The form developed from this is also a platform for offering NRT and varenicline (Champix) and to recommend a prescription when this is deemed appropriate. The back page of the form is a perforated tear-off section which is sent immediately (not at discharge) to the Stop Smoking Service (SSS) who monitor admission status of the patient via electronic patient management system. When discharge is noted, attempts at follow up contact are then initiated. SSS Advisors need to access the hospital patient information management system to see if the patient was still admitted, transferred, discharged, or deceased?

Healthcare staff were also invited to help shape the training session to be used to help staff acquire the necessary skills and knowledge to assist patients in attempts to quit or abstain from smoking. This training was rolled out on the back of brief advice (Level I) training sessions which then recruit staff on to intermediate smoking cessation (Level II) training. Patients slowly but increasingly took up the offer of cessation support via the pathway and at least half of those taking up the offer were quit at 4 weeks (self reported).

Strategy

PDSA cycle 1

The assessment form and the associated training package needed to be tested in real world settings outside of the pathway development group. Evaluation asked about perceived time constraints in completing the assessment form and any issues of not feeling adequately trained to intervene with a patient including the explanation of and recommending any pharmacotherapy.

Suggestions were made about ensuring the form was better formatted to ensure questions and answer boxes were in line with each to avoid a confusing layout. Minor tweaks to the training session involved utilizing more NRT products to interact with, to practice opening packets and sachets etc. Concerns about time issues were not raised as a significant barrier and it was felt it was an important intervention, particularly in cardiology and respiratory patients.

PDSA cycle 2

Monitoring of discharge referrals received at SSS were compared to hospital pharmacy data which shows which patients had NRT prescribed whilst admitted. This was compared to the names received at SSS via the Level II discharge referral. It became clear that as much as half of all NRT prescribing occurred outside of this agreed pathway (see uploaded table). This is concerning as it demonstrates a lack of widespread evidence-based, cost effective practice for smoking cessation interventions for which this pathway was designed to minimise.

PDSA cycle 3

As pharmacy is always involved in the dispensing of stop smoking medications, it was felt that they could act as gatekeepers, able to allow only prescription requests for those patients who have been properly assessed through the Level II pathway. However pharmacy had to be made aware of the problem and discuss some potential mediating action. Demonstrating the significant cost of NRT for patients who were never referred for support, coupled with the fact that the trust itself is losing out on numbers for submitting mandatory quit data, was sufficient to engage in a period of more closely scrutinized NRT dispensing. Pharmacists insist they need sight of a completed Level II form before making NRT and now varenicline available.

PDSA cycle 4

Constant monitoring of referral data against NRT prescribing data and relaying this data back to pharmacy resulted in an increase of appropriately assessed patients from less than 50% to well over 70%. Quit rates for the pathway overall are monitored and also between patient groups such as cardiology and respiratory.

PDSA cycle 5

Level II training session content now seems to be stable with only minor regular modifications needed. The assessment form has been allocated a bright orange paper colour to enable better identification during any case note audit. Further embedding of the pathway is required throughout the whole hospital site as well as key areas to ensure that there is equitable access to the support across different patient groups.

Results

The main measure of the pathway's operation is the discharge referrals received at SSS, compared against the pharmacy NRT

prescribing data. An updated list of all staff who are trained to Level II is also produced. This is available throughout the hospital online via the intranet. Currently, departments with no Level II Advisors can request another area's Advisor to assess one of their patients. This is done if the Advisor can spare the time to do this. Any areas we become aware of with a low number of trained Advisors can be targeted with offers of training. An ideal number of Advisors should be that which enables a Level II trained person to always be available for a specific area. This can be determined locally depending on patient numbers and operating times of the department. An ongoing task is ensuring all areas within the hospital have enough trained staff.

Quit rates are measured for the pathway as whole and between the individual departments; cardiology versus respiratory for example. The system is now bedding in and we know that it works from start to finish, i.e. from identification of a smoker (Level I) to completion of a supported quit attempt up to and after discharge (level II). Staff report that they like the system of using existing healthcare staff, as it skills them up with a useful and transferable skill for their continuing professional development and it helps them maintain continuity with their own patients in overall holistic care.

See supplementary file: ds3365.docx - "comparison of referrals to levels of NRT prescribed with costs"

Lessons and limitations

It is harder for people to dismiss attempts to introduce new practice due simply to the usual time constraints or even personal objections. If a pathway is based on good solid evidence of practice and cost effectiveness data someone should be implementing it.

The staff who will be expected to deliver the practice are key partners in developing it all. Staff who are not enthusiastic or able to input into the design and development will not assist in getting the practice going or help to demonstrate appropriateness and usefulness within their own area.

Projects that are not backed with mandatory pressures to be delivered in a hospital such as smoking cessation, will be difficult to put in place. There will often be struggle to secure staff time for training and the subsequent operation of the practice.

Requests for any funding will compete with higher priority (financial and political) projects or practices.

This pathway we believe represents a highly adoptable and sustainable practice that can offer a tested template for other hospital trusts who wish to quickly implement a method of supporting inpatients to stop or abstain from smoking. Many of the potential arguments for not investing in such a pathway can be muted by showing the successful implementation in another hospital.

Conclusion

It is essential to be able to offer hospital inpatients the same level of support to quit or abstain from smoking as exists within the community. It appears that many hospitals have not yet considered implementing such a pathway or that many are struggling to set up a pathway that can be sustained despite the absence or movement away from the hospital of smoking cessation staff. Given that it is often hard to engage with people who smoke when they are in their usual environment, the hospital environment added to any associated health concerns offers a somewhat unique window of opportunity to tackle an individual's smoking. Increasingly hospitals are choosing or being strongly encouraged to become smokefree sites, smoking and temporary abstinence must be something that is significantly invested in to support such policies. The pathway developed and tested here can offer some useful guidance to assist hospitals in the development of these tobacco control policies.

Training large numbers of existing core healthcare staff to deliver an intermediate level of smoking intervention seems to offer the best insurance from not having any cessation support at certain times. A reliance on a small number (or even just one) specialist member of staff can leave gaps with no provision when absent. Using existing healthcare staff confers some ownership of intervening in smoking rather than it being simply the job of the 'smoking nurse' whenever available.

References

1. National Institute for Health and Care Excellence. (2014) PH48: Smoking Cessation, Acute, Maternity & Mental Health Services. London:NICE.
2. Rigotti, N., Munafo, M.R., Stead, L.F. (2007) Interventions for smoking cessation in hospitalised patients. Cochrane Database of Systematic Reviews, Issue 3. (CD001837 DOI: 10.1002/14651858.CD001837.pub2).

Declaration of interests

Nothing to declare

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Bolton Stop Smoking Service Referral

This patient has received smoking cessation advice whilst in hospital and prescribed a limited amount of medication. This patient has requested continued support after discharge including a continued supply of stop smoking medication in accordance with local guidelines. 1

This patient has not requested continued support but has been informed they will receive **ONE** follow up call approximately four weeks after their quit/last cigarette date. 2

Patient details:

Address label or complete in block capitals: Name:..... Address:..... Post code:..... RMC/NHS No:..... D.O.B.....	Assessed on which ward and department:	<input type="text"/>
	Date of assessment:	<input type="text"/> / <input type="text"/> / <input type="text"/>
	Date of last cigarette: (or) intended quit date:	<input type="text"/> / <input type="text"/> / <input type="text"/>
	Your name, dept & tel:	<input type="text"/>

Patient occupation:

Patient contact details: home telephone/work number/mobile/email

Mental Health patients - Care Co-ordinator name & number

Patient's GP: (& address if known)

Medication Prescribed in Hospital

Varencline (Champix)

24hr patch (step1) (step2) Taken off at night? Yes No

Lozenge 4mg Mini Lozenge 4mg 1.5mg

Gum 4mg 2mg Nasal Spray 10mg Inhalator 15mg

Notes:

Mental Health: Inpatient support initiated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Community support arranged?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Patient pregnant/breastfeeding?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**DETACH AND SEND AS SOON AS COMPLETED TO:
Bolton Stop Smoking Service, Crompton Health Centre**

Level 2 Inpatient Smoking Cessation Assessment Form

This form is to be used during the assessment of a patient for stop smoking support, including the use of stop smoking medications. **Please complete fully then place this section in the patient notes. Stop smoking medication should not be prescribed to inpatients without this completed form.**

Mental Health Departments: It is advised that smoking cessation attempts should generally not be initiated when a patient is acutely unwell. Review when acute episode has ended.

Affix address label or complete: Name:..... Address:..... Post code:..... Tel:..... RMC/NHS No:..... D.O.B.....	Date: <input type="text"/> / <input type="text"/> / <input type="text"/>
	Date of last cigarette: (or) intended quit date: <input type="text"/> / <input type="text"/> / <input type="text"/>

Mental Health Department: Diagnosis

Acutely Unwell?
If **Yes** review potential for quitting when acute episode ended Yes No

Is patient on antipsychotic medication? e.g. Clozapine?
If **Yes** inform doctor of any attempt to stop smoking Yes No

Age started smoking?

Age now?

Any periods longer than 12 months **NOT** smoking? YEARS

Smoked what? Cigarettes Rolling Tobacco Uses Chewing Tobacco
e-cigarette Cigar Pipe Shisha Pipe etc.

Usual number of cigarettes smoked per day? 1-10 11-20 20 or more

How long before first cigarette after waking? 0-5 mins 5-30 mins over 30 mins

Does patient find it difficult not smoking in non-smoking places? Yes No

Has patient tried to stop smoking before? Yes No

Has patient previously used any medication to help them stop smoking? Yes No

If Yes, which product and strength? (If known)

Is patient ready to quit smoking from today? Yes No

Does patient want help to stop smoking whilst in hospital? Yes No

Does patient only want to stop smoking temporarily whilst in hospital? Yes (only offer NRT if Yes) No

Does patient want someone to contact them and offer stop smoking support when sent home? (If no, inform patient ONE 4-week follow up call will still be made) Yes (complete discharge letter tick box 1) No (complete discharge letter tick box 2)

Is patient pregnant/breastfeeding? Yes (only offer NRT if Yes) No

DETACH AND SEND ON COMPLETION

Medication Recommended

Inpatients should be prescribed product on a one weekly basis. (Continued abstinence from smoking is required). Check BNF for current prescribing/dosing recommendations. Any change of medication should be recorded in notes/review section below. ONE FULL WEEK PRODUCT TO BE SUPPLIED ON DISCHARGE

STOCK ITEMS IN PHARMACY

Varenicline	Champix	Starter pack	<input type="checkbox"/>	Maintenance supply	<input type="checkbox"/>
24hr Patch (7 patches)	Niquitin CQ Clear (If patch is to be used as a 16hr patch, ensure this is documented on the patients' wardex)	Step 1	<input type="checkbox"/>	Step 2	<input type="checkbox"/>
Gum	Nicorette Mint (105)	4mg	<input type="checkbox"/>	2mg	<input type="checkbox"/>
Lozenge	Niquitin CQ (72)	4mg	<input type="checkbox"/>		
Mini Lozenge	Niquitin CQ (20)	4mg	<input type="checkbox"/>	1.5mg	<input type="checkbox"/>
Nasal Spray	Nicorette (1-2 bottles)		<input type="checkbox"/>		
Inhalator	Nicorette (Cartridges)		<input type="checkbox"/>		
Sublingual Tablet (Microtab)	Not in stock but can be ordered if necessary		<input type="checkbox"/>		

Was medication prescribed as above? Yes No
If no, please give details in notes/review

Prescriber:

Signed:

NOTES/REVIEW (please continue to review medication use whilst patient remains in hospital)

Name Level 2 Advisor/contact details:

Signed:

Stop smoking medication for Bolton NHS Foundation Trust

TREATMENT OPTIONS AT A GLANCE		NRT		VARENICLINE (Champix)		
Available product (RBH)	PATCHES AVAILABLE STEP1/STEP2	GUM 4mg/2mg	SPRAY 10mg	INHALATOR 15mg cartridges	LOZENGE 4mg MINI LOZENGE 4mg/1.5mg	TABLETS 0.5mg (white / 1mg (blue)
Treatment Period	8 to 12 weeks	Licence recommends gradual withdrawal after 3 months	12 weeks	12 weeks	At least 12 weeks - then reduce gradually. Maximum treatment length 6 months.	12 week course Titrates via Starter pack initially
Dosage	Niquitin CQ: Step 1 > 10 cigs per day Step 2 < 10 cigs per day RBH stock is for 24hr patch only. These patches can be removed at night if desired and must be removed at night during pregnancy. Please ensure patient's wardex documents the required duration.	Nicorette: 4mg > 20 cigs per day 2mg < 20 cigs per day Maximum dose 15 pieces gum per day.	Nicorette: One spray in each nostril when urge to smoke occurs. Limit of one spray each nostril twice/hour. Maximum 64 sprays per day. Reduce dose gradually after 8 weeks.	Nicorette: Maximum of 6 cartridges per day (15mg/cartridge). Reduce dose gradually after 8 weeks. Reduce use by half over next 2 weeks. One cartridge = 40mins intensive use. 10 puffs on inhalator = 1 puff of cigarette for nicotine delivery	Niquitin CQ: 1.5mg *TTFC >30 mins 4mg *TTFC <30 mins 1 lozenge every 1-2 hours (Max 15 lozenges daily)	Pfizer - Varenicline: Day 1-3 0.5mg OD Days 4-7 0.5mg BD Day 8 onwards 1mg BD Need to set quit date for 8-16 days after commencing tablet
Advantages	Very easy to use. Automatically gives the right dose. 24hr patches can help with early morning cravings.	Easy to regulate dose. Could help prevent overeating. Gives extra help at difficult moments.	Provides fast relief to heavy smokers. Easy to adjust dose.	Helps keep hands and mouth busy. Easy to regulate dose. Could help prevent over-eating.	Can be used discreetly. Easy to adjust dose. Very few side effects.	Alleviates symptoms of craving/withdrawal whilst simultaneously reducing rewarding effects of smoking.
Disadvantages	24hr patches may disturb sleep or sleep disturbed by stopping smoking. Not orally gratifying. Possibility of skin reaction.	Tricky with dentures. Jaw ache. Gastric upset. Hiccups.	May cause nasal irritation at first. This will disappear after several days use.	Coughing. Throat irritation.	Gastric upset. Stinging in mouth. Hiccups. Localised irritation.	Nausea. Abnormal dreams, insomnia, headache.
Available product	Niquitin CQ @ Nicotinell @ Nicorette @	Niquitin CQ @ Nicotinell @ Nicorette @	Nicorette @	Nicorette @	Niquitin CQ @ Nicotinell @	Pfizer Varenicline @ (Champix)
Legal category	General Sales Licence	General Sales Licence	General Sales Licence	General Sales Licence	General Sales Licence	POM

*Time to first cigarette Highlighted = pharmacy stock items Check BNF's and/or SPC's for prescribing/dosing recommendations