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National Survey of Stop Smoking Service Provision in Hospitals in Great Britain: Current Practice, Barriers and Facilitators

Barnaby Proctor*, Katie Myers Smith, Hayden McRobbie and Peter Hajek

Tobacco Dependence Research Unit, Wolfson Institute of Preventative Medicine, Queen Mary University of London, Philpot Street, London E1 2JH, UK

Abstract

Aim: The UK National Health Service (NHS) funds the Specialist Stop Smoking Service (SSS) that provides help to smokers across various settings. While community services are extensively monitored, little data exist on hospital services. We set out to review current practice and identify barriers and facilitators associated with implementing smoking cessation services in UK hospitals.

Methods: Hospital service leads were identified from a national online forum and invited, via email, to take part in a survey that assessed service characteristics, referral pathways, interventions used, service throughput and outcome, barriers, facilitators and suggestions for service improvement.

Results: Data from 39 services were included in analyses. There was considerable variation in how services were staffed and run. Services employed on average two full time equivalent staff (FTES) and covered two hospitals. The majority (85%) were funded via local public health budget rather than by the hospitals themselves. Most referrals were received from ward nurses over the telephone and services received on average 9 referrals a week per 1 FTES. The majority provided behavioural support on wards and referred patients to community SSS on discharge. All inpatient services were able to provide nicotine replacement treatment, 57% additionally offered varenicline and 35% bupropion.

Conclusions: Smoking cessation provision in UK hospitals is currently highly variable. Ensuring that smokers are referred to treatment is the main challenge. Guidance is needed to help services optimise referral routes and unify data collection. Research is needed into what service models produce the best outcomes.

Keywords: Smoking; Cessation; Hospital; Secondary care; Acute

Introduction

In the UK an estimated 460,000 hospital admissions in 2010/11 among people aged 35 and over were due to smoking, which accounts for 5% of all hospital admissions in this age group [1]. It is estimated that some 30% of all hospital patients are smokers [2], with up to 70% of smokers attending hospital reporting they would like to stop [3]. Hospitalisation provides a good opportunity to stop smoking. Hospitals in many countries, including the UK, are now smoke-free environments with no cues for smoking, and the hospital admission brings smokers into contact with healthcare professionals (HCPs) who can advise on quitting smoking and, in the case of the UK National Health Service (NHS), refer dependent smokers to the NHS-Stop Smoking Service (NHS SSS).

The NHS SSS was established in 1999, with the aim of offering free stop-smoking treatment from trained advisors. National Guidelines recommend that HCPs, with the support of the SSS, should provide cessation support routinely to hospitalised smokers [4]. However, despite the evidence of the effectiveness of intensive interventions [5] and the availability of NHS-SSS funded to provide them, such interventions are not universal.

There are limited data describing smoking cessation support within NHS hospitals. In 2003 a survey of 260 UK hospitals suggested only around 50% had a dedicated smoking cessation service on-site [6]. Two later surveys [7,8] showed a slight overall increase in hospital service provision, but there remains widespread disparity in the availability and content of hospital services [6]. A 2005 NHS Health Development Agency survey found that only 40% of hospitals had nicotine replacement therapy (NRT) on the hospital formulary, NRT was available on prescription in 10% of hospitals, and only 8% of smokers were pro-actively offered [9].

There are a number of barriers and facilitators towards implementing smoking cessation services in hospitals. For example, hospitals that record smoking status perform better on indices of smoking cessation counselling and training of hospital staff can increase the rate at which they screen for tobacco use [10-15]. Other interventions that can have a positive effect on staff performance and practice include prompts and reminders to routinely check patient smoking status and refer [16-18], and providing staff with feedback on their referring performance [19,20]. Lack of time, knowledge and skills are the most commonly cited barriers to hospital staff intervening with patients who smoke [21-23].

We set out to survey the current provision of support provided to hospitalised smokers in the UK. Several service characteristics were focused on; referral pathways, support provided to smokers, service throughput and outcome, barriers, facilitators and provider suggestions for service improvement.

Methods

The survey was conducted between March and July 2012 under

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the auspices of the internet-based National Smoking Cessation in Secondary Care Forum, which was hosted at the time by the Inpatient Smoking Cessation Service at the Royal London Hospital, UK. The Forum provided networking and information opportunities to service leads, advisors, community SSS managers and service commissioners.

An email was sent to all individuals on the Forum (n=344) to identify hospital service leads willing to complete the survey. Respondents had the choice of completing the 23-item questionnaire electronically or having the survey conducted over the phone by a member of the team (BP).

The survey included questions on the service funding, staff numbers, number of hospitals covered, staff training, referral pathways and pre- and post-discharge pharmacotherapy and support. Other items concerned the number of referrals received per year, patients starting treatment in hospital and after discharge and patients achieving 4-week verified abstinence. Three open questions were included regarding service promotion, barriers to service implementation and suggestions for service improvements.

Descriptive analyses were undertaken using PASW Statistics for Windows, Version 18 [24].

Results

Altogether forty-one service leads responded. Two services were excluded, one being a maternity only services, and one being a staff only service, leaving 39 (95%) who were eligible to take part. The 39 services covered 116 hospitals in England, Scotland and Wales. Twenty-two services (56%) opted for the phone interview, sixteen services (41%) returned the form via email, and one form (3%) was completed about the service run by the authors. We describe the results for each service characteristic below. The number in brackets at the end of some sections shows the number of services providing the section information. (Ns vary due to missing data).

Service funding

Thirty-three services (85%) were funded by the public health departments of their local Primary Care Trust (PCT). Five services (13%) were funded by Hospital Trusts and one service (3%) was funded jointly by the PCT and Hospital Trust (N=39).

Service staffing

The mean number of staff members employed was 2.6 per service (SD=1.9, Range=1-8, N=37). Some were part-time staff. The full time equivalent staff (FTES) average was 2 (SD=1.7, Range = 0.2-6.6, N=36). Some services counted administrators and managers, so not all employees were treating smokers.

Number of hospitals covered

The mean number and type of hospitals covered was 2.3 (SD=1.7, Range=1-8, N=36). There were two outlier services covering 17 and thirteen 13 hospitals (the former listing five main hospitals and twelve smaller community hospitals, and the latter listing four main hospitals and nine smaller community hospitals).

Staff training

Of the 37 services that provided data on training, 31 (81%) employed advisors trained to Level 3 (specialist level, which typically involves 2-3 days of training and equips advisors to deliver intensive multisession behavioural support and pharmacotherapy) and eight services (19%) were trained to Level 2 (Level 2 advisors typically receive 1.5 days hours

Referral method	N=36*
Telephone	31(86%)
Email	18 (50%)
Fax	16 (44%)
Electronic referral system	9 (25%)
Ward referral cards	8 (22%)
Desk notes	5 (14%)
Internal post	4 (11%)
Self-referral cards on wards	4 (11%)

*Participants were asked to list all referral methods used

Table 1: Referral methods used by hospital smoking cessation services.

of training that equips them to provide a basic level of behavioural support, and some have basic knowledge of pharmacotherapy).

Training was provided mostly in-house, with external programmes including National Centre for Smoking Cessation and Training (NCSCT) on-line course (5%), NCSCT face-to-face course (5%), Smoking Cessation Training and Research Programme (SCRTP) course (5%), training in very brief advice (VBA) (3%), motivational interviewing (3%), neuro-linguistic programming (3%), pharmacy-provided training (3%), Pip Mason training (3%) and e- learning (3%).

Sources of referrals

Data on referral sources was provided by 38 services. All reported receiving referrals from ward nurses, 35 (92%) received referrals from hospital doctors, and 23 (61%) from ward pharmacists.

Methods of Referral

Services used a variety of referral methods, with telephone referral being the most commonly used (Table 1).

Support pathway

Thirty-three services (85%) reported that the first contact with the patient was made in hospital, while six services (15%) reported starting treatment after discharge. This involved signposting patients to other services in the community and focusing on training staff in VBA and/or developing referral pathways (N=39).

Inpatient support

All services provided at least one visit to patients. Two services provided daily support during the week.

Of the 37 services that provided information on pharmacotherapy, all were able to provide NRT to their patients. Twenty-one services (57%) additionally offered varenicline and 13 (35%) offered bupropion.

The majority (86%) of services dispensed medication to patients from the hospital pharmacy. Services (14%) that could not supply medication from the pharmacy had to rely on NRT being brought into hospital from the community (N=36).

Support after discharge

The majority (77%) of services that provided data on support after discharge (n=35) made arrangements for an on-going supply of smoking cessation medicines. Of these, nineteen (70%) could use 'To Take Away Medications' (TTAs) from the hospital pharmacy and eight (30%) used vouchers given to patients. Five services (14%) had to write to the patients' GP to supply medications to their patients after discharge. Three services (9%) used different approaches depending on what service they refer patients onto (N=35).

One service offered referral to Level 2 services only, with all other services offering patients referral to community Level 3 services after discharge. Eight services (23%) additionally offered outpatient services themselves.

Patient throughput and outcome

Some monthly/annual figures provided by the services were estimates. The figures are mixtures of outpatients and inpatients, with pregnant patients, staff and visitors also included (although the number of these is likely to be small). The services typically did not keep separate records for different patient groups. Data were scaled to 1 FTES.

Services received on average 447 referrals per year per 1 FTES (SD=343, Range=26-1238, N=28). An additional outlier service reported receiving 1879 annual referrals per 1 FTES. 1 FTES provided support to an average of 172 (38% of referrals) patients per year (SD=106, range=12-350, N=17). Services generated on average of 61 4-week quitters per 1 FTES per year (SD=51, range=6-209, N=23), with a short-term self-reported success rate of 36%. An average of 52 patients per 1 FTES (SD=54, range=4-209, N=22), had their abstinence validated by carbon-monoxide readings, suggesting a 30% validated success rate.

What facilitates referrals?

Twenty two different themes emerged from the open question. The top three were "training staff (18)", "conducting ward rounds (10)" and "successful networking and relationships (8)". The next two topics received both positive and negative endorsements: "use of posters (12 mentioned as useful and 5 as not useful)" and "use of intranet (7 mentioned as useful and 2 as not useful)".

What improvements would you most like to see?

Thirty nine different themes emerged from the open question. The top five were "more staff (8)", "more training/ mandatory training for hospital staff (7)", "better recording of patients' smoking status (6)", "more importance put on service (6)" and "more referrals (5)". With the exception of the first point regarding staffing levels, all other points were related to the need to improve patient referrals.

What are the main barriers to your service?

Thirty eight different themes emerged from the open question. The top five were "Smoking cessation seen as low priority (9)", "Staff not educated in smoking cessation and referring (7)", "Staff do not realise importance of referring smokers (7)", "Knowing who to contact within hospital to set up/organise/promote referrals to the service (4)" and "No office/consulting space in hospital (4)".

Discussion

The survey provides new data on the organisation and content of hospital based smoking cessation services in the UK.

The representativeness of the sample is difficult to assess. There may have been a preponderance of services which were relatively well developed and managed because they were all registered on the Forum. There are services with advisors who are not involved in regular training updates (where most of the network participants learned about the network) and services that are on the forum but preferred not to share their details. The survey however could also attract services which struggle and which seek guidance. The sample included a mixture of services which were well established and services which were inexperienced. The selection bias is the main limitation of the study.

The relatively small sample size is another limitation. The barriers and facilitators identified in the survey, however, are likely to be relevant across the country.

The majority of services were funded from the NHS Public Health budget and not by the hospitals they serve. This is an anomaly peculiar to the UK setting. Lack of involvement of hospital management is a known barrier to running a successful SSS [25] and the fact that the hospitals did not 'own' the services is likely to be one of the reasons for the lack of organisational support reported.

The service models and the levels of staffing and costs varied widely. There is a need to identify a workable model of a hospital service and provide at least rough guidelines on practical aspects of such a service.

Inpatient services rely on referrals from hospital staff. Most referrals were received from ward nurses over the phone, which is in line with previous reports [26]. Only 25% of services received referrals through an electronic system, which seems low considering recent moves towards paperless systems and evidence suggesting their acceptability to patients and staff [27,28] and potential advantages in generating daily lists of inpatient smokers [29]. However there may be additional barriers not captured in the survey. Electronic referrals system can work, but these need to simple and 'user friendly'. Anecdotally we know of systems that require a series of steps to go through before reaching the referral portal.

Most services started treatment at patient bedside, but some focused on training frontline staff to refer patients to local 'mainstream' services. Data are needed on which alternative produces better outcomes. There were also services which focused on training frontline staff to provide intervention themselves, an approach which is known to be ineffective for long-term cessation [5] and which does not really utilise the NHS investment into specialist stop-smoking service.

All services were able to provide NRT which reflects an improvement on a survey from 2005 which found that only 40% of UK hospitals had NRT on the hospital formulary [9]. There remains a scope for further improvements. Only 77% of services were able to supply patients with medication to take home after discharge, which raises a concern that quit attempts could have been aborted due to poor organisation of care.

Patients were typically referred to their local mainstream services on discharge. An ideal joined-up service would consist of the hospital advisor seeing the patient themselves after discharge or passing the patient contact details on to their community counterparts and the community advisors contacting the patients pro-actively. However, it is not clear how often this was organised and how often patients were just given the local service phone number to contact themselves.

Services collected data on patient throughput and outcome in different ways, with differing definitions of what constitutes a quit date or support, and different lengths of follow up. Many of the figures we report are rough estimates. To assess service performance and to identify and develop optimal service models, parameters of service monitoring need to be developed. Currently there is no standardised requirement let alone standard data set to assist hospital services to record their activities.

The barriers identified by the service are similar to those reported in previous reports [21-23], and include problems with referrals of smokers to the service by hospital staff due to lack of time, knowledge and skills, and insufficient organisational support. A common complaint was that smoking cessation is often seen as low priority. A common improvement that was mentioned was for more training

of HCPs in referring. It is possible that if the services were funded by hospitals, referring smokers for treatment could become an official part of staff duties and a brief training in asking about smoking and offering a referral would be included as mandatory in routine staff induction.

The recent introduction of smoking cessation targets and financial implications of the Commissioning for Quality and Innovation (CQUIN) payment framework [30], mentioned by a number of services, may also stimulate improvements [31].

In summary, there is currently no established model of a successful hospital service. Different services operate in different ways, which are likely to produce varied outcomes. The funding arrangement where hospitals do not 'own' the services seems suboptimal. Guidance is needed on essential practical issues such as the optimal referral pathways, training of HCPs, handling of stop-smoking medications, and ensuring continuity of care after patients are discharged from the hospital. There is a need to standardise data collection to determine which service models produce the best outcomes.

Acknowledgments

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