

Development of a hospital-based stop smoking service

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**Title**

The introduction of a hospital-based stop smoking service: key considerations

**Introduction**

The White Paper *Smoking Kills* (Department of Health, 1998) highlighted the burden of ill-health created by smoking and set out the government's strategy to reduce smoking rates. Part of this strategy was the introduction of Stop Smoking Services (SSS) (which were subsequently created in 1999/2000). Clinics were situated in community settings such as community centres, local halls and clubs as well as GP surgeries and health clinics. More recently, a broadening of access to SSS has been promoted, for example using non-NHS locations, such as work places, but most settings were still allied to the NHS (DH, 2009). In primary care new venues included pharmacies, dental practices, optometrists and maternity services (DH, 2009). As part of the widening access agenda services are now being developed in secondary care. Hospitals by definition address health issues, employ large workforces and receive many patients and visitors every year; as such it is suggested they might be ideal locations in which to offer smoking cessation services (Ghodse et al, 2008).

Nurses have the potential to be key advocates for the stop smoking message (Shuttleworth, 2004). A Cochrane Review (Rice and Stead, 2008) found that interventions delivered and supported by nurses, especially in hospital and where the interventions were embedded in routine care, increased a smoker's success in quitting. From the patients' perspective, diagnosis of a smoking-related disease can act as a trigger for a change of attitude, making them more accepting at that time towards stop smoking messages (Twardella et al, 2006). In practical terms, some

patients experienced forced abstinence due to their condition and smoke free site policies, creating an opportunity to offer nicotine replacement therapy (NRT) as a temporary measure, and the potential for a quit attempt (Ghodse et al, 2008). These factors suggested that making smoking cessation support available in acute hospitals was likely to increase quit rates if there was follow-up support following discharge for at least one month (Rigotti et al, 2007).

This paper identifies the evidence base and a number of policy-driven documents which underpin the delivery of smoking cessation services in secondary care. They have been used as a framework in which to situate the findings from an evaluation of the expansion of SSS of two adjacent primary care trusts (PCTs) into a large, acute hospital. The service reported here used an integrated model whereby the hospital and community organisations took joint responsibility for planning, funding and delivery. The hospital team consisted of an Agenda for Change Band 6 Specialist Adviser for 30 hours per week and four facilitators each working 15 hours (see Figure 1). It was envisaged that nominated ward nurses would act as the communication link into the ward for information on stop smoking; these champions would proactively promote the cause and between them they would raise awareness, encourage brief interventions and disseminate information to other ward staff.

### **Evidence sources**

Hospital-based, stop smoking initiatives in the UK have progressed piecemeal and currently stop smoking counsellors are not available in all hospitals (Stern, 2011). Evidence on suitable service models is limited (Rigotti et al, 2007), however the

Department of Health is carrying out pilots in secondary care with the results expected later this year (Croghan, 2009; DH, 2011). Other initiatives, some based on the findings from Cochrane reviews and some based on professional opinion, are being developed, for example the British Thoracic Society's Stop Smoking Champions programme, but are in their infancy (BTS, 2011). Nevertheless there have been a number of policy documents and Cochrane reviews in recent years that have drawn together the available evidence-base. The most relevant and robust have been used as the framework for this article, including two Cochrane Reviews which involve nursing input to stop smoking and which have influenced government guidance for some years (DH, 2009; DH, 2011). Three policy documents have also been used: a comprehensive report, commissioned by Health Executive Scotland, of a national mapping exercise of stop smoking support in Scotland (Eadie et al, 2008); a toolkit prepared by a team at St. Georges', University of London (Ghodse et al, 2008) and a paper on the Ottawa Model piloted in Canada (Reid et al, 2009). Each publication, in broad terms, supports the recommendations of the others (Box 1). Taken together they represent some clear evidence for future service delivery.

### **Principles arising from the evidence sources**

Six key principles (see Box 1) have emerged from the evidence sources cited above. These principles highlighted areas that need to be considered when introducing a stop smoking service into a secondary setting, such as an acute hospital.

#### **Box 1**

Key recommendations for effective service delivery from the literature:

Hospital environment

- Senior advocate(s) and staff champions within the hospital are required to open doors and push for the establishment of the service.
- Awareness must be raised amongst staff by prioritisation of the stop smoking agenda and making training relevant and accessible.
- The hospital culture needs to be changed towards a smoke free site.

#### Preparation

- Assessment of readiness of organisation for introduction of SSS
- Multilevel preparatory period to address barriers, introduce new systems and train staff

#### Collaboration

- Collaboration between the secondary stop smoking service, local community providers and the host organisation is required to design and agree referral routes within the hospital and into the community.
- Patients need to be assessed early on in their journey through hospital and provided with a quick, reliable and accessible source of NRT.
- Patients/clients require reliable transition pathways into and out of the secondary care stop smoking service, with support for at least one month following discharge.

#### Resourcing

- A hospital-based, dedicated specialist team with protected time is required to establish the service.
- The secondary care team require dedicated administrative support.
- Hospital staff require access to training e.g. through protected time, making it mandatory.
- Additional pharmacological products may be required on hospital formulary.

#### Training

- All smokers should receive an offer of a stop smoking assessment which includes counselling and pharmacotherapy regardless of diagnosis.
- Level 1 training to be made available to all frontline staff.
- Level 2 training to be given to selected staff.

#### Evaluation

- Collection of data on the users of the secondary care service needs to be efficient, ethical and sufficiently detailed. It should be disseminated to the secondary care team in a timely manner.

### ***Hospital environment***

A receptive environment in terms of the host organisation was identified as an important factor for success; whereby a senior clinician, able to advocate and influence at a senior level, could be identified (Eadie et al, 2008; Ghodse et al,

2008). Sufficient support was also required at directorate, ward management and bedside levels (Eadie et al, 2008; Ghodse et al, 2008; Reid et al, 2009). The degree to which the environment was underpinned by organisational stop smoking policies, the authority with which they were backed and implemented and the prevalent culture within each area of the hospital affected the level of receptiveness to a stop smoking service (Ghodse et al, 2008).

### ***Preparation***

The need for a comprehensive preparatory framework to guide the development of the service was highlighted in the Ottawa Model (Reid et al, 2009). This model used a facilitator to change hospital treatment for smokers at an in-depth level within the organisation. These included: a review of present practices with baseline audit and feedback to officials, consensus building steps including goal-setting and identifying ways to integrate stop smoking care into routine practice, making care providers accountable for delivery of the service, introducing smoking status reminders throughout care pathways, delivering training of representatives from all disciplines of frontline staff and regular, ongoing feedback of progress to staff delivering the intervention as well as senior management (Reid et al, 2009). The principles of this approach were supported in the UK by Ghodse et al (2008) who highlighted the need for a 'multilevel review of the organisation's readiness for implementation of stop smoking services' (p27) and 'adopting a stop smoking culture' (p27) across the organisation. Ghodse et al (2008) recommended that the introduction of the service was led by the chief executive, with a decision-making working group of key individuals and devolved responsibility to broader management structures, for

dissemination of strategy and training opportunities across directorates and onto wards.

### ***Collaboration***

#### In-hospital

A brief intervention delivered by a nurse or doctor was recommended as the first step in delivering the stop smoking message (Ghodse et al, 2008; Reid et al, 2009). Either the attending staff or a specialist would continue with an assessment for patients expressing an interest in quitting. The importance of clear, well-publicised referral routes for patients was highlighted (Eadie et al, 2008). Another area where close collaboration was required was with pharmacy services, to ensure that NRT products were stocked and dispensed in accessible, timely ways. Often smokers would be admitted out-of-hours and begin to suffer withdrawal symptoms quickly thereafter, emphasising the need for swift availability of treatment as part of maintaining a smoke free site.

#### Hospital-community

Initial collaboration between the new service, the pre-existing community service and clinical staff was found to be essential for a positive patient experience (Eadie et al, 2008). This included designing and agreeing referral pathways and protocols that could be integrated into the hospital and community care provision (Eadie et al, 2008). Ghodse et al (2008) also emphasised the importance of close collaboration with the community. This particularly related to designing and implementing a robust follow-up service so that patients were given continuing support to succeed as they moved through various health care settings, convalesced at home and returned to

their normal routines. The Ottawa Model included an interactive voice response (IVR) automated telephone follow-up system, which used a standard question set and branching logic depending on the patient's responses. In the UK the expectation would usually be that hospital service users would transfer to community SSS on discharge from hospital (Ghodse et al, 2008). A variety of other options were also identified by Eadie et al (2008), which included the use of telephone support and home visits and/or ongoing support from the hospital.

### ***Resourcing***

Additional resources were required to support the introduction and continuation of the service. Ghodse et al (2008) emphasised that the hospital pharmacy did not necessarily stock all the pharmacotherapy products and that negotiation was required to change stock which also had cost implications. Training also required sufficient resourcing. Finding the time to release staff for training has been identified as a major issue that has hampered attempts to improve services (Eadie et al, 2008). The prioritisation of training was emphatically supported by Ghodse et al (2008) who also highlighted the need for meeting training costs. Further recommendations with resource implications were access to administrative support, arrangements to cover marketing costs and where specialists were employed solely for the service, that sufficient holiday/sickness cover (Eadie et al, 2008; Ghodse et al, 2008).

### ***Training*** (see Box 2)

Training was identified as essential in raising awareness amongst staff as part of the preparatory phase (Eadie et al, 2008; Ghodse et al, 2008; Reid et al, 2009). One way this was achieved was through brief advice training.

## Box 2

### Levels of Stop Smoking Intervention Training

Level 1: involves a routine enquiry to all patients on their smoking status and readiness to quit. Advice to quit should be clear and tailored to the individual's health. Information on the availability of stop smoking services should be offered. Ideally all front line staff should receive Level 1 training.

Level 2 (or intermediate advice): involves a health professional supporting an individual through the quitting process. Training to undertake this role generally takes 2 days. Information about this training is available through the local stop smoking service. Individuals working at Level 2 often do this as part of another role (e.g. practice nurses). However it is important that they have dedicated time to give to the role.

Level 3 (or specialist level): this involves supporting individuals to quit in a group setting following a withdrawal-oriented approach. Those working at this level may also be involved in training.  
(Ghodse et al, 2008)

If it was to be implemented effectively then there was a requirement for it to be prioritised by providing protected time and making it mandatory; taught on-site by the hospital SSS staff (Eadie et al, 2008; Ghodse et al, 2008; Reid et al, 2009). In addition selected members of staff required further training, to assess and support a smoker to quit (Ghodse et al, 2008). This recommendation was supported by the Ottawa Model (Reid et al, 2009), wherein a broad-based programme of staff preparation and training was employed.

### ***Evaluation, monitoring and feedback***

Measuring the effectiveness of the service through ongoing monitoring, feedback and evaluation was also seen as important. Efficient, ethical and accurate data collection systems were recommended to capture the patient journey through the



service and record the eventual outcome (Eadie et al, 2008; Reid et al, 2009). It was recommended that systems were sufficiently detailed to allow for submission for national monitoring as well as separate analysis of the hospital service, broken down to departmental and ward level (Eadie et al, 2008; Ghodse et al, 2009). A further recommendation was that service staff were updated on outcomes from the data and could access patient details to facilitate follow up (Eadie et al, 2008).

### **Evaluation of an in-hospital SSS implementation**

This section reports the findings from interviews with professional staff involved with a new smoking cessation service. Ethical approval was gained from the university and hospital research and governance committees before commencing. Interviews, to elicit experiences and lessons learned, were conducted with the lead smoking cessation specialist, four team members and three ward champions. Team members were interviewed twice, once earlier in the implementation and again three months later. Two team members also acted as champions on their wards and were interviewed in that capacity also. The interviews were analysed thematically, using Braun and Clarke's (2006) approach. The findings are presented according to the themes identified from the evidence sources.

## **Findings**

### ***Hospital environment***

A key strength of the hospital-based service was that smokers were accessed at a 'teachable moment' which made them more receptive to quitting. Some specialities, notably cardiology, were keener to promote the stop smoking agenda than others. An important factor for successful implementation was a senior advocate from both

nursing and medicine, who championed the cause at senior management level and down to ward level. There were a small number of ward staff champions who were passionate about the issue and raised its profile on their wards. The smoking cessation team worked to embed changes in the hospital culture to encourage a smoke free site that extended beyond the buildings alone. Nevertheless, although there were a number of keen individuals at senior and bedside levels, impact was diminished for reasons which are explored below.

### ***Preparation***

The Trust had an implementation plan which was largely evidence-based and was agreed at senior management level meetings. A multidisciplinary working group was established with representation from primary and secondary care which provided the vision for the service. The hospital-based stop smoking team provided assessments and counselling to in-patients and out-patients, staff and visitors. They also trained frontline staff in assessing, counselling and recommending treatment. This enabled early assessment for smokers following admission. In-hospital referral routes were negotiated and began to be established during the evaluation period.

The preparation phase had been less comprehensive than that suggested by Reid et al (2009) and Ghodse et al (2008). There was no specific review of baseline stop smoking policies and practice carried out with which to compare future work. There was no hospital system to collect fundamental data e.g. baseline smoking status. Similarly there was hesitancy from the community to set up data collection systems that straddled secondary and primary care, while maintaining the facility to separate service data for audit and feedback. Developing ward-based advocates beyond

those who already existed proved difficult and any stop smoking activity tended to lie with those who were most enthusiastic.

### ***Collaboration***

Referral routes were devised in collaboration with senior staff and publicised before and after the launch. Negotiations were carried out with the hospital pharmacists so that more, but not all, pharmacotherapy options could be offered. Systems for providing quick, reliable NRT were developed and ongoing discussions continued to improve them e.g. providing emergency supplies on wards out-of-hours. Patients were advised of the options for follow-up in the community or continuing to attend hospital clinics. A smooth transition proved to be difficult to ensure for all, due to methods of remuneration for successful quits and non-transferable paperwork between hospital/community and across PCT areas.

### ***Resourcing***

Although there was an agreement between the hospital and community services in place, it failed to address all the resourcing issues that arose during the implementation, therefore under-resourcing of the new service impeded progress. Office facilities and administrative support were difficult to access resulting in reduced time for direct care. The team successfully provided the service during office hours but struggled to maintain cover during holiday/ sickness or necessary meeting times. Funding of long-term staffing levels was unclear leading to uncertainty and loss of momentum. Training sessions to assess and counsel smokers were developed but uptake was poor as staff could not be released from clinical duties to attend.

### ***Training***

The evaluation found that only the stop smoking team itself had been trained at the point when the service was launched. Training of hospital staff commenced after the service had been introduced. It was difficult to raise awareness and achieve acceptance of the importance of the stop smoking message in this situation. Apart from within cardiology, ward staff were not actively supported by their ward management to attend training or engage in assessments on the ward.

### ***Evaluation, monitoring and feedback***

The findings from the evaluation illustrated how establishing data collection systems that satisfied the requirements of the hospital, PCTs and stop smoking team created problems throughout the study period. Dealing with this issue absorbed time and effort from the team to the detriment of the service. This included difficulty with maintaining and accessing figures specific to people whose quit attempts were initiated in hospital.

### **Discussion**

An increase in the availability of smoking cessation services has been recommended and includes a move into the acute hospital setting. The cited literature highlighted a number of issues that need to be considered when such services are developed. The literature also provided a contextual framework in which to place the findings from the evaluation of the new service. Factors that were identified as likely to increase success included the presence of clinical champions, enthusiastic ward staff and a team which provided prompt assessment, counselling and a range of

NRT. Findings from the evaluation highlighted that progress was impeded from the start, with a lack of sufficient, widespread authority that would have allowed prioritisation of the stop smoking agenda to the extent that it could be widely understood and embraced then embedded into routine practice. Preparation through training, prior to launching the service, was not undertaken and attendance at sessions provided later was poor; consequently the team struggled to maximise effectiveness. So the environment within the study hospital could be considered as only modestly conducive to success.

Service development within the hospital was growing slowly but with regard to transition between hospital and community services the national context has to be considered, as it brought a number of additional impeding factors. Firstly, local SSS grew up independently, developing their own paperwork, which was not transferable between the study hospital and PCTs or other hospitals outside the immediate area. Transferable paperwork from hospital to local PCTs was developed as part of the new service but required further work to be fully accepted. Out of area patients would have to transfer to a different service and be re-assessed unless they were willing to travel back to the hospital for follow-up. Visitors and staff seen as out-patients could only be given advice, not treatment, which was likely to reduce effectiveness. Secondly, government remuneration schemes were according to quit and, if successful, the quit would be allocated to the local service where they were followed up not the hospital where the quit was initiated. This is a disincentive for the service as the hospital draws patients and staff from a wide area but would not be reimbursed for their successes for people from out of area.

Robust data collection methods were required to overcome intrinsic difficulties in the system however implementation was delayed. Difficulties were compounded by the non-integration of hospital and PCT governance data protection rules. Examples of the challenges included: complete data on quits initiated in the hospital were more difficult to collect as these clients moved between hospital and community SSS; service users lived across a wide area and most were followed up in other settings and areas, many of which did not have data sharing agreements with the hospital or local PCTs; some people did not access further services but may/may not have quit. All these groups were more likely to be lost to follow up, relying on data from follow up telephone calls alone being received, rather than attendance at a local service.

## **Limitations**

A full review of the literature was not undertaken. However this paper draws upon the findings from a Cochrane systematic review and other policy documents which were based on comprehensive reviews of the literature. The evaluation reported here was based on one smoking cessation team in one NHS Trust and therefore the findings might not be applicable in other Trusts. However, the findings are strengthened when supported by the conclusions from the Cochrane systematic reviews and Health Executive Scotland's mapping exercise, then combined with recommendations from the St. George's toolkit and Ottawa Model.

## **Conclusion**

To achieve maximum effectiveness, hospital-based stop smoking services require broad acceptance within their organisation. The evidence-base and the evaluation

illustrated the importance of thorough preparation and training of frontline staff prior to service launch to raise awareness, embed interventions into routine practice and maximise effectiveness. It also identified the challenges associated with providing a smooth transition for patients between hospital and community services.

*Conflict of interest: None*

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**Box 1****Key recommendations for effective service delivery from the literature**

## Hospital environment

- Senior advocate(s) and staff champions within the hospital are required to open doors and push for the establishment of the service
- Awareness must be raised amongst staff by prioritisation of the stop smoking agenda and making training relevant and accessible
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## Preparation

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- Patients need to be assessed early on in their journey through hospital and provided with a quick, reliable and accessible source of NRT
- Patients/clients require reliable transition pathways into and out of the secondary care stop smoking service, with support for at least one month following discharge.

## Resourcing

- A hospital-based, dedicated specialist team with protected time is required to establish the service
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- Additional pharmacological products may be required on hospital formulary.

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- All smokers should receive an offer of a stop smoking assessment which includes counselling and pharmacotherapy regardless of diagnosis
- Level 1 training to be made available to all frontline staff
- Level 2 training to be given to selected staff.

## Evaluation

- Collection of data on the users of the secondary care service needs to be efficient, ethical and sufficiently detailed. It should be disseminated to the secondary care team in a timely manner.

**Box 2****Levels of Stop Smoking Intervention Training**

Level 1: (brief intervention) involves a routine enquiry to all patients on their smoking status and readiness to quit. Advice to quit should be clear and tailored to the individual's health. Information on the availability of stop smoking services should be offered. Ideally all front line staff should receive Level 1 training.

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Level 3 (specialist level): this involves supporting individuals to quit in a group setting following a withdrawal-oriented approach. Those working at this level may also be involved in training.  
(Ghodse et al, 2008)

**Figure 1****In-hospital Stop Smoking Service Model**

KEY:

BI = brief intervention

Assess = initial assessment

