# Evaluation of the Rural Community Pharmacy smoking cessation pilot in Powys

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**Purpose and Summary of Document:**  
As one of the Rural Health Innovation Fund projects, Powys Teaching Health Board has carried out a pilot of a rural community pharmacy based smoking cessation service. The pilot took place in localities across Powys between January and March 2011 and was designed to complement existing services provided by Stop Smoking Wales.  

This report is a retrospective evaluation of the pilot against its key aims and objectives, alongside the Rural Health Plan themes of Access, Integration and Community Cohesion and Engagement.
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Background

Few interventions are associated with greater health gains than those that support smoking cessation and health professionals across all specialties should be prepared to offer advice about quitting to any person that smokes (WeMeReC, 2009). In 2008, the National Institute of Health and Clinical Excellence (NICE) made recommendations supporting the involvement of community pharmacies in local control measures with the potential to reach and treat large numbers of people that use tobacco.

Many studies have reviewed the contribution of the community pharmacist towards smoking cessation and two recent reports produced for North Wales (Allgeier and Tinkler, 2009) and Merthyr Tydfil (Allgeier et al, 2009) provide a comprehensive evaluation of community pharmacy based smoking cessation service. Both reports highlighted the community pharmacy smoking cessation service as being successful in terms of numbers accessing the service and for the quit rates achieved. They also showed that service provision from community pharmacy did not adversely affect the number of contacts made with Stop Smoking Wales (SSW). A further evaluation in Scotland specifically in rural locations showed that community pharmacy based initiatives impact on smoking cessation targets and allow for a variety of services relevant to the needs of the population (Cramp et al, 2007)

As part of a successful rural pharmacy project proposal to the Rural Health Innovation fund, the Powys Teaching Local Health Board (LHB) identified piloting smoking cessation services at rural pharmacies as their service development to address the three key themes of the Rural Health plan: access to services, integration and community cohesion and engagement.

The Powys LHB community pharmacy – based smoking-cessation pilot

As part of the Rural Health project, the main aim of this pilot was to improve access to smoking cessation service(s) across rural parts of Powys by extending provision to community pharmacy. There were four key objectives:

- To develop community pharmacies as part of referral care pathway for smoking cessation by those unwilling or unable to access current service.
• To complement and work with existing Stop Smoking Wales (SSW) NHS service
• To integrate the service as a core element of rural community provision and assist delivery of Health, Social Care and Wellbeing strategy
• To facilitate participation in health service activity by hard-to-reach groups.

Powys Health Board in collaboration with Stop Smoking Wales identified seven pharmacies in 4 locations to take part in the pilot. All seven pharmacies accepted the invitation to participate in the pilot and received accredited training to provide the service. The project ran between 1\textsuperscript{st} January and the 31\textsuperscript{st} March and had a good geographical distribution across the Health Board area.

Definitions, terms and measures
The service level agreement was produced by the LHB and designed to work alongside the SSW specialist service provided by Public Health Wales. The service specification outlines the enhanced pharmacy service levels 2 and 3 that were available for pharmacies to use supporting smokers to quit.

The level 3 service is the more comprehensive service offered by pilot pharmacies to smokers motivated to quit. Pharmacies will provide one to one assessment of clients’ needs; initiate, supply and monitor the use of appropriate nicotine replacement therapy (NRT) and provide motivational support each time NRT is supplied to a client. The Level 3 service is designed to make full use of the accessibility and convenience of rural community pharmacies in increasing the availability of stop smoking support for people in the locality.

The level 2 service is designed to improve access to NRT and professional advice by linking rural community pharmacies with the intensive behavioural support service provided by Stop Smoking Wales. Under this arrangement the community pharmacy will consider the supply of NRT to smokers who are receiving intensive smoking cessation behavioural support from SSW, in response to a referral letter from Stop Smoking Wales that indicates the client’s dependency on nicotine.

The terms from the Russell Standard, widely accepted as the leading standard for criteria for throughput and success rates in smoking cessation, were used for
measuring outcomes. These were: treated smoker, CO–verified 4-week quitter, self–reported 4–week quitter and loss to follow up at 4 weeks (West R, 2005). There is also a further measure, the 52 week quit rate, which falls outside the timescales of this pilot and therefore is unable to be calculated.

Four key deliverable measures were agreed at the start of the pilot:

- Number of client contacts accessing pharmacy service
- Number of these clients setting quit dates
- Percentage 4-week self reported and validated quit rates (aim for validated success rate of at least 35% at 4 weeks as per NICE guidance performance indicator)
- Client satisfaction surveys to feed qualitative analysis (Powys R&D research facilitator, from the Institute of Rural Health, provided support)

Evaluation

The evaluation for this pilot consists of two distinct elements. The main body of this paper focuses on the quantitative elements of the pilot measured against the objectives and deliverables agreed at its planning stage but does includes some patient stories from pharmacies involved in the pilot. A full summary of the more qualitative elements, written by the research facilitator and taken from in-depth interviews they carried out at the pharmacies is included in Appendix 1.

Aim.

To produce a retrospective evaluation of the Pharmacy based smoking cessation pilot in Powys Teaching Health Board (tLHB).

Objectives.

- To identify the number of smokers accessing rural community pharmacies for Level 3 services and thus obtain measure of participation.
- To review NRT pharmacy supply (Level 2 service) as part of integrated referral pathway from Stop Smoking Wales and other Level 3 providers e.g. GP practices.
• To analyse pharmacy client data using widely accepted clinical standards
• To describe and report the key results from the pharmacy smoking cessation pilot

Methods
Data were collected from the seven community pharmacies by Powys LHB according to the service specification agreed. The evaluation used the data at the 12 week end point of the pilot but as smoking cessation is a continual process, there will be smokers who have quit and have stayed quit, smokers that have quit but not yet reached their 4 week quit validation date and smokers who have been lost to follow up but not accounted for. For the three month duration of this project, no client had reached their 12 week quit date or their 52 week quit date, so this data is not able to form part of this evaluation.

Activity
Pharmacy returns data identified the nicotine replacement therapy (NRT) supplied to clients of both Level 2 and Level 3 services. There were a total of 963 individual items of NRT packs supplied from the seven pharmacies for the duration of the pilot (145 packs via level 2 and 818 packs via level 3). This gives a mean NRT supply of 137 items per pharmacy, ranging from 37 to 367 items per pharmacy over the pilot period. Initial analysis of the impact of this NRT supply shows a mean reduction of 45% in NRT item prescribing by GPs over all the localities where the pharmacy scheme is operating (with a reduction of 76% in one locality).

Level 3 outcome data follows clients who have been identified (or referred) to pharmacies for motivational support and advice as well as supply of appropriate NRT. A summary of Level 3 outcome data is provided in table 1.
Data in table 1 shows that:

- 146 new contacts have been made by smokers to the level 3 pharmacy service

- 76% (111/146) have set a quit date and reached the 4 week evaluation point within the data collection period

- 43.3% (47/111) of the clients who had set a quit date had carbon monoxide (CO) validated successful quits at their 4 week follow up appointments.

Detailed client data was also collected by pharmacists for the LHB and a summary of the data relevant to this evaluation is included in table 2.
Table 2: Summary of total pharmacy returns data for clients (January 1st – March 31st 2011)

<table>
<thead>
<tr>
<th>Where heard about pharmacy service</th>
<th>Total client data number = 130. Missing data for 16 clients.</th>
<th>Age client started smoking</th>
<th>Not accessed other stop smoking services</th>
<th>Number of first time quitters</th>
<th>Number not used NRT before</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP/ nurse</td>
<td>friend pharm other</td>
<td>&lt;18</td>
<td>18-34</td>
<td>35+</td>
<td></td>
</tr>
<tr>
<td>48 (37%)</td>
<td>42 (32%)</td>
<td>36 (28%)</td>
<td>4 (3%)</td>
<td>95 (73%)</td>
<td>34 (26%)</td>
</tr>
</tbody>
</table>

Summary data in table 2 shows that:

- 37% of clients heard about the pharmacy scheme from their GP or nurse.
- 78% of clients had not accessed smoking cessation services before
- 15% of clients had not used any form of NRT previously

The evaluation also considered the costs associated with the level 3 service against the numbers of smokers who quit. Data for each pharmacy is included in Table 3.

Table 3: Summary of NRT and service costs by pharmacy (January 1st – March 31st 2011)

<table>
<thead>
<tr>
<th>Pharmacy</th>
<th>NRT costs (£)</th>
<th>Level 3 service costs (£)</th>
<th>Average cost per quitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davies, Ystradgynlais</td>
<td>2487.02</td>
<td>773.50</td>
<td>£271.71</td>
</tr>
<tr>
<td>Davies, Gurnos</td>
<td>4155.22</td>
<td>1149.50</td>
<td>£312.04</td>
</tr>
<tr>
<td>Jones, Hay</td>
<td>1247.68</td>
<td>393.50</td>
<td>£273.53</td>
</tr>
<tr>
<td>Primrose, Talgarth</td>
<td>271.50</td>
<td>98.50</td>
<td>£370.00</td>
</tr>
<tr>
<td>Dudley Taylor, Llanidloes</td>
<td>453.66</td>
<td>345.00</td>
<td>£159.73</td>
</tr>
<tr>
<td>Boots, Welshpool</td>
<td>540.31</td>
<td>115.00</td>
<td>n/a</td>
</tr>
<tr>
<td>Rowlands, Welshpool</td>
<td>1470.57</td>
<td>620.00</td>
<td>£261.32</td>
</tr>
<tr>
<td>Total</td>
<td>10625.96</td>
<td>3495.00</td>
<td>£288.18</td>
</tr>
</tbody>
</table>
The data from table 3 was used to calculate a mean pharmacy cost per client quit rate of £288.18 based on the self reported and CO-validated results. A comparison analysis was not carried out with other services due to the difficulties in comparing total costs of different types of smoking cessation service.

During the 12 week pilot, there was also a reduction of £4491.81 in NRT prescribing costs of GPs in the 4 localities, as a direct result of the pharmacy scheme. This cost data could be used as part of future more detailed cost benefit work.

**Discussion**

Overall the pharmacy smoking cessation pilot has been successful in terms of numbers of smokers accessing (n = 146) and for the 4-week quit rates achieved in the Level 3 service. The mean carbon monoxide (CO) validated quit rate of 43.3% is well above the minimum NICE performance target of 35% (NICE, 2008). The fact that this is a new service must be taken into consideration as it will require time for pharmacy teams to gain experience in providing the service and for clients to take up the new service. This is supported by recent LHB data from one of the pharmacies that has improved from 47% to now showing a 70% quit rate – future data would indicate an overall improvement above this very good starting position.

The numbers accessing each level 3 pharmacy service range from 6 to 44 per pharmacy (with a mean value of 21 clients per pharmacy over the 3 month pilot). Whilst the numbers are small and are simply a reflection of some pharmacies being located in small rural communities (and thus small pool of prospective clients), they do indicate an existing (and potential) client base utilising their community pharmacy who are happy to access the smoking cessation service this way. The pharmacy service is thus able to address an unmet need in these rural areas and increase the numbers receiving the smoking cessation service. Future work to compare the client demographic data with that of SSW might help determine if the pharmacy service is attracting a unique client group.

Individual pharmacy quit rates for the level 3 service did vary across the LHB area and whilst two pharmacies had quit rates well over 50%, others were less than or close to the NICE expected minimum. NICE recommends that audits be carried out on exceptional results to determine the reasons.
For the 12 week period of this pilot, 49 smokers have reached their four week quit status with an average cost per quitter value of £288.18. Whilst it is difficult to compare this measure with other types of service, this does sit between the 4 week cost per quit rates of £220 for the Merthyr pharmacy scheme and the cost per quit rate of £335 calculated for the North Wales pharmacy scheme.

Further analysis of the pharmacy client data indicated that whilst the highest percentage (37%) are informed about the service by their GP/nurse, a high percentage (32%) found out about the service by friends or from the pharmacy itself (28%). This differs greatly from the SSW report data (2009) which identified that the majority of their clients heard about their smoking cessation service from their GP/nurse (75.6%). This indicates the pharmacies accessing different groups of people within their rural communities from that of the core smoking cessation service.

This supplementary data also reports that 78% (102/130) of the client group had never accessed smoking cessation services before. This shows that the majority of clients accessing the pharmacy smoking cessation service are new clients that have used the pilot scheme in the rural pharmacy setting as their route to quit smoking.

Only 15% of the client group accessing the pharmacy service had never used NRT before, which indicates the majority of clients have purchased or obtained their own NRT to try and quit by themselves. Evidence shows that success in quitting smoking increases with the level of support provided and behavioural support provided by smoking cessation advisor combined with pharmacotherapy is the most effective intervention (NICE, 2008). Provision of the pharmacy service is supporting these clients who have tried (unsuccessfully) to quit before but are now able to access support service at their local pharmacy leading to better quit outcomes.

In addition to the service level data, 963 NRT items were also supplied from pharmacies during the pilot, which has resulted in a 45% reduction in GP prescribing rates of NRT in the localities where the pharmacy scheme is operating.
Access

Given the timescales of the pilot, the numbers accessing the rural pharmacies are very good and have resulted in a high number of smokers being able to access an NHS smoking cessation service, which satisfies one of the key themes of the Rural Health plan. 78% of the pharmacy clients have not accessed such smoking cessation schemes previously and thus the service is addressing an ‘unmet need’. A number of clients provided anecdotal feedback commented on the ready accessibility of the pharmacy service being a major reason why they used it in preference to existing SSW or GP services.

The report by Allgeier and Tinkler demonstrated that the pharmacy service in North Wales improved ease of access to NRT and involved less process steps for clients who no longer needed to request prescriptions for NRT from their GPs. This finding is echoed in the Powys scheme where the GP prescribing reduction in NRT suggests removal of this extra step in the patient journey for local clients. All of the available client feedback stated that the pharmacy was accessible and convenient in terms of location and appointment / waiting times - indicative of the very high level of client satisfaction with the service.

Integration

In addition to the new clients accessing the smoking cessation service at pharmacy, the referral or source of recommendation into the pharmacy scheme shows differences to that of SSW. Whilst the majority of clients heard about SSW from their GP/Nurse, clients heard about the pharmacy scheme fairly evenly from GP/nurse, friends and from the pharmacy itself. This suggests a different access and integration point by clients into the pharmacy service, who by seeing new clients can refer and integrate with SSW and other service providers.

Referrals from SSW resulted in 145 NRT items being supplied by community pharmacies in rural areas and as SSW were also involved in the provision of training to pharmacies this shows good joint collaboration locally. The referral process established with SSW moves towards closer working and integration between SSW and pharmacies in rural areas, which supports the Rural Health plan principle of
integration between the different healthcare providers to improve health and service delivery in rural communities.

Additionally, two pharmacies also benefitted from development of a clear referral route from the local GP practice, resulting in those pharmacies having the highest client numbers and that practice having the biggest reduction in NRT prescribing.

**Community engagement.**

Community pharmacies are very often at the core of rural communities and will provide the first port of call for healthcare for many in the population. The training and support given to community pharmacies by the LHB and SSW to deliver this NHS smoking cessation service has encouraged people in rural communities to engage with mainstream services and the data from this pilot demonstrates active sign up and ownership by the local people.

**Patient stories**

In addition to the numerical supporting data for this pilot scheme, there has also been positive feedback received from the pharmacies involved. 100% of available client feedback stated that clients would recommend the pharmacy service to other smokers who want to quit and over 90% of clients said they would use the service again if they ever returned to smoking.

The following are a couple of patient stories from two different pharmacies that support and endorse the service that is provided:

**Pharmacy 1**

“My first ever client was a local lady who was desperate to give up smoking after one failed past attempt. She had already received some patches from the GP but after chatting with her one day in the pharmacy she agreed to carry on with our stop smoking service. When she returned she had also persuaded her husband to join the scheme with her! She used to smoke 20 cigarettes a day and he smoked 30 and had previously tried to quit twice. They both completed the 12 week programme back in April and couldn’t be happier. They’re still smoke free and are now putting all the money they’re saving towards a holiday next year!

**Pharmacy 2**

“Mr Z has been smoker for 50 years and no real attempts at giving up. Attended pharmacy regular and used inhalator therapy only and coped very well. Found
programme excellent and consultations very helpful and encouraging - feels much better for not smoking and has positive outlook on not smoking in the future. Has been in pharmacy many times since and he says that he is still not smoking."

**Conclusion**

There are numerous possible approaches to defining outcomes of health care or of a health services activity (Donaldson, p224) and this pharmacy programme picks up real changes in behaviour by individuals within the rural communities of Powys who may not have had the opportunity before.

The Powys LHB pilot smoking cessation service is a good example of how community pharmacies can support services that focus on the health of people living in rural communities. It has demonstrated improvement in the pilot’s key objectives and addressed the three key themes of the Rural Health Plan: access, integration and community cohesion and engagement.

The initial successes and data from the pharmacy pilot has enabled Powys LHB to support extending the scheme until December 2011 and this evaluation will contribute to the LHB making further considerations towards the longer term future of the service.

**References**


1. Introduction

A series of in-depth interviews were carried out with the Pharmacists and Support Staff involved with a trial of a rural community pharmacy smoking cessation services (Level 2 and 3). The trial involved seven pharmacies across four areas of Powys. An interview guide was designed to document the themes and topics to be explored. Each interview was transcribed and analysed according to the pre-determined themes. An overview of the analysis of participant responses according to the key themes follows.

2. Overview

2.1. Views on the service

Comments such as ‘I think it’s an excellent service’ and ‘I think it’s one of the best things the LHB have done for pharmacy for a few years’ were indicative of the positive views that the pharmacists and support staff held of the service.

Accessibility was often cited as a key factor in terms of the reported take-up of the service, for example, ‘I think it just opens up more doorways for people for the service’. The tendency was to compare the accessibility of the pharmacy service with that available elsewhere:

I think for a rural [area] it’s great because, [...] the Stop Smoking Wales person is very busy, because she’s tied across a lot of different surgeries. So she only works in [the town] one a day a week ... So often it can take people a few weeks to get an appointment. And with something like smoking, often people have set a date in mind, and then if they can’t then get the service to help them, they either have to pay for it, or carry on smoking until they can see her...you know what I mean?

I think it’s a big selling point for the service really, definitely. I mean...that is the...the one thing that Pharmacy has isn’t it? You can come and see a Pharmacist without an appointment for anything really... do you know what I mean? We’ll come and chat to the person, to see if we can help them. So with the Stop Smoking, I think people do appreciate that; that there’s the flexibility really.
It can be a bit daunting sometimes, you know, going to the GP. They don’t need to be but...and you’re only allowed about five minutes each, aren’t you when they go there.

A further set of factors perceived to influence take-up were related to promotion and awareness generating activities. This included relationships with other health professionals (including other proximate pharmacists). Clients were made aware of the service via a number of avenues and this tended to differ according to pharmacy, although the majority of pharmacists said that word of mouth referrals increased during the course of the service. Two pharmacists emphasised the importance of referrals from their local GP in that, ‘I do think that...referrals from the surgery is a vital way to get people in through the door’ and ‘I would say they refer ... about ninety percent now, of their patients to us’. One pharmacist singled out referrals from a local nurse:

I’ve definitely had a few people say...oh, the Asthma Nurse has sent me down here, she told me I’ve got lung function of a seventy year old or whatever and I need to do something about it.

2.2. Impact of the service

Perceptions as regards take-up and quit rates tended to be positive among the pharmacists and their support staff, however they were mindful of the need to draw comparison to data from other service providers.

Take up was quite good first quarter. Second quarter take up was even better. We’ve more people on the books. No it’s worked well. We’re getting more and more all the time. And as they’re quitting or tried it, not quit but tried it, they’ve been telling their friends or whatever and then their friends have been in and tried it...

I think overall, we’ve... for the pharmacy service, we’ve done kinda, quite well [...] without really knowing...what happens with Stop Smoking Wales.

A number of the pharmacists also mentioned non-returners to the service following initial consultations:

With the ones that have seen it though, I’m...I’m pleased. Umm....but, but we had quite a high kind of, drop out....rate. You know, people would come for a week, two weeks and then.....try as we might we couldn’t get hold of them ... and that’s a bit frustrating but I don't know how that compares with... Stop Smoking Wales’ data.

Some don’t come back after a first consultation and you think what have I done ... you haven’t done anything they just disappear. If they come back a second time I know I’ve got them!
Particular components of the service such as carbon monoxide testing were reported as having a positive effect on client motivation. Furthermore, the pharmacists were keen to enhance their own skills and to draw on the experiences of their peers with respect to developing their own techniques. Whilst the training was deemed ‘well thought through’ and the follow up discussions with the Powys THB Medicines Management Pharmacist were considered valuable, learning through doing was a feature of all of the accounts:

I think the training was very useful day to be honest. I think it is like anything. You get better with experience, but you only get the experience from actually offering the service. So I think for instance...umm...to begin with, some of the clients were dropping off quite early, now whether that was down to me or whether it was the particular client I don’t know. But my quit rates do seem to have pretty improved in the last few months. So I think perhaps, it was a bit of both really. So with experience you learn yourself, don’t you?

As regards impact on the pharmacy, the gains were presented as wide reaching:

It’s actually...I’ve found it, the most rewarding service that we do to be honest. Kind of liberating in a way, freed me from the shackles of just sitting in the dispensary room, prescriptions [...]! Um ... so, I think it’s...it’s benefitted me... a lot more than just having, kind of.....that extra bit of money coming in and... and expanding the public health role that we had.

I mean...we are claiming a lot more money for our extra services at the moment, because if we do have a lot of people on the smoking service it does pay well because of the price of the products are not particularly cheap. The fees are fairly good for the consultations as well. But I think it had a bigger impact on... sort of the community, that we offer the service as opposed to...I mean I didn’t go into it for financial gain for the Pharmacy.

The service was considered time-consuming by all of the pharmacists although they appeared to accept this as the nature of the service and that the benefits of the service were worthy of the resource. They had all given consideration to any displacement activity.

I mean we do other services as well so it’s just trying to fit everything in really. You find time for it...you know.

As a Pharmacy you’ve got to work it into your work load.

There are obviously different options available to try and manage the work load better.

All of the pharmacists acknowledged the importance of involving and training support staff to assist with delivery of the service.
When [support staff are] off…it’s really hard then […] especially if it’s an initial consultation they take about fifteen minutes, twenty minutes sometimes because they like to chat about everything that’s going on.

One of my members of staff did get trained as well, but she since has left […] so it has just been myself, for the last three months, and when she left we had about twenty people on the…twenty odd people signed up. So it…we managed, but…it was busy at the time. It’s since calmed down a bit, because there aren’t quite so many people on at the moment, but obviously if the system were to carry on I’d hope to get someone else trained up.

### 2.3. The Future

As outlined previously the general consensus was positive as regards the service and all of the pharmacists felt that the service should continue:

> It’s like anything….there’s a market for this kind of service and you’ve got to have… the people out there who want it. And I think there are.

> I think as a service, it is one of the best that, Pharmacies have been given the chance to offer for a long time.

Questioning with regard to expanding the service across Powys was also met with a positive response:

> Yeah, I hope that happens.

> I don’t think there’s any reason why we can’t… we’ve got, whatever it is… twenty……what is it, twenty one, twenty four….pharmacies ideally placed to prompt people to give up.

The wider health benefits of such a development, for example, ‘it’s one of the…interventions that we can make, which probably saves…much more money than it costs’, were referred to by many.