

**Rural community pharmacy models: an exploration of
community perceptions**

**A pilot study for NHS Highland
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CONTENTS

1. Introduction	3
2. Method	3
2.1 Selection of communities.....	3
2.2 Telephone survey of community members.....	4
2.3 Public meeting.....	5
2.4 Interviews with GPs and community pharmacists	5
3. Findings	6
3.1 Communities and participants	6
3.2 Awareness and use of local pharmacy services.....	7
3.3 Advice services	10
3.4 Change to services.....	11
3.5 Findings from the public meeting.....	13
3.6 Findings from the community pharmacist and GP interviews.....	15
3.6.1 Community pharmacists	15
3.6.2 GP interviews.....	16
5. Commentary	18
5.1 Commentary on methods	18
5.2 Summary of potentially interesting findings	19
5.3 Potential areas for further research	21
APPENDICES	23
Pharmacy Questionnaire for members of the public.....	23
Telephone survey questions for GPs and community pharmacists.....	27

1. Introduction

This report presents findings from a pilot study, conducted for NHS Highland in August-September 2009, to scope communities' perceptions of the diverse community pharmacy models in place in remote and rural areas. The five communities selected for study have differing models of community pharmacy provision. Community A has a dispensing general practitioner (GP) practice; Community B has a community pharmacy and a GP practice (with access in the wider community to another GP practice and a dispensing GP practice); Communities C and D each have a community pharmacy and GP practice; Community E has neither a community pharmacy nor a local GP practice. The community pharmacies in communities B, C and D have all started-up during the last three years.

The findings presented in this report were obtained from a telephone survey of residents of the five communities, interviews with GPs and community pharmacists and a public meeting.

The specific questions this report addresses are:

1. How do citizens in rural areas currently access medicines?
2. Are community members satisfied with the provision they currently receive?
3. What has been the effect of any changes to provision?
4. What do community members think could be improved with regards to medicine provision?

2. Method

2.1 Selection of communities

Staff at NHS Highland Pharmacy department identified five rural communities in the NHS Highland area that had different models of medicines provision. GP practices and community pharmacies in the communities were contacted to tell them the pilot study was being undertaken. As the pilot study represents

a service evaluation, Ethical Committee and NHS Management R&D committee approvals were not required. This was confirmed by NHS Highland R&D Department.

2.2 Telephone survey of community members

Given time and resource constraints, it was decided to survey 50 adult residents of each selected community using a structured telephone interview. The electoral roll covering each community was purchased and 70 residents for each community were selected using random number tables. (Seventy were selected to allow for those who were not listed in the online telephone directory). The list of 70 residents was then cross-checked with an online telephone directory to obtain their telephone number. For each community, the first 50 people that were found to be listed formed the sample to be contacted for the telephone survey. For one community, only 38 residents were listed in both the electoral roll and the telephone directory (this community has a population <120). All 38 were included in the sample. This produced a total overall sample of 238 people to be telephoned.

A short questionnaire was developed in close co-operation with NHS Highland Pharmacy department (see Appendix). There were many questions that could have been asked but to try to maximise response, the questionnaire was kept as brief as possible. The questionnaire was piloted over the telephone with known respondents (unrelated to the survey sample) and adapted. Feedback was also provided by pharmacy and health service researchers and a patient representative. Ultimately, questions were included that assessed: how participants accessed prescription and 'over the counter' medicines; the convenience of this method in the context of their location; the impact of any recent changes; and any changes they would make.

To maximise response, most telephoning was undertaken between 4pm and 7pm on week-days. Each telephone number was tried three times; if no answer was obtained on all three occasions, this was treated as a non-response. The survey was completed within 4-6 minutes on the telephone.

A form was completed, by a researcher, for each telephone questionnaire respondent. Data were then transferred into SPSS for management and analysis.

2.3 Public meeting

Public meetings were originally suggested as an additional data collection method. This would allow anyone from the community the opportunity to comment about services (i.e. those that might have been missed from the telephone survey). It was suggested that a public meeting should take place in: a) a community with a GP practice and a community pharmacy; b) a community with a GP dispensing practice; c) a community with neither GP practice nor community pharmacy. However, there were complications with realising this idea – primarily, there was concern that holding a public meeting could cause worry amongst the community that something about their service was going to change. It was also difficult to publicise the meetings to a wide range of people, at short notice, over the summer period. Meetings were publicised by sending posters to community hall contacts who agreed to circulate them and by communication with local councillors. This resulted in two public meetings meetings being held. One of these was successful, with seven attendees; the other was held on a night with a violent storm and had no attendees. The focus of the public meeting that actually took place was around service delivery, access and desired improvements.

The meeting was recorded, with consent, and data were transcribed.

2.4 Interviews with GPs and community pharmacists

Telephone interviews were conducted with GPs and community pharmacists that worked in the study communities (four communities had a total of six GP practices located in them; three communities had community pharmacies; one community had neither and therefore no GPs or pharmacists representing that community were interviewed). Following an introductory letter explaining the study, a researcher made contact with each GP practice and community

pharmacy to establish an interview contact and arrange a time for telephone interview. Three GPs (from three different communities) and three community pharmacists (from three different communities) participated. Three GP practices declined to participate.

GPs and community pharmacists were asked questions on the same themes covered by the community survey. In addition, they were asked to focus on ways that provision had changed in the last year and the impacts of this on the communities and health professionals/ their organisations. These telephone interviews were recorded with permission.

Interview data were transcribed and analysed to identify themes in relation to the research questions as outlined.

3. Findings

3.1 Communities and participants

Table 1 provides a summary of information about the services available in the remote and rural case study sites and their location vis a vis service centres.

Table 1 Summary of case study sites

Community	Community Pharmacy	Dispensing GP	Non-dispensing GP practice(s)	Location re Service Centre ¹
A		√		Within 1 hour of large service centre
B	√	In the wider community	One in the immediate community; one in the wider community	Access to large service centre is via ferry
C	√		√	Within 10 mins. of large service centre
D	√		√	Within 30 mins. of large service centre, but with own distinct community identity
E				Access to small service centre is via ferry

1. A large service centre would have a wide range of shops, including supermarkets and chain pharmacy(ies). A small service centre would provide access to a limited range of shops and a community pharmacy. Times by car estimated.

A total of 120 people from the five case study communities completed the telephone survey (50.4% overall response). Responses for each community are summarised in Table 2.

Table 2: Survey response

Community sample size	No. of completed responses	No. that decline to participate	No. that could not be contacted	% response
A (n=50)	21	16	13	42.0
B (n=50)	29	13	8	58.0
C (n=50)	22	13	15	44.0
D (n=50)	34	6	10	68.0
E (n=38)	14	13	11	36.8
Total (n=238)	120	61	57	50.4

As can be seen from Table 3, overall, two respondents were in the age range 18-30 (1.7%), 75 (63.6%) were between 31 and 64 and 41 (34.7%) were 65 or older. Seventy-seven (64.2%) reported taking at least one item of prescription medicine at the time of the study. In total, 74 (61.7%) stated they were exempt from paying prescription charges.

Table 3 Characteristics of respondents

Age (n=118 ¹)	No. (%)				
	A	B	C	D	E
18-30	0	1 (3.4)	0	1 (2.9)	0
31-64	11 (57.9)	18 (62.1)	13 (59.1)	23 (67.7)	10 (71.4)
65-74	3 (15.8)	4 (13.8)	6 (27.3)	4 (11.8)	1 (7.2)
75+	5 (26.3)	6 (20.7)	3 (13.6)	6 (17.6)	3 (21.4)
One + prescription item²	14 (66.7%)	22 (75.9%)	9 (40.9%)	24 (70.6%)	8 (57.1%)
Exempt from payment³	13 (61.9%)	19 (65.5%)	12 (54.5%)	24 (70.6%)	6 (42.8%)

1. Two people at site A did not give their age. 2. Currently taking one or more item of prescription medicines. 3.

Exempt from paying prescription charges.

3.2 Awareness and use of local pharmacy services

Participants were asked about their awareness of ways to access medicines in their community. Table 4 shows that most respondents accurately identified

whether they had access to a local community pharmacy (i.e. for communities B,C & D, over 80% said there was a community pharmacy; while for community A over 90% recognised services were provided by a dispensing GP). There was some confusion among respondents as to the definition of a dispensing GP practice and how it differs from a GP practice that does not dispense (both are the source of prescription medicines was the perspective of some respondents). We know that people were confused because there was discussion about this during the telephone survey. As well as general confusion around distinguishing dispensing and non-dispensing GPs, further complication was added as, at site C, the community pharmacy service is located at the GP practice. For all sites with community pharmacies, this service has only become available over the last three years so there is still some confusion as people become used to new arrangements. The proportions aware of pre-payment certificates were higher at all sites compared with site A. Similarly, there was higher awareness of collection and delivery of medicines at B,C,D and E, compared with A; for site E this awareness is likely due to their lack of access to medicines in their immediate community, making it important that people know the arrangements for accessing services at a distance.

Table 4 Awareness of local pharmacy services

Service ¹	No. (%)				
	A [Dispensing GP]	B [Pharmacy & GPs]	C [Pharmacy & GP]	D [Pharmacy & GP]	E [Neither]
Community pharmacy	2 (9.5%)	29 (100%)	18 (81.8%)	34 (100%)	0
Dispensing GP	19 (90.5%)	24 (82.8%)	20 (90.9%)	11 (32.4%)	2 (14.3%)
Pre-payment certificates	5 (23.8%)	19 (65.5%)	9 (40.9%)	22 (64.7%)	7 (50%)
Collection & delivery	3 (14.3%)	16 (55.2%)	8 (36.4%)	32 (94.1%)	12 (85.7%)

¹. Respondents were asked if they were aware of the service being available in their local community; they could answer yes, no or don't know. Only 'yes' responses are given here.

In general, respondents tend to obtain their prescription medicines from the service that is most easily accessible to them (see Table 5). In communities B and D, where there are community pharmacies, the service is used by 69% and 82.4% respectively, to obtain prescription medicines. Community C is

near a large service centre and some respondents noted that they would use community pharmacy or GP services there while at work or visiting for shopping. Where the local dispensing GP is the closest pharmacy service, as in Community A, 71.4% use the dispensing GP to obtain prescription medicines. It should also be noted that in communities B,C and D there was some confusion about what a 'dispensing practice' is and, thus, some people who describe getting prescription medicines from a dispensing GP may actually be getting them from a community pharmacy. For communities A-D, where participants chose to get medicine from somewhere other than the most accessible local source this was largely due to work commitments making it easier to collect prescriptions from pharmacies or GPs in larger towns. In community E, of those 12 who obtained prescription medicines elsewhere, the majority of those (75%) did so at a nearby service centre because it was convenient for them. Others in community E had their medicines delivered by a community nurse or a delivery service to their homes, both of which methods were commended as helping with access to medicines.

With regard to non-prescription medicines, in communities B and D, more than 50% use the local community pharmacy to access these. This is also true of community E, although for this community the 'local pharmacy' is located in a small service centre, accessible by ferry. For communities A and C, high proportions of respondents (57.1% and 45.4% respectively) said they would get non-prescription medicines at a supermarket or chain pharmacy while doing other shopping.

Table 5 Obtaining medicines

Prescription medicines No. (%)				
Community	Local pharmacy	Local dispensing GP	Other answer	
A	2 (9.5%)	15 (71.4%)	4 (19.0%)	
B	20 (69%)	9 (31%)	0	
C	7 (31.8%)	9 (40.9%)	6 (27.3%)	
D	28 (82.4%)	4 (11.8%)	2 (5.9%)	
E	1 (7.1%)	1 (7.1%)	12 (85.7%)	
Non-prescription medicines No. (%)				
Community	Local pharmacy	Local dispensing GP	Local shop	Other answer
A	4 (23.8%)	2 (9.5%)	3 (14.3%)	12 (57.1%)
B	16 (55.2%)	1 (3.4%)	8 (27.6%)	4 (13.8%)
C	6 (27.3%)	3 (13.6%)	3 (13.6%)	10 (45.4%)
D	18 (52.9%)	0	6 (17.6%)	10 (29.4%)
E	8 (61.5%)	0	2 (15.4%)	3 (23.1%)

In a further question, respondents were asked if they viewed the place they go for their medicines as being 'conveniently located' for them. In communities A-D, the majority of participants viewed their provision as convenient (A (15:71.4%): B (27:93.1%): C (20:90.9%): D (31:91.2%). In community E, only 42.8% (six) thought their service was conveniently located for them.

Respondents from E commended the postal service and the local nurse for assisting with access to medicines. Several respondents commented that the service was *"as good as it could be"* (respondent from community E), given the location of their community, but that it would be difficult if one was unable to travel easily.

3.3 Advice services

Table 6 shows that higher proportions of respondents from communities with a community pharmacist said they would consider asking a 'local pharmacist' questions related to improving their general health, compared with communities A and E that do not have resident pharmacists. All communities had high proportions that would consider asking their GP. Interestingly, 25.8% (31), in total, said they would contact a telephone helpline (although in the survey they were given an example of losing weight and this answer is perhaps directly related to that). Two respondents said they would use NHS

24 to get advice on general health issues. Regarding advice on using medicines – again, in communities with a community pharmacy, higher proportions would ask their local pharmacist first. There were proportions ranging from 20.6% to 38.1% that would ask their local GP first for advice about using medicines. Respondents from communities B and D were most likely to ask their pharmacist first about a minor complaint. No-one said they would contact NHS 24. Many people said they would not go to a pharmacist or GP about a minor complaint because they did not want to bother services; for some respondents their thinking was further affected by the distance for them to reach the service. Of those who said they would do something other than ask a pharmacist or a GP about a minor complaint (34.2%: 41), 26 said they would assess it themselves, three would ask someone they know such as a colleague or relative who is a health professional and six said they would ask a nurse. All of the latter group live in Community E and this answer represents use of the closest local service.

Table 6 Sources of advice

No. (%)					
If you had a question about improving your general health, like losing weight, which of these would you consider asking?					
Community	A	B	C	D	E
Local pharmacist	4 (19.0%)	16 (55.2%)	10 (45.4%)	20 (58.8%)	4 (28.6%)
Local GP	15 (71.4%)	22 (75.9%)	20 (90.9%)	22 (64.7%)	9 (64.3%)
Telephone helpline	5 (23.8%)	7 (24.1%)	3 (13.6%)	14 (41.2%)	2 (14.3%)
Other	3 (14.3%)	5 (17.2%)	1 (4.5%)	8 (23.5%)	5 (35.7%)
If you wanted advice about using medicines, who would you ask first?					
Local pharmacist	2 (9.5%)	14 (48.3%)	9 (40.9%)	24 (70.6%)	5 (35.7%)
Local GP	8 (38.1%)	11 (37.9%)	8 (36.4%)	7 (20.6%)	5 (35.7%)
Other	9 (42.8%)	4 (13.8%)	5 (22.7%)	3 (8.8%)	4 (11.8%)
If you wanted advice on what to do about a minor complaint, like a sore throat or a headache, who would you ask first?					
Local pharmacist	4 (19.0%)	23 (79.3%)	8 (36.4%)	23 (67.6%)	3 (21.4%)
Local GP	4 (19.0%)	5 (17.2%)	4 (18.2%)	3 (8.8%)	0 (0.0%)
NHS 24	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Other	11 (52.4%)	1 (3.5%)	10 (45.4%)	8 (23.6%)	11 (78.6%)

3.4 Change to services

Respondents were asked if they had noticed any changes recently to their services for obtaining medicines. Twenty-four said they had noticed a change; most of these (18) were from communities B and D. Of those that noticed a

change, 16 cited the introduction of the community pharmacy. Below are some of the comments made. The community identifier has been removed due to the sensitivity of some of the issues raised:

“The pharmacy opened. They know what they’re talking about.”

“Half the doctors ... don’t like the pharmacy, which makes things difficult.”

“We could lose our doctor if the pharmacy succeeds.”

“It’s been a tremendous change.”

Four of those who were aware of a change noted the reduction in prescription charges. Other responses included the availability of a minor ailments clinic, the restrictions on the number of over-the-counter medicines, increased form-filling and an increased use of medicines. Overall, 14 respondents thought changes had improved services for the better (12 of these were from B and D). Four people thought services were just the same, in spite of change and six people thought services had become worse. Service deterioration was generally aligned with two thoughts: increasing *“nanny state interference”* in life and that too many medicines were prescribed and, consequently, consumed. One person said that getting medicines from the community pharmacist was *“not as convenient as getting from the doctor’s”*.

Respondents were asked to suggest one change *‘for getting medicines and advice about medicines’*. The majority (69.2%: 83) did not give a change. Most people said this was because they believed the current service to be satisfactory. Ten (8.3%) wanted extended community pharmacy opening hours, particularly at weekends. Other responses included reducing the price of medicines, improving delivery and repeat prescription services, expanding existing pharmacies to provide more services and extending access to GP services. A flavour of these comments is given below (again community identifiers have been left out for sensitivity).

“Make sure [pharmacist name] never leaves!”

“Everyone should be in the pharmacy.”

“We need a nurse practitioner to ask advice from.”

“Get new doctors.”

“I don’t like seeing people queuing up for their methadone.”

“There’s too much medicine given out these days.”

3.5 Findings from the public meeting

Arrangements were made to hold two public meetings; in communities A and D. Unfortunately, the public meeting in community A was held on the night of a violent storm and there were no attendees. The public meeting in Community D was more successful, with seven attendees. We experienced difficulties publicising the public meetings due to short notice, the summer season making people difficult to contact and attract to meetings and difficulties with establishing local sources of advertising.

At the community D meeting, participants were asked where they accessed prescription medicines, to which the answer was universally ‘*at the pharmacist*’. Participants were complimentary of the service they currently received:

“There’s a very good arrangement between the surgery and the pharmacy.”

The pharmacy was seen as ‘*an improvement*’ in that it could stock a wider range of products than the previous dispensing GP practice. This included prescription and non-prescription medicines. People also appreciated the local availability of items like nappies and toiletries, which they said was good for young families. Accessibility was good and there was a delivery service available for those unable to go to the pharmacy. A minor ailments clinic and chronic illness service were highlighted as allowing people to discuss problems they would be hesitant to take to the GP. The community pharmacy was preferred over other places to get medicine because of its convenience, but also because it was a *community* business.

“You try to support the local businesses if you can.”

“[the pharmacist] has built up quite a rapport with the village and they go to her quite happily. I find her very, very good. She does keep an eye on people.”

“The pharmacist gets to know people in a small place.”

Participants thought that a pharmacy service where the professional had made efforts to integrate with the community, represented a high quality service. They appreciated that the pharmacist was knowledgeable about drug interactions and could say which drugs were inappropriate for certain people based on knowledge of their illnesses.

Participants said they kept a small supply of medicines to deal with potential illnesses, including throat tablets, painkillers and cold and flu remedies. Previously these medicines were only available at the GP, or in the nearest town. Participants believed that the community, and the GP, were now better served by not having to bother the GP for ‘over-the-counter’ medicines. There was some discussion about the wider roles of different services. When asked where to go for advice, one participant stated that the pharmacist was for minor complaints, the doctor for everything else and NHS24 was for something more serious.

When asked what additional services could be provided by a community pharmacist, participants were initially hesitant as they were concerned that change could harm their current services. They suggested pharmacists could give travel and flu vaccinations; introducing a paperless system for prescriptions; and giving more options to pharmacies regarding provision of contraceptives. Overall, participants were positive about their local community pharmacy service.

3.6 Findings from the community pharmacist and GP interviews

3.6.1 Community pharmacists

Three pharmacists from communities B, C and D were interviewed by telephone. These represent the three communities in the pilot study that have community pharmacies. The pharmacies in all three communities had opened in the last three years. All of the pharmacists thought their services had brought benefits to their communities. All of the pharmacists thought they were valued by their communities and had been welcomed.

The most cited benefit of a community pharmacy was the ease with which a community member could speak with a pharmacist about a minor complaint, compared with 'bothering' the GP. This was regarded as providing a source of reassurance, as well as releasing GP time. Their location within rural communities meant saving patients' travel to access similar pharmacy services elsewhere for advice and 'over-the-counter' medicines. It was suggested that this was of particular benefit to the substantial numbers of older people who found it difficult to travel outside the community.

The pharmacists emphasised 'safety' benefits: all three stating that the addition of an extra health professional in the community acted as a verification of GP prescribing (a pharmacist was seen as a medicines specialist and a GP as a medical generalist and generalist diagnostician):

"To see a qualified pharmacist before they would have had to travel to [service centre]. It's a huge difference."

"We have a good range [of services] for such a small area."

"It saves money and is a guaranteed medical check on all prescriptions. All dispensing GPs should be closed - overnight."

Extended services such as a minor ailments clinics and smoking cessation advice were provided and there was potential to provide flu vaccinations, medicine reviews and clinics for asthma and hypertension. One pharmacist

suggested there were difficulties in having several practitioners offering the same type of service, e.g. smoking cessation advice, that was also offered by the GP and the nurse and viewed a minor ailments clinic as part of a nursing role.

Some mentioned good teamwork, but difficulties of negotiating with and working with other health professionals in small communities were mentioned. The introduction of a new service had sometimes occasioned animosity between services and between individual practitioners and this could impact on the wider community.

“One of the good things is the teamwork between the pharmacist and GP when we work together. But very occasionally, that makes it take longer.”

Improvements to service provision were sometimes difficult to effect due to rural location. Most problematically, opening hours, which many community members would like extended, were difficult to expand because pharmacists' working hours are legally restricted. To extend, additional staff would be required and there would be insufficient demand to cover this increase in costs. Additional services that could be provided require training that would mean the pharmacist leaving the community and requiring cover. Limited space for expansion was also commented on.

3.6.2 GP interviews

GPs were interviewed from communities B, C and D. All of the three GPs that agreed to be interviewed worked in GP practices that had previously been dispensing practices. Community pharmacies had opened in their communities in the last three years. One of the community pharmacies is located within the GP practice.

The GPs said that the addition of a community pharmacy generally represented a benefit to their communities. They believed that an '*extra clinical check*' on their prescribing was helpful and that pharmacists provided

a source of advice for GPs as well as community members. It was noted that sometimes patients were discharged from hospital with drugs the GPs had not heard of:

"I sleep better at night now!"

"We're doctors, not pharmacists."

GPs thought that community members, particularly older people and those with young families, now used the pharmacy where previously they might have attended the doctor; for example, for advice on medicines and to buy non-prescription medicines. One GP said that numbers of prescriptions had been increasing in recent years, representing a heightened workload. The drop in dispensary work since the introduction of the community pharmacy had helped to make the GP workload more manageable, simultaneous with providing higher quality dispensing as this was now done by a specialist. The GPs thought the local pharmacists were supportive of their business and the communities' needs.

"[the pharmacist] takes a note of what we tend to prescribe most often and ensures we have supplies."

"It's a community service."

GPs noted the financial impact of the loss of dispensaries at their practices. One GP was concerned about ongoing rural health service erosion, suggesting that further introduction of community pharmacists might lead to GPs being replaced by a local health care model combining a nurse practitioner and a community pharmacist. Another GP spoke of pressure to prescribe more expensive drugs when they were previously a dispensing GP practice, and an associated low rate of prescribing generic drugs. Now, with dispensing in the community pharmacy, the GP practice was prescribing more cost-effective generic medicines. There was a suggestion that *"the benefits outweigh the disadvantages"* and that financial problems were compensated for by overall improvements in service.

GPs said current service models worked well, although the system would benefit from being made paperless, so that forms did not have to be passed

between GP practice and the community pharmacy. One GP noted that the communication between the GP and pharmacist was an exemplary model that could be exported to urban communities.

5. Commentary

The scope of the pilot project was very small and conducted over a short space of time; therefore, the findings can only be indicative. Nonetheless, we think there are some potentially interesting issues raised that suggest a bigger study of pharmacy provision to remote and rural communities could yield useful results, particularly around future service models for a range of types of remote and rural communities (differing as to the range of local health professionals and accessibility to service centres of different sizes and at different distances).

5.1 Commentary on methods

We think that the telephone survey worked well and this method could be used further, although the number of questions has to be kept relatively few so as to retain respondents' attention. Public meetings have the potential to be more fruitful and a future study should perhaps consider using focus groups: this would make it easier to identify, attract and retain participants and would avoid the issue of raising concerns about threats to local services that tend to pertain when public meetings are held. Samples for focus groups might be identified using local groups (including any patient participation groups), community council and health professional contacts. The interviews with GPs and pharmacists were important and a good source of information indicating how configurations of teams work in communities and the impacts of the introduction of new community pharmacists. However, in this pilot study, this was limited by the participation only of GPs and community pharmacists, not other health professionals, and of professionals solely from communities where there are community pharmacies and by representatives of GP practices that had changed from dispensing to non-dispensing

practices. This is likely to have limited responses to those more positive to community pharmacy models.

5.2 Summary of potentially interesting findings

- Most participants were satisfied with their current model of obtaining medicines, even where there is no community GP or pharmacy. This suggests that, as long as there are workable means in place to obtain medicines, people have adapted and cope with them. Clearly, participants from community E did note that things could be better, but that local health professionals helped to make medicines accessible.
- Extended opening hours was the only suggested improvement for those with access to community pharmacies.
- Community pharmacy may be most successful (i.e. in terms of use for prescription and non-prescription medicines and providing a range of advice) where there are 'distinct' communities that are sufficiently distant from larger service centres to prevent business from being 'pulled' to those.
- Use of local services appears dependent on proximity to other service centres and centres of employment. It might be of potential interest to map use of community pharmacies vis a vis other services using GIS mapping.
- The embedding of new health professionals and services can raise issues with existing health professionals and services, perhaps particularly around whether there is sufficient work to maintain a viable business/ service. Potential local service models involving different configurations of professionals and sharing of workload, and the financial viability of these, is worthy of further exploration as it is an important issue when considering sustainable future rural service models.

- New community pharmacists have tried hard to integrate into communities and many have raised awareness of new services and opportunities for local people, such as the availability of advice services. Awareness and use of services for advice and the outcomes of this knowledge and behaviour, for different communities with access to different service models, would be of interest for further research.
- Several people noted that they would not bother a GP or a pharmacist with 'a minor complaint', thus indicating resilience. Levels of community resilience in terms of behaviour in response to minor complaints might be of interest to study in communities with a range of service models, since developing higher levels of resilience is a health service goal.
- Where community pharmacies had opened, GPs and other community members were appreciative of their value as specialists in medicines. Further, it was seen as 'adding to the stock' of the community by providing another local service that made the community more vibrant and made services more accessible, particularly for older people and young families.
- Opening of community pharmacies may save travelling and this is worthy of further exploration in terms of establishing the 'carbon footprint' of services.
- High sensitivity to change of health care models is linked to perceptions of ongoing service erosion in rural communities among citizens and practitioners, meaning any change or potential change is 'highly charged'. In the case of some communities in this study, access actually extended to a wider range of local services i.e. new community pharmacy services opened. It is important to establish the extent that such development of services might provide a role model for different types of rural communities or whether, over the longer-

term, service developments are sustainable or affect the sustainability of other local businesses/services.

5.3 Potential areas for further research

In conducting the study, we found the following issues interesting and they may be worthy of further study:

- Different rural service provision models, the activity and income of constituent service providers, and in relation to different locations and accessibility to service centres (involving GIS mapping).
- The role of various service providers, agencies and local people in facilitating access to medicines and other services.
- Modelling different staffing configurations to achieve desired health and care outcomes for communities, and their cost-effectiveness.
- Communities are often urged to become more resilient; are they actually, quite resilient? Can we identify more resilient communities and look at how we could transfer their behaviour?
- Different models of service provision in relation to community members' awareness of where to go to obtain what; e.g. where to go for advice.
- Models of good practice of team-working from the perspective of health professionals and communities; and their impacts on communities' access to services and health outcomes.
- The study showed that some pharmacists have recently moved to rural communities and they appear to be integrating well. Since encouraging health professionals to rural communities is often said to be difficult, what can we learn from community pharmacists who have established

businesses in rural communities in order to encourage other professionals to work in rural communities?

APPENDICES

Pharmacy Questionnaire for members of the public

Aim of the study: to understand current use of community pharmacy services, satisfaction with these services and potential improvements in community pharmacy provision.

Hullo, my name is _____. I am calling you today from the Centre for Rural Health, Inverness on behalf of NHS Highland. I wonder if you can spare just a few minutes of your time to comment on pharmacy services in your area, and about how you obtain medicines in your community? Your name was chosen completely at random from the electoral roll, what you say will be confidential, your name will not be written with your replies and any answers you give will not affect your future health care.

1 As far as you are aware, are any of these services available in your local community?

A pharmacy / chemists 'shop'	Yes <input type="checkbox"/>	A dispensing GP practice	Yes <input type="checkbox"/>
	No <input type="checkbox"/>		No <input type="checkbox"/>
	? <input type="checkbox"/>		? <input type="checkbox"/>
Pre-payment certificates for medicines	Yes <input type="checkbox"/>	Collection and delivery of prescription medicines	Yes <input type="checkbox"/>
	No <input type="checkbox"/>		No <input type="checkbox"/>
	? <input type="checkbox"/>		? <input type="checkbox"/>

2 Where would you normally go to get medicines?

Local pharmacy	<input type="checkbox"/>	Local GP	<input type="checkbox"/>
Other, specify....	<input type="checkbox"/>		<input type="checkbox"/>

3 Is the place that you go for your medicines conveniently located for you?

Yes	No	Other answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4 If you were looking for advice about using medicines, where would you go to first?

- Local pharmacy Local GP
Other, specify....

5 If you wanted advice on an issue about improving your general health, like losing weight, would you consider asking the following?

- Your local pharmacist Yes No ?
Your local GP Yes No ?
A telephone helpline Yes No ?

Someone else, please specify

6 If you wanted advice on what to do about a minor complaint like a sore throat or a headache, who would you ask first?

- Local pharmacy Local GP
NHS 24
Other, specify....

7 In general, where do you get medicines that you don't need a prescription for (like paracetamol for a headache...)?

- Local pharmacy Local dispensing GP
Local shop Other, specify....

8 Have you noticed any changes recently to local services for getting medicines and advice about taking medicines?

Yes (go to Q8 & 9)

No

Other answer

9 If YES, what have these changes been?

10 If there have been changes, do you think these have?

Improved the
service

Made the
service worse

Service is just the
same

11 If you could make one change to local services for getting medicines and advice about medicines, what would it be?

12 Currently, do you take prescription medicines?

No

Yes, 1 item

Yes, more than
1 item

13 Are you exempt from paying prescription charges?

Yes

No

Other answer

14 Would you mind telling me your age today ? _____

Thank you very much for participating.

Would you like to receive a summary when the project is finished?

Yes

No

If so, take email address or name & address :

Telephone survey questions for GPs and community pharmacists

1. Tell me about the way that services to provide medicines – and advice about medicines – are currently provided in your community
2. Has the way services are provided changed recently, explain the change
3. If change has occurred, what have been the impacts of change?
 - 3a. For the community and your patients?
 - 3b. For you and your organisation?
4. Do you think services to provide medicines and advice about medicines have improved in recent years?

Give specific examples that would illustrate this
5. How does the community feel about the way that services in relation to providing medicines and getting advice about medicines is provided?

Do you have feedback?
6. What are the good and less good things about the current service?
7. What do you think could be improved?
8. Is anyone or any body/agency currently taking this forward?
9. What is the future for the provision of medicines and advice about taking medicines in your community?