

## Title

Towards improving service delivery in screening and intervention services in community pharmacies: A case study of an alcohol IBA service

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# **Abstract**

## **Background**

Previous studies have demonstrated positive outcomes from a range of pharmacy public health services, but barriers to delivery remain. This paper explores the processes of delivering an alcohol screening and intervention service, with a view to improving service delivery.

## **Methods**

A mixed methods, multi-perspective approach was used, comprising: in-pharmacy observations and recording of service provision; follow-up interviews with service users; and interactive feedback sessions with service providers.

## **Results**

Observations and recordings indicate that staff missed opportunities to offer the service and that both availability and delivery of the service were inconsistent, partly owing to unavailability of trained staff and service restrictions. Most service users gave positive accounts of the service and considered pharmacies to be appropriate places for this service. Respondents also described positive impacts, ranging from thinking more about alcohol consumption generally, to substantial reductions in consumption. Key facilitators to service provision included building staff confidence and service champions. Barriers included commissioning issues and staff perception of alcohol as a sensitive topic.

## **Conclusions**

Findings support expansion of pharmacies' role in delivering public health services, and highlight benefits of providing feedback to pharmacy staff on their service provision as a possible avenue for service improvement.

## Introduction

Community pharmacies (CPs) sell and supply medicines and provide health-related advice and intervention services. CPs are recognised as appropriate locations for public health services (1,2), with a skilled workforce, easy accessibility, long opening hours and existing rapport with customers (3). Many well-established CP-based public health services focus on medicine supply, e.g.: smoking cessation (4); emergency contraception (5); methadone (6) and buprenorphine supply (7) for opioid dependence. Other services support effective use of medicines, such as Medicines Use Reviews (MUR), where pharmacists help patients to understand and use their medicines (8), and the New Medicine Service (NMS), where pharmacists proactively support patients to manage issues arising from newly prescribed medicines (9). There is evidence that some of these services improve patient access (10–12) and are effective and cost-effective interventions (11–14).

The role of CPs in screening and intervention is less well recognised (15). However, many such services have been implemented in recent years, including: cardiovascular (16) and diabetes screening (17); weight management clinics (18); chlamydia screening (19); and alcohol related services (20–22).

Barriers to successful integration of new services into existing pharmacy workflows remain, with appropriate training and competence assessment being important for high quality service provision (23,24). In particular, behavioural interventions require staff to be trained in consultation skills and behaviour change (5,25) and their motivation (26), perceptions of their role (27) and confidence in skills and knowledge (24,28) also need to be considered. Another identified barrier is high variability of service funding, arising primarily from economic constraints and changes to commissioning models (29).

For CPs to be successful partners in public health provision, there is therefore a need to better understand how to make these services work in real-world settings.

## Aim

This study aimed to develop and apply a model for in-depth scrutiny of CP-based screening and intervention services with feedback to service providers to support development of best practice. The study was undertaken using alcohol identification and brief advice (IBA) services in North West England as a case study.

## Methods

This study used ethnographic observation and interviews to examine service provision from multiple perspectives, with feedback to service providers. Data collection comprised four phases: [1] observation of interactions at the pharmacy counter; [2] audio recordings of consultations; [3] follow-up interviews with service users; and [4] interactive feedback session with pharmacy staff.

The research team purposively selected pharmacies based on: setting (proximity to health centres and retail locations); and level of activity in relation to alcohol IBA service provision (high and low activity; provided by commissioners). The pharmacist in charge at each pharmacy was then invited to participate in the study.

Three former Primary Care Trusts (English health administration region) in Northwest England had commissioned CP-based services to tackle risky alcohol consumption. Services involved: initial pre-screen of customers by any member of staff\*, using AUDIT-C (30); anyone scoring greater than 5 was offered an in-depth consultation with a pharmacist or other trained member of staff, framed around a full AUDIT (31) assessment.

REC approval was obtained prior to data collection.

### Phase 1: Staff-customer interactions

Two trained researchers directly observed interactions between pharmacy staff and customers at the pharmacy counter over at least 30 hours per pharmacy reflecting a typical week in each. Standardised data collection forms, with a pre-determined coding framework, were used, recording: customer sex; estimated customer age category; reason for visit; whether alcohol IBA offered; customer reaction and outcome.

All staff gave written consent prior to observations. Posters were also displayed in the pharmacy stating that a study was taking place and interactions at the counter may be observed and customer consent was assumed, unless they asked not to be observed. No personally identifiable data were recorded and no private or quiet areas in the pharmacy were observed.

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\*UK Pharmacy staff typically comprise: Pharmacists (professionally registered with university qualification), technicians (professionally registered with high school qualification), dispensers (not professionally registered with high school qualification), and medicines counter assistants (MCAs; in-house or bespoke qualification).

## **Phase 2: IBA consultations**

In pharmacies where consultations were provided in a private area, these were audio-recorded. Recordings were transcribed verbatim, checked for accuracy then securely destroyed. Transcripts were analysed independently by ECS & DH using constant comparison technique with emergent codes subsequently reviewed and combined to reach the final framework.

Staff providing the service obtained verbal agreement from service users prior to the consultation; followed-up by providing written information on the study and obtaining written consent at the end of the consultation. Where this was withheld, the recording was immediately deleted. This pragmatic approach was adapted from simulated shopper/patient studies (32,33) and was intended to minimise the impact of the research on normal behaviour.

## **Phase 3 Follow-up interviews**

One researcher (ECS) performed semi-structured telephone interviews, incorporating critical incident technique, with service users at around two weeks and three months following their consultation. The first interview focussed on perceptions of the service and the second on perceived impact on alcohol-related behaviour. Interviews lasted 5-10 minutes and audio-recordings were transcribed verbatim. Transcripts were analysed independently by ECS & DH using constant comparison technique (34), with emergent codes subsequently reviewed and combined to reach the final framework.

Participants were recruited via packs handed out by pharmacy staff following consultations; interested parties then returned completed written consent forms and contact details.

## **Phase 4 Interactive feedback**

Individual feedback reports were compiled for each pharmacy and provided the basis for interactive feedback meetings with ECS. Report format was standard across the pharmacies, comprising data gathered in that pharmacy including: customer profile; opportunities to link to original reason for visit; data on screening at the pharmacy counter; and service user perspectives. Where available, data from Phase 2 consultations were also included in the report. Other topics were raised spontaneously by participating staff and included: operational data; training; and perceptions and experience of service delivery. Sessions were designed to encourage constructive self-criticism of current service provision with a focus on service improvement and explored pharmacy-level review of the service and issues faced by their pharmacy.

## Results

Of the thirteen pharmacies initially approached, five participated in the study. Reasons for non-participation were: counter staff not consenting to observations (1); appropriate approvals from company management not being obtained (2); concerns regarding patient consent (5).

Participating pharmacies were diverse in terms of ownership (single branch, small & large chain ownership), opening hours (ranging from 40 to 100 hours per week) and proximity to GP surgeries (same site to 0.5 miles away). Data comprised: observation of 3299 counter interactions, including 112 offers of alcohol screening, during 171 hours of observation (Phase 1); audio recordings of 9 consultations in a private area in two pharmacies (Phase 2); follow-up telephone interviews with 16 service users at 2 weeks and 14 users at 3 months (Phase 3); and feedback sessions with staff in all pharmacies (Phase 4). Phases 1 and 4 took place in all pharmacies and all pharmacies participated in recruitment for Phase 3 interviews. Phase 2 data were only collected in two pharmacies, as others did not provide consultations in private areas.

### Phase 1: Staff-customer interactions

Fifty-nine percent (1949/3299) of customers in the observations were female and estimated customer ages are shown in **Error! Reference source not found.** Around three-quarters (2501; 76%; n=3299) of observed interactions related to prescriptions. Other reasons for visits were: non-medicine purchases (468; 14%); over-the-counter (OTC) medicine purchases (307; 9%); advice (158; 5%); and accessing services (144; 4%). One interaction was a pre-booked alcohol IBA consultation. Multiple reasons for visiting were recorded for some visits. Two-thirds (2065/3299; 63%) of observed interactions involved an MCA, a further 570 (17%) involved dispensers or pharmacy technicians and pharmacists handled 663 (20%; 1 missing).

During the observations, 112 customers were offered screening and demographic profiles for these customers are shown in Figure 1. Two-thirds (74; 66%) accepted, with common reasons for refusal being '*do not drink alcohol*' or '*don't have time*'. Staff did not offer the service on all occasions where strong potential existed to raise the topic or link to a purchase or other service. There were no meaningful differences in whether the customer was offered the service based on: customer gender; reason for visit; type of staff member involved; or time of day. There was a tendency for those with estimated ages of under 65 years to be offered the service more often when compared to those with estimated ages of over 65 years.

Researcher field notes identified: inconsistent availability of trained staff owing to other work activities or shift patterns; restrictions on numbers of service episodes per week/month; and eligibility criteria for customers as factors that might impact on service provision.

## **Phase 2: IBA consultations**

Of the nine consultations recorded, six (67%) were with male customers. Estimated ages were below 25 years for 4 (44%) customers, with the remaining customers estimated as being aged 55 years or over. Six (67%) had visited for a prescription; two (22%) for a non-medicine purchase and one (11%) had pre-booked the consultation. Five (55%) scored as lower risk (AUDIT score 0-7); three (33%) as increasing risk (score 8-15); and one (11%) as high risk (score 16-19).

Staff displayed discomfort in questioning service users' personal lives via the consultation and were observed to employ strategies to minimise this in conversations. This sometimes involved humour, but also led to pre-empting clients' answers and rephrasing questions to be consistent with service provider expectations of clients' responses (Box 1).

## **Phase 3: Follow-up interviews**

Sixteen service-users completed a follow-up telephone interview at around two weeks following their consultation and 14 of these participated in a further interview at three months. Seven (44%) were male and all age categories were represented among those completing the first follow-up interview: under 25 years (4; 25%); 25-34 (2; 13%); 35-44 (4; 25%); 45-54 (1; 6%); 55-64 (3; 19%); 65 years and over (2; 13%).

Most participants described the service positively, reporting that the delivery was acceptable and many highlighted that their existing rapport with pharmacy staff encouraged them to use the service; however, a minority felt that GP surgeries were more appropriate for alcohol discussions. Participants considered the service could raise awareness of risks around alcohol consumption, but many emphasised that it would predominantly benefit at risk individuals, a group from whom participants were careful to distance themselves.

Participants were generally happy with the level of privacy offered, but where consultations took place in a public area, satisfaction was contingent on no other customers entering this space during the consultation (Box 2).

Some participants said the service had made them think differently about their alcohol consumption and reported discussing it with family and friends including recommending that they use the service. Others, including the individual at high risk, reported reducing alcohol consumption as a consequence of the consultation, and two service users reported significant lifestyle changes, which they attributed to the service. One participant, together

with their partner, had cut alcohol consumption from four days per week to two (Female; 35-44); whilst another respondent reported cutting alcohol consumption very significantly and using a gym daily (Female; 35-44) (Box 2).

#### **Phase 4: Interactive feedback**

Feedback discussions focussed on barriers and facilitators around service delivery. Key facilitators included: building staff confidence along with competence; service champions<sup>†</sup>; promotional material; use of private spaces; staff-customer rapport; use of informal, empathetic approaches; and simple systems for recording operational data. Key barriers to service provision raised by staff were: fluctuations in funding for commissioned services; constraints on commissioned service (e.g., maximum numbers of service episodes or restrictive targeting); workload; staff perception of alcohol consumption as a sensitive topic; staff perceptions of appropriateness of AUDIT questions to CP; and a lack of direct referral pathways for higher risk individuals. Across the five pharmacies, three pharmacists, one pharmacy technician and two MCAs were directly involved in the feedback sessions, with other staff in the pharmacy being consulted for clarification where necessary.

Staff considered CPs to be appropriate places for advice around alcohol consumption, highlighting the rapport between staff and regular customers. However, some pharmacies reported having screened most of their regular customers early in the service rollout leading to difficulty in identifying new service users. One pharmacist reported that involvement in the alcohol IBA service had shifted perceptions of other staff in his pharmacy to proactively approaching and engaging customers and that this might have a positive impact on other services. Pharmacy staff recognised that IBA services could easily be linked with other services like smoking cessation, weight management and minor ailment services; however, data from Phase 1 observations did not show cross-linking was currently taking place.

## **Discussion**

### **Main findings of this study**

The findings add weight to the notion that an alcohol identification and brief advice service is feasible in a CP settings, and identified difficulties in relation to service delivery. The feedback model described provides a feasible and potentially useful approach to scrutinise service provision and support service improvements. Studies exploring wider application of

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<sup>†</sup> Service champions are individuals that take responsibility for the service and are usually responsible for obtaining service materials and facilitating service provision by their colleagues.



this technique to other services in CPs could identify empirical factors for successful service provision and facilitate development of best practice models.

### **What is already known on this topic**

CPs are established providers of a range of healthcare services, but are repeatedly described as an underutilised resource, particularly in terms of self-care and public health. Services continue to be developed to make use of the unique attributes of CPs and previous work has shown that screening and intervention studies are feasible and desirable amongst pharmacy staff and pharmacy users (20,35,36). However, service provision is currently patchy, transient and, in some cases, suboptimal in quality. Additionally, a recent trial of a CP-based alcohol IBA service reported no significant benefit and recommended further work is needed to develop such services (37).

### **What this study adds**

This study examines a CP-based screening and intervention service from multiple perspectives, including recording consultations conducted in a private area, to provide a constructive mechanism for improving service delivery in a real-world setting. The findings highlight a number of positive features of CP-based screening and intervention services as well as scope for quality improvements.

#### *Positive features of CP-based alcohol IBA service*

Existing rapport between staff and customers can facilitate lifestyle advice, and involving non-pharmacist staff can have a positive impact on attitudes towards other services. Service Champions had evolved organically in some pharmacies and these were widely seen as important to service success. Service Champions are known to support longer-term sustainability of services (38) and are an important feature of the Healthy Living Pharmacy model (5). Pharmacy users include individuals who may not be using other health services and CP-based services provide an opportunity to reach this group.

Despite relatively low numbers of customers receiving brief advice during the study, there was some evidence of self-reported impact; with two of those followed-up reporting changes to their lifestyle, which they attributed directly to the service. Amongst other service users followed-up, there was a general increase in awareness of risks around alcohol and this had stimulated an information cascade to friends and family.

#### *Challenges in service delivery and scope for improvements*

Staff found incorporating the service into their normal workflow difficult and restrictions around commissioned services further compounded this. The service was not continually

provided in all pharmacies, owing to trained staff not always being available. In addition, restrictions on numbers of service episodes meant that provision was stopped for the remainder of a week/month once limits had been reached. Such interruptions to service provision created problems promoting the service to customers and embedding it into normal practice.

Some staff were uncomfortable discussing alcohol consumption with customers as this was seen as a sensitive topic and many staff failed to identify or take opportunities to begin such conversations (e.g., purchase of a hangover remedy). This phenomenon has also been seen in chlamydia screening services (39), but service users did not report concerns regarding discussing alcohol in the pharmacy, confirming other work (20,40). Staff confidence, attitudes and skills can be addressed through training (24,41) and is equally important as knowledge of the underlying topic.

Developing consultation skills and increasing use of private areas were identified as key areas for improvement. Staff sometimes ran through AUDIT questions with customers and altered wording, against recommended instructions, reducing the fidelity of the intervention and potentially impacting on the tool's effectiveness in assessing alcohol risk. An evident reason for this was embarrassment in discussing personal topics, and some staff expressed the view that question wording was too intrusive for the CP setting. Further studies may be required to evaluate the appropriateness of existing alcohol screening tools to a pharmacy setting, including possible adaptation for this environment (37).

### **Limitations of this study**

This study is relatively small-scale, and participating pharmacies self-selected to a degree, but the inter-linked data provides a broad and unique picture of service provision from multiple perspectives. Pharmacy staff and patients were aware that they were being observed/recorded in Phases 1 & 2 and this may have impacted on their behaviour, although review of the data from the multiple perspectives did not show any aberrations between observed and other data, also the findings are broadly in line with similar studies. The use of estimated age group for Phase 1 observations was a pragmatic approach to assessing the customer profile for the pharmacy. As these data are estimated, they should be interpreted cautiously.

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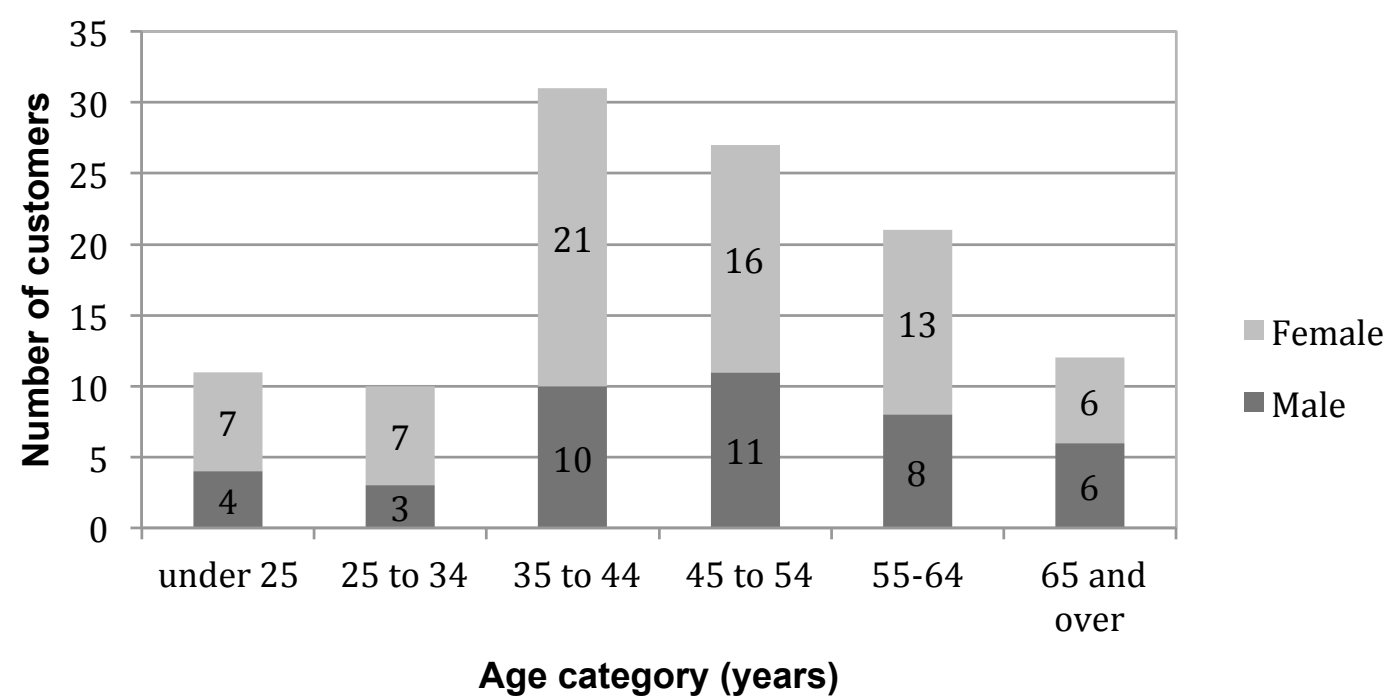
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## Tables & Figures

**Table 1 - Number and proportion of customers involved in counter interactions in participating pharmacies during observations by estimated customer age category (n=3290; 9 missing)**

Estimated age category	Number of customers	Proportion of customers
Under 25 years	253	8%
25-34 years	424	13%
35-44 years	650	20%
45-54 years	660	20%
55-64 years	580	18%
65 years and over	723	22%

**Figure 1 - Chart showing demographic profile for customers offered alcohol IBA service during Phase 1 observations (n=112)**





## Box 1 – Illustrative quotes from consultations

### Pre-empting answers

*"A lot of these [questions] won't apply to you probably but I'll check them with you anyway"* (Pharmacist).

### Rephrasing questions

*"Okay, um, I take it that you've never failed to do something that was expected because of drinking?"* (Pharmacist)

### Use of humour

*"We get rubbish [at drinking] as we get older"* [in reference to AUDIT question regarding failing to remember a drinking episode] (Medicines Counter Assistant).

## Box 2 – Illustrative quotes from follow-up interviews with service users

### Existing Rapport

*"This is our regular pharmacy that we go to so it wasn't a problem, you know."* (Male, 65 and over)

### Raising awareness

*"We did find out some things that we didn't know about the consumption of alcohol and the units. It was very useful."* (Female, 25-34, visiting the pharmacy with her boyfriend, male, 25-34)

### Value for at risk individuals

*"I think if someone's got a problem obviously, it's a good idea."* (Female, 35-44)

### Happy with levels of privacy

*"She [dispenser/technician] took me into a room. It was confidential as I was well out of the way. Like I say, when she told me and I was shocked what my rating was [increasing risk], it was nice to be in an enclosed area."* (Female, 25-34)

### Privacy when consultation took place in open

*"Very discrete, yeah. We were away from the actual counter. It was just like the other end of the counter where other people weren't standing [so felt had enough privacy]."* (Female, 35-44)

### Impact on alcohol consumption

*"Instead of drinking three, four times a week, I'm down now to twice a week...I thought I don't really need that and, you know, I look back and think, 'well, I'm in work tomorrow' [so] I have water with my dinners if I go out with friends [rather than having an alcoholic drink]."* (Female, 35-44)