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Community pharmacists' perceptions on managing people with oral health problems—A prioritisation survey

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Abstract

Background: Alternative sources of oral health information are likely to be of benefit to the public, particularly where access to dental services is limited. There is evidence that community pharmacists are willing to advocate for oral health, but it is unclear what is needed to develop this role.

Objectives: The aims of this study were to obtain the views of community pharmacy staff on the frequency and type of oral health conditions they encounter challenges in management and training/research priorities.

Methods: An anonymous online survey targeted pharmacy staff and elicited quantitative data related to the types and frequencies of oral health conditions experienced. Participants were stratified by age, gender, ethnicity, experience and setting. Free text responses allowed participants to detail challenging aspects of patient management, their priorities for service development and future research. Reflexive thematic analysis of free text responses identified key themes.

Results: Oral/facial pain and swelling were seen weekly by most respondents, and daily by 28.8%. Other commonly presenting conditions were ulcers, dry-mouth, thrush and denture issues. Challenges in managing oral health conditions included: access to NHS dentistry, awareness of referral pathways, examination/diagnosis and understanding 'Red Flags'.

Conclusion: Acute and chronic oral health conditions commonly present to community pharmacists who lack necessary knowledge/training, which may result in missing 'red flag' symptoms for oral cancer or acute facial swellings which can be life threatening. There is a need to support pharmacists, who are willing to act as oral health advocates, in recognition, prevention and onward referral for oral diseases.

KEYWORDS
community services, community health services, mixed methods, oral health, pharmacy, research priorities

1 | INTRODUCTION

Oral diseases are thought to affect a significant proportion of the world's population, approximately 3.9 billion people worldwide, and cost the National Health Service (NHS) in England £3.4 billion per year.[1,2] Poor oral health has significant impact on general health and wellbeing both directly by causing pain, difficulties eating and sleeping, and indirectly by impacting socialising and reducing life chances through stigma associated with poor oral health. There is also an economic impact associated with time off work.[3]

England has fewer NHS dentists per person than other nations in the UK and significantly lesser than other comparable countries.[4] The most recent available statistics indicate that only 50.4% of the adult population were seen by an NHS dentist within 24 months and that 23% of the UK population do not attend a dentist at all.[5,6] These statistics do not yet reflect the impact of the COVID-19 pandemic, but a recent and widely publicised investigation by the BBC indicated 90% of NHS dental practices are unable to accept new patients and in some socially deprived areas this figure was up to 98%.[7]

Delivering oral health advice has traditionally been the preserve of dental health professionals. However, there is increasing evidence supporting non-dental health professionals, such as community pharmacists, providing preventive oral health advice and signposting patients to receive appropriate care for acute dental problems.[8] There is an opportunity to make prevention of oral health problems a priority across community-based care teams with an estimated 1.1 million informal weekly consultations taking place in community pharmacies and up to one quarter of these patients reporting attending a pharmacy due to being unable to access other health services.[9] These settings are an accessible and convenient first point of contact for patients looking to access support for their oral health or advice on an acute problem. These contacts could be used to deliver preventive oral health advice and signpost patients to services for urgent dental problems which may also reduce health inequalities as pharmacies are often more accessible in areas of high deprivation, or rural and remote settings.[10] At present this is not consistently done[11] but there is an opportunity to utilise the availability and expertise of these professionals with potentially huge impact, particularly given that most common oral diseases are preventable if early education and advice are available and the most serious oral diseases such as oral cancer have significantly reduced morbidity and mortality if diagnosed early.[12]

A recent scoping review[13] showed that community pharmacists and pharmacy staff were interested in an expanded role in dental and oral healthcare and identified lack of knowledge and sub-optimal practice as potential barriers. However, there was lack of research on development, implementation and evaluation of oral healthcare related services by pharmacy staff and evidence to inform the role of the pharmacy was needed. It is important to understand which dental conditions are commonly encountered by pharmacists and their perceptions regarding management of these to develop such extended roles.

The aims of the current investigation were to obtain the views of community pharmacy staff on:

1. The frequency and type of oral and dental presentations to a pharmacy setting.
2. The perceived challenges of managing oral health conditions in a pharmacy setting.
3. Priorities in developing the role of community pharmacy in oral health care.

2 | METHODS

An interprofessional working group composed of academic pharmacists with extensive experience of community pharmacy, general medical and dental practitioners, and research fellows with interests in primary health care and remote/rural health and social care convened to design the project. A survey was developed to elicit quantitative data related to the types and frequencies of oral health conditions experienced in community pharmacy practice.

Qualitative data were obtained from free text responses that allowed participants to detail which aspects of managing patients presenting with oral health conditions they found most challenging and what their top priorities were for future research in this field. Additionally, participants were asked about their awareness of oral health prevention programmes, such as topical fluoride application and their opinions on feasibility of providing such services in community pharmacies.

Ethical approval was granted by the University of Leeds Dental Research Ethics Committee (Ref: 070721/VA/328) before commencement. The target population was all community pharmacy staff (Community Pharmacists (including provisional registered pharmacists), Pre-registration Pharmacists, Pharmacy Technicians (NVQ/SVQ3), Dispenser or Dispensing Assistants (NVQ/SVQ2) and Medicines Counter Assistants). Participants were stratified by age, gender, ethnicity, years of experience, and whether they worked in a rural, semi-rural or urban setting.

The questionnaire was created and programmed using a UK-based GDPR-compliant online survey tool (www.OnlineSurveys.co.uk). The preliminary questionnaire was piloted by a small group of academic pharmacists and adjustments made for usability in response to their feedback. Participants were recruited by circulation by professional societies and publication on social media. Participants were asked to reshare the link to the questionnaire to promote snowball sampling.

2.1 | Analysis

Quantitative data was analysed using Microsoft Excel. Descriptive statistics (numbers and percentages) were generated for demographics and frequencies of conditions reported. Chi squared tests

were used to test for statistical differences between frequencies of conditions reported and whether these varied by type of setting (rural, semi-rural and Urban).

Two members of the team (AJ & EE) familiarised themselves with the information collected from free text responses before independently coding the data to generate initial themes. Themes were then developed and defined collaboratively (AJ, EE & VA) resulting in the key themes presented in Tables two and three. Our approach was guided by Braun and Clarke's guide to thematic analysis.[14]

3 | RESULTS

3.1 | Respondent demographics

The survey link was made available between September 2021 and February 2022 during which it was completed by a total of 59 participants. There were more participants in the younger age groups and there were more female (64.4%) respondents of White British ethnicity (54.2%) with 10+ years of post-qualification experience (47.5%). Most participants were Community Pharmacists (50.8%), followed by Dispensing Assistants (18.6%), and Pharmacy Technicians (10.2%). Suburban settings were the most common (40.7%), followed by urban (23.7), rural (20.3) and semi-rural (15.3) settings. See Table 1 for a detailed summary of participant demographics.

TABLE 1 Demographics of questionnaire participants.

Characteristic	Participants (N = 59) No. (%)
Age (years)	
18–29	17 (28.8)
30–39	11 (18.6)
40–49	11 (18.6)
50–59	13 (22)
60+	6 (10.2)
Prefer not to say	1 (1.7)
Gender	
Female	38 (64.4)
Male	18 (30.5)
Prefer not to say	3 (5.1)
Ethnicity	
White—British	32 (54.2)
White—Irish	2 (3.4)
White—Any other background	6 (10.2)
Asian or Asian British—Indian	7 (11.9)
Asian or Asian British—Pakistani	4 (6.8)
Asian or Asian British—Bangladeshi	1 (1.7)
Asian or Asian British—any other background	1 (1.7)
Black or Black British—African	1 (1.7)
Prefer not to say	5 (8.5)
Role	
Community pharmacist, retail pharmacist or chemist	30 (50.8)
Dispenser or dispensing assistant (NVQ/SVQ2	11 (18.6)
Pharmacy technician (NVQ/SVQ3)	6 (10.2)
Pre-registration pharmacist	4 (6.8)
Medicines counter assistant	3 (5.1)
Pharmacy student	3 (5.1)
Admin manager	1 (1.7)
Academic pharmacist	1 (1.17
Setting	
Rural	12 (20.3)
Semi-rural	9 (15.3)
Suburban	24 (40.7)
Urban	14 (23.7)
Years of Experience (years)	
<1	7 (11.9)
1–3	10 (16.9)
4–6	10 (16.9)
7–9	4 (6.8)
10+	28 (47.5)

3.2 | Frequency of presenting oral and dental conditions

The most commonly reported conditions are presented below and a summary of the frequencies of all presenting conditions is presented visually in Figure 1 .

Oral health conditions were frequently encountered in community pharmacy and most of the conditions surveyed were reported by at least one participant on a daily basis. The most commonly reported presentations were acute conditions specifically oral or facial pain. 28.8% participants reported being approached for advice in managing dental pain daily. A high proportion of respondents were also approached for advice on how to manage dental swellings on at least a weekly or monthly basis (Figure 1).

Other conditions commonly presenting to community pharmacies were mouth ulcers, dry mouth, oral thrush and denture issues. Requests for advice on oral hygiene were less commonly encountered but 61% of participants still reported oral hygiene queries at least monthly, and 11.9% were approached for advice every day (Figure 1).

3.2.1 | Acute conditions: Oral/dental pain

28.8% of participants reported being approached about oral or dental pain daily, a further 44.1% were approached on a weekly basis and 18.6% on a monthly basis. Only 3.4% of participants were never approached regarding oral or dental pain (Figure 1).

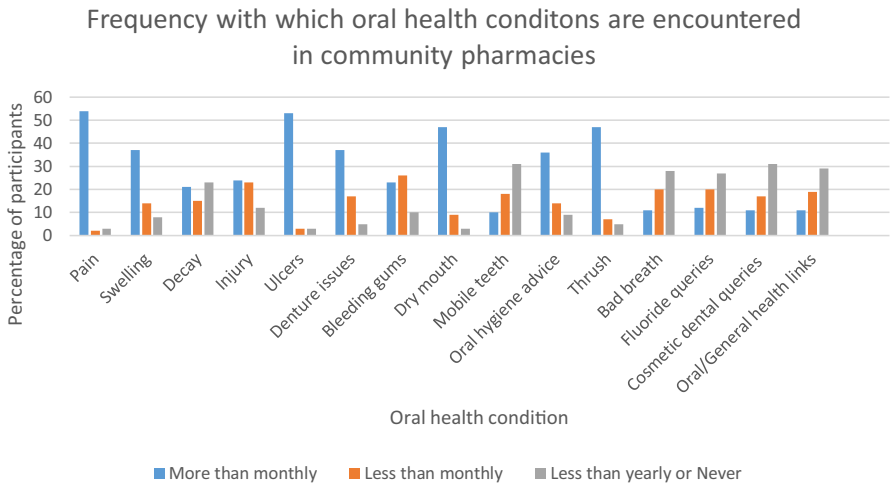

FIGURE 1 Frequency with which oral health conditions are encountered in community pharmacies.

3.2.2 | Oral/facial swelling

6.8% of participants were presented with oral or facial swellings daily, a further 22% experienced this on a weekly basis and 33.9% on a monthly basis. Only 8.5% never experienced swellings in their clinical practice (Figure 1).

3.2.3 | Oral thrush, mouth ulcers and dry mouth

Mouth ulcers were also very commonly encountered with over half of participants (54.2%) being approached at least once per week with queries about oral ulceration. 15.3% were approached daily and only 3.4% never encountered mouth ulcers in their practice.

Other general oral conditions regularly presented to pharmacists included dry mouth which 35.6% encountered daily or weekly and 33.9% on a monthly basis. Oral thrush was also often diagnosed and managed by pharmacists with a very high proportion of respondents (79.7%) encountering oral thrush at least once per month (8.5% daily, 32.2% weekly and 39% monthly) (Figure 1).

3.2.4 | Periodontal disease—bleeding gums and mobile teeth

Bleeding gums were reported to present more commonly than mobile teeth and this difference was significant ($p = .04$). Although a low proportion of participants were approached regarding bleeding gums daily (1.7%) this condition was still encountered frequently on a weekly (16.9%) and monthly (20.3%) basis. 44.1% reported being asked about bleeding gums once per year and 17% less than once per year or never. Most participants rarely 10.2% < once per year) or never (42.4%) encountered patients seeking advice on loose teeth (Figure 1).

3.2.5 | General oral hygiene advice

11.9% of participants reported being approached for general oral hygiene advice daily, a further 20.3% were approached on a weekly basis and a further 28.8% on a monthly basis. Only 8.5% reported never being asked for oral hygiene advice. Basic oral hygiene advice was requested of pharmacy staff more frequently than other issues such as cosmetic dental enquiries ($p = <.001$).

3.2.6 | Other reported conditions

Some participants chose to leave free text responses detailing other oral health issues they commonly encountered. Several mentioned commonly advising on broken fillings or lost crowns or recommending temporary dental repair kits. Some described encountering bacterial or viral infections such as cold sores or impetigo on a weekly basis. Paediatric dental issues were also common sources of enquiry by patients, seeking advice on issues such as teething or loss/mobility of deciduous teeth.

3.3 | Differences in setting

No statistically significant differences were noted in the types or frequency of conditions reported between rural, urban, suburban and semi-rural settings. Some settings had low response rates and most respondents worked in a suburban setting.

3.4 | Fluoride varnishes

18.6% of participants were aware of guidance for offering fluoride varnish for children, however, there was not strong support for fluoride applications to be offered in pharmacies. Some respondents

reported a lack of space and time to provide such interventions and others did not feel that appropriate resources were available to support them in delivering fluoride varnishes, although others indicated that they would be happy to supply varnish and advice for a parent to apply.

3.5 | Challenges in managing oral health conditions

Participants reported their perceptions of the most challenging aspects of managing oral health conditions with free text responses. Five main themes were identified which are discussed below. A summary of the main themes and sub-themes is presented in Table 2.

3.5.1 | Access to NHS dentistry

Lack of access to dentistry for their patients was cited as a prominent challenge for community pharmacy staff with 36% of participants reporting this as their main concern. Participants reported that their patients had difficulty registering for NHS dental care, and where emergency care was available the access to this service was limited. Some perceived patient awareness of available services as an issue. In total, 76.3% reported their patients had problems accessing urgent NHS dental care and 67.8% reported their patients had problems accessing routine NHS dental care.

3.5.2 | Awareness of referral pathways

39% of respondents cited a lack of knowledge of how the dental services in their local area operated, or did not appreciate where, when or how to make dental referrals. Some commented that they were used to working closely with general medical practitioners or practice nurses but did not have contact with dentists and would appreciate a referral pathway. Some suggested that information about the important signs and symptoms warranting referral to a dentist would be of use to them in their practice. Respondents also frequently requested guidance on how best to signpost patients to appropriate services.

3.5.3 | Examination and diagnosis

Practical and educational issues were raised by pharmacists regarding diagnosis of dental issues. Some cited lack of training and knowledge and concerns about misdiagnosis whereas others raised practical concerns such as a limited space in their practices to examine patients, and lack of appropriate examination facilities such as private areas, chairs or examination lights. Some raised the inadvisability of examining oral cavities without appropriate experience or personal protective equipment with reference to the COVID-19 pandemic. Some were concerned that if they did examine patients then they were not equipped with the knowledge to interpret or act on symptoms.

3.5.4 | Understanding 'Red flags'

Fears of misdiagnosis or missing a serious condition were frequently raised. Participants were familiar with using the 'red-flag' system for other medical conditions but were not aware of red-flags for oral conditions. They expressed concerns about misinterpreting serious symptoms as innocuous and not making timely referrals. Participants commented that they were consulted regarding mouth ulcers on a very regular basis, and some were aware that certain mouth ulcers could represent cancer but were not aware of what features should increase their index of suspicion.

3.5.5 | Medication limits

The final theme broadly encompasses the medical management of oral health conditions by pharmacists. Some participants were concerned that their patients repeatedly required strong analgesics to manage oral and dental pain. Some suggested that further training in prescribing for dental conditions might be of benefit, for example, suggesting that being trained in prescription of antibiotics for dental conditions might be of benefit. Others expressed concerns about a limited number of products available over the counter for dental issues, such as temporary restoration repair kits or were unsure about when these were suitable products to recommend.

3.6 | Research priorities

All participants relayed their top research priorities for oral health in community pharmacy via free text responses. There were some prominent themes which we collated into four categories. A summary of these themes and codes is presented in Table 3.

To address the perceived challenges in recognising and appropriately referring oral health conditions practitioners frequently suggested production of literature for pharmacy staff to use in their daily practice. Suggestions included triage guides with visual aids and information explaining red-flag signs. Development of simple interventions staff could use to disseminate oral health advice and information to their patients was also recommended. Some suggested further training for pharmacists and pharmacy staff in recognising and managing common dental conditions as well as supporting collaboration between pharmacists and dentists by increasing knowledge of referral pathways and processes. Development of postgraduate training in antibiotic prescribing was suggested by one participant, and others suggested developing training in management of oral pain and analgesic prescribing. There were also

TABLE 2 Challenges of managing oral health conditions in community pharmacies.

Theme	Codes	Data extracts
Access to NHS dentistry	Registration difficulties	"[It is challenging to] support patients with dental pain when they have no access to a dentist" *Pharmacy Technician (NVQ/SVQ3))*
	Limited emergency care	"[There is a] lack of dental emergency care and GPs dont often treat dental problems" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Patient awareness of services	"Some patients have had conditions related to oral health for a long time and are not aware of the service available" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Reduced appointment availability	"They [patients] have no NHS dentist and cant get an appointment with one" *Pharmacy Technician (NVQ/SVQ3)* "[There is a] lack of dental appointments" *Dispenser or Dispensing Assistant (NVQ/SVQ2)*
Awareness of referral pathways	When to refer	"Knowing when to refer patients with oral health issues and which can be managed OTC" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Where to refer	"How to decide whether to refer to a GP or a dentist. When do dentists want us to refer to them specifically?" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Understanding referral methods	"Most recently, how do I refer patients who require a dental intervention if the dentist is closed" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "[There are challenges in] understanding appropriate referral methods" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
Medication limits	Repeat use of strong analgesics	"[Patients have] regular requests for strong painkillers when they are unable to see a dentist" *Medicines Counter Assistant*
	Product availability	"[There is a] lack of products to sell" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* *"[There are challenges in] making sure the dental section is fully stocked" Dispenser or Dispensing Assistant*
	Efficacy of medications	"[There are challenges when the issue] is still painful even after an antibiotic course, or if the medication hasnt worked" *Other (Pharmacy Student)* *"How do we know when OTC products are insufficient. How can we keep ourselves updated with new OTC products for oral care and how effective they are?" Dispenser or Dispensing Assistant (NVQ/SVQ2)*
	Access to prescription medications	"Many products are out of stock, or some products are prescription only" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
Examination and diagnosis	Limited equipment	"[It is] difficult to examine as we dont have appropriate equipment, chair etc" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* *"Not being able to examine, particularly in Covid circumstances—not having the same equipment dentists do" Pre-Registration Pharmacist*
	Difficulty visualising the problem	"Sometimes, it is hard to view the [dental] problem" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Difficulty interpreting symptoms	"How to interpret the patients opinion on pain/wounds as not always obvious or visible" *Dispenser or Dispensing Assistant (NVQ/SVQ2)*
Understanding 'Red Flags'	Awareness of concerning features	"[There are challenges with] out of hours presentations of dental pain [and] identification of mouth ulcer red flags. Symptoms of sepsis due to a dental abscess—knowing when and where to refer" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Potential for serious misdiagnosis	"[There is potential for] misdiagnosis of something sinister for example, oral cancer" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*

suggestions to develop training to upskill pharmacy counter assistants to provide oral health advice.

Many participants recognised that the patients presenting to pharmacies struggled to access routine and emergency dental care and recommended research into how to best address availability issues and assist those without access to care. There were also more general suggestions such as research into developing more over-the-counter products for pharmacy use and into the effectiveness of some existing products such as temporary dental repair kits.

4 | DISCUSSION

This survey adds to the growing literature to inform the presentation of and challenges in management of dental conditions in a pharmacy setting.[8,11,13] The most common dental conditions encountered were acute, including pain, swelling, ulcers and bleeding gums with a quarter of participants reporting encountering dental pain on a daily basis. The need for oral hygiene advice was also regularly reported although less frequently when compared to acute conditions.

Key challenges reported by pharmacists in managing these presentations were the lack of dental access and a lack of awareness of how to refer or support dental access for those presenting with urgent/acute dental problems. This coupled with a lack of knowledge and understanding of dental conditions meant that pharmacists were unsure about 'red-flags' and therefore the potential for not recognising life-threatening conditions like facial swellings and oral cancer which, if managed early, can result in better prognosis and improved survival. Pharmacists had reservations about implementing 'physical' interventions and saw their role as 'gatekeeping', signposting and providing advice.

Priorities for pharmacists for oral health and dental conditions therefore included the need for training in managing and/or referring dental conditions to the appropriate services. Importantly, pharmacists felt an urgent need to have quick access triage guides that could allow recognition of acute dental conditions and 'red flags' for onward referral to dental services. There was a willingness to deliver brief oral health advice but again pharmacists lacked knowledge and training to deliver the same. These findings corroborate recent research that there is a willingness amongst pharmacists to have an expanded role in dental oral healthcare although barriers identified were lack of knowledge and training.[13] A previous pilot study also showed that pharmacists could deliver an oral health promotion programme and this was feasible and acceptable.[8]

However, the current survey has identified, for the first time, the high frequency of presentation of acute dental problems to pharmacy settings and the pressing need for appropriate management and referral. It is certainly alarming that approximately a quarter of the survey respondents reported seeing facial swellings daily or weekly. Such swellings if left unmanaged can progress to life-threatening cellulitis and/or airway obstruction.[15] Also alarming was the finding that over half the participants reported seeing mouth ulcers on a weekly basis. Non-healing mouth ulcers can be early signs of oral cancer which if diagnosed and managed early can substantially improve prognosis and survival rates.[12] Pharmacists were unsure how to establish 'red flags' related to swellings and ulcers that would necessitate immediate referral emergency services.

Worryingly, pharmacists were willing and keen to be allowed to prescribe antibiotics for dental pain. There is ample evidence that antibiotics do not cure toothache[16] and inappropriate prescription contributes to the global burden of antimicrobial resistance.[17] Procedures and not prescriptions are the way forward for alleviating dental pain. Appropriate education of pharmacists regarding use of antibiotics for dental pain could help curb inappropriate prescription of antibiotics for toothache which are commonly prescribed by general medical practitioners and also by some dentists.[18] Pharmacists could function as gatekeepers and refuse to dispense antibiotics for dental pain when they have been inappropriately prescribed.

There are some limitations of our survey. Participants were from the UK which has a government funded NHS for dentistry. However this is not free at the point to care and majority of patients have to pay for dental care be it on the NHS or privately. This is similar to other countries where dentistry is not free at the point of care. The UK is currently experiencing a major dental access crisis with patients unable to find an NHS dentist.[7] This may have skewed the frequency of presentation of acute dental conditions to pharmacists in our survey but nevertheless replicates scenarios where there is a shortage of dentists and where pharmacists can play an important role in recognising 'red flags' and making an appropriate referral. Our sample was mid-range (59 respondents) for online surveys[14] and we did not have information on non-respondents as the survey was voluntary and completed online. We may not have been powered to detect differences in settings for example, rural/urban and we did not conduct an a priori sample size calculation. That said, our objectives were not to examine within group differences and the sample was sufficient to provide details on frequency of presenting dental conditions to pharmacy settings. The free-text responses provided sufficient data for qualitative thematic analysis to explore the challenges and future priorities.

4.1 | Future research and interventions

Our study has shown that there is clearly an important role for pharmacy staff (pharmacists, counter assistants) in oral health advocacy. Future interventions targeted at training pharmacy staff in oral health advocacy need to incorporate not just preventive oral health messages but address 'red flags' and recognition of acute life-threatening presentations. Key components of such interventions might include the following:

1. Recognition and referral of acute dental conditions—'red flags' could include asking patients whether they are struggling to swallow or breathe in the presence of a large facial swelling—this would necessitate immediate referral to the nearest Accident and Emergency. Non-healing ulcers that are painless and present for

TABLE 3 Research priorities reported by participants.

Theme	Codes	Illustrative data
Interprofessional guidance and advice	Triage guides	"A triage guide from the dentist would be good." *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Red flag signs	"[A top research priority should be] dental issues that are red flags and whether we can refer to A+E/hospital departments"*Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* *"We learn red flags for many conditions, and I think we need applicable ones for oral health" Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Visual aids	"Visual guides for mouth problems—what should we expect to see?" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Oral health advice and information	"How can pharmacy make the biggest impact on oral health advice?" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "How best to deliver some brief oral health information." *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "How [does] smoking affect your oral health and hygiene" *Other (Pharmacy Student)*
Limits of pharmacy service	Effectiveness of pharmacy dental products	"I never feel comfortable with recommending the temporary refill kits, to my knowledge there are no proper studies as to their effectiveness."*Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "[A research priority should be] effective medication or methods of pain relief for dental pain" Medicines *Counter Assistant*
	Range of pharmacy dental products	"[A research priority should be] the range of [pharmacy] treatment and products available" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "[There needs to be] a wider range of products" *Medicines Counter Assistant*
	Appropriate pain management provision	"How best to help people in pain or with worsening symptoms without quick access to a dentist" *Pharmacy Technician (NVQ/SVQ3)* "[A research priority should be] pain management" *Dispenser or Dispensing Assistant (NVQ/SVQ2)* "[A research priority should be] appropriate pain relief" *Dispenser or Dispensing Assistant (NVQ/SVQ2)*
	Extent of over-the-counter treatment	"[Improved clarity on] dry mouth counselling advice given with medication. How to avoid, when to speak to pharmacist, when to speak to GP etc." Community *Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
Addressing access to NHS dentistry	Reduced availability	"Dealing with situations when dentists are shut or unavailable" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "[A research priority should be] access to dental services and signposting" *Dispenser or Dispensing Assistant (NVQ/SVQ2)*
	Unregistered patients	"Who and how to make referrals, particularly when some patients say they dont have a dentist." *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "Patients need dentists" *Dispenser or Dispensing Assistant (NVQ/SVQ2)*

TABLE 3 (Continued)

Theme	Codes	Illustrative data
Knowledge and training	Training in common dental conditions	"[A research priority should be] the most common conditions for training purposes and associated training required to enable us to provide support." Community *Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*
	Training in management of dental problems	"[A research priority should be] more awareness of conditions, and [their] causes and management" *Pre-registration Pharmacist*
	Training in referral pathways	"[A research priority should be] who and how to make referrals, particularly when some patients say they dont have a dentist" *Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)* "A research priority should be] when to refer mouth ulcers" *Pharmacy Technician (NVQ/SVQ3)* or "understanding when to refer and to whom" *Pharmacy Technician (NVQ/SVQ3)* "Education in regard to when to refer to a GP. What signs [should we] look out for for something more serious?"*Community Pharmacist, retail pharmacist or chemist (including provisional registered pharmacist)*

3 weeks also need immediate referral for further investigation for suspected oral cancer.[19] Where the acute problem is not life threatening but associated with pain pharmacists can familiarise themselves with their local acute dental—for example in the UK these are covered by the NHS 111 service.[20]

2. Early prevention for dental caries and periodontal disease and triage on risk factors for dental disease. At the less severe end of the spectrum there is an opportunity for early preventative advice. For example, bleeding gums were encountered more frequently in our survey than mobile teeth and are the first stage of periodontal or gum disease which eventually leads to tooth mobility—timely and appropriate advice on managing bleeding gums can prevent progression to tooth loss. In addition, pharmacists can play a role in managing dry mouth which predisposes to dental decay. This may take the form of considering substituting medications that are causing dry mouth, for example anti-cholinergics,[21] the use of which is increasing, or providing advice on saliva substitutes and fluoride intake. Use of sugar free medication can also combat tooth decay particularly in children where medication is provided in liquid/syrup preparations. Advice on prevention can be tailored according to patient knowledge of risk factors for dental disease[22] and targeted at high-risk groups for example, those with diabetes or severe mental illness who are known to be predisposed to dental diseases.[23,24]
3. Gatekeeping for antibiotic prescribing for dental conditions—this could help curb inappropriate prescribing of antibiotics for toothache which is commonly practice by medical practitioners and some dentists.

5 | CONCLUSION

Our study showed that dental problems present frequently to pharmacy settings with the most frequent presentation being acute conditions. While pharmacists are willing to engage in oral health advocacy, they lacked knowledge or training in this area and were unsure of how to identify and refer patients with life-threatening oral health presentations. Future interventions targeted at training pharmacists in this area need to encompass the range of oral health presentations identified namely acute conditions, provision of preventative advice and appropriate prescribing for dental conditions. Timely intervention and prevention for oral health problems by pharmacists has the potential to improve oral health outcomes and reduce oral health inequalities where dental services are costly and inaccessible.

CONFLICT OF INTEREST STATEMENT

There are no conflicts of interest to declare.

PEER REVIEW

The peer review history for this article is available at https://www.webofscience.com/api/gateway/wos/peer-review/10.1111/joor.13657.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on reasonable request from the corresponding author [VRA].

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