

Abstract

Objective: To examine rural pharmacists’ perspectives on their roles in oral health in rural communities and collaborations with dental practitioners.

Design: A qualitative research study using face-to-face, semi-structured interviews. Interview data were thematically analysed with the assistance of Nvivo 10.

Setting: 11 rural communities across rural Tasmania.

Participants: 20 community pharmacists.

Results: Five major themes ~~and subthemes~~ emerged namely: (i) barriers for patients to access dental services; (ii) oral health presentations to rural pharmacies; (iii) roles of pharmacists in oral health care (sub themes: advice; health promotion and referrals); (iv) collaborations with dental practitioners; and (v) oral health education and training.

Conclusion: This study suggests that rural community pharmacists had advisory and referral roles in oral health and acknowledged that they could play a greater role in oral health promotion . It was suggested that oral health could be incorporated into existing pharmacy health promotion and surveillance activities. There was a lack of collaboration between pharmacists and dentists or dental services and limited oral health education and training provided to pharmacists. Stronger collaboration between pharmacists and dental practitioners and better oral health training for pharmacists may enhance their role in promoting oral health within rural communities.

Keywords: pharmacists, roles, oral health care, rural, perspectives

What is already known on this subject:

- People in rural and remote Australia have poorer oral health outcomes than their city counterparts.
- Community pharmacists are regularly consulted for a range of oral health-related conditions.
- There is limited research in Australia exploring the roles of Australian pharmacists in oral health care.

What this paper adds:

- Rural community pharmacists had advisory and referring roles in oral health and acknowledged that they could play a greater role in oral health promotion.
- ~~There was a lack oral health education and training for pharmacists, as well as limited collaboration between pharmacists and dental practitioners.~~
- Stronger collaborations between pharmacists and dental practitioners along with better oral health education and training for pharmacists may enhance their roles in advising, referring and promoting in oral health to rural communities.

Manuscript

Introduction

Oral health is important to general health, wellbeing and quality of life ¹. Residents in rural and remote Australia have poorer oral health outcomes than their city counterparts² and poor access to dental care due to the maldistribution of dental practitioners ^{3,4}. In Australia, there are more than 5,300 community pharmacies that are well-distributed throughout metropolitan and rural areas.⁵ Pharmacies are often the most accessible points of contact for individuals within the health care system, especially for disadvantaged populations including rural residents who find it difficult to access dental care.⁶

The literature recognises the potential to improve the role of pharmacy personnel in oral health because they are frequently consulted for a range of oral health problems.⁷ In particular, nearly 70% of pharmacies in Northern England received more than 11 oral health requests weekly.⁸ Australian rural pharmacists reported seeing people with oral health-related issues between 5-10 times per week.⁹ Pharmacy staff including pharmacists and pharmacy assistants were involved in handling the majority of oral health-related presentations in community pharmacies in Australia.^{10, 11} They viewed an extended role in oral healthcare positively, including the provision of preventative oral health, oral health interventions, and referral to oral

health services.¹⁰ These extended roles in oral health for community pharmacies may benefit rural and remote populations.¹⁰

There is the potential for rural/remote community pharmacies to form collaborations with dental practitioners to implement preventive oral health services and to play a greater role in improving the oral health in these communities.¹⁰ However, there is limited research in Australia exploring the roles of Australian pharmacists in oral health care. Of the few studies available,^{10, 11} their quantitative designs and methods did not allow for an in-depth exploration of the roles of rural community pharmacy in oral health care. This study investigated rural pharmacists' perspectives on their roles in oral health in rural communities and collaborations with dental practitioners.

Methods

Design, participants and data collection

Between May and July 2016, qualitative semi-structured face-to-face interviews were conducted with community pharmacists in rural [areas of](#) Tasmania classified as ASGC RA (Australian Standard Geographical Classification Remoteness Area) 2 (Inner Regional) and 3 (Outer Regional)¹². Participants were recruited using both purposive and snowball sampling strategies.¹³

The interview guide was developed from our literature review and discussions with the research team. It included prompts on their potential role to improve oral health within their community, communication with dental practitioners and their oral health training needs. All interviews were conducted by two members of the research team who had training and experience in qualitative research. Recruitment continued until data saturation¹⁴ was observed in the concurrent data analyses. Interviews were audio recorded and transcribed verbatim.

Analysis

Interview data were thematically analysed¹⁵. QSR - NVivo v10.0 software¹⁶ was used to manage transcripts and codes. All transcripts were independently verified against audio recordings by two research team members and interview data was coded independently as a form of cross-validation. The coding results were compared, reviewed and discussed at regular team meetings to reach consensus. We used the consolidated criteria for reporting qualitative research (COREQ)¹⁷ as a guide to ensure quality.

The Human Research Ethics Committee (Tasmania) Network granted an ethics approval for the study (reference H0013217).

Results

Twenty pharmacists from 20 community pharmacies in 11 rural communities (9 classified as RA3 and 2 RA2) participated in individual interviews. Interviews took place at the community pharmacies and lasted from 30 to 45 minutes. The participants pharmacy experience ranged from 6 months to 37 years.

Thematic synthesis

Five major themes, and their sub-themes, emerged from the analysis of the interviews (Figure 1).

Barriers for patients to access dental services

~~Cost of dental care:~~ The cost of dental care was a frequent factor preventing rural people from accessing dental services and described as “far too expensive”. Many pharmacists highlighted long waitlists for the public dental care system, even for dental emergencies.

~~...dentist is far too expensive, it's not covered by anything, private health insurance doesn't cover it. (Pharmacist 11)~~

~~Long wait lists:~~ ~~When speaking about the public dental care system, many pharmacists highlighted long waitlists, even for dental emergencies.~~

~~It takes a long time to get in, honestly for 2, 3 weeks, for adults ... and that can be fairly prevalent (Pharmacist 7)~~

~~Distance to services:~~ The level of access to dentists varied by location, with many having to travel some distance for services or wait for dentists who may only be available on certain days of the week.

~~...the barrier is the distance because there's no dentist in town. (Pharmacist 13)~~

~~Low priority on oral health:~~ The low level of importance people placed on their own dental health was listed as a barrier to people using dentists. Participants explained that people would often “keep putting off” treatment and consume pain killers rather than see a dentist.

~~I don't think a lot of people seem to take care [of their teeth], they don't see it as a priority. (Pharmacist 1)~~

Oral health presentations to rural pharmacies

On average, 10 people per week ~~were asked ing~~ about an oral health-related topic in the rural pharmacies.

~~I guess 2 or 3 people a day maybe. Ten or so in a week. (Pharmacist 8)~~

The most frequent ~~A range of~~ oral health conditions ~~were~~ seen by the pharmacist participants were including toothaches (17/20), followed by ulcers (12/20), abscesses (7/20) and oral thrush (6/20).

A lot of people come in with toothache. They come in to us to get painkillers. (Pharmacist 7)

Some presentations such as toothache and ulcers could be managed by a pharmacist while other presentations such as abscess required referral to a GP or dentist.

It depends, if it's for ulcers, people come in want some recommendations, if it's for tooth pain, they'd come in wanting some specific product. So if it's ulcers, they want advice, if it's tooth pain, they know what they want, either it would be anti-inflammatory or paracetamol codeine. (Participant 14)

I'd just mention that they'd need to see a dentist or if it's an abscess at least a GP they should be able to get some antibiotics, if I feel that. Obviously I can't diagnose that but if the symptoms are showing indicating that then usually I'll refer them onto either of those places. (Participant 4)

Roles of pharmacists in oral health care

Advice: Pharmacists had a specific role to play in the provision of oral health advice, given that access to dental or general practitioners may be limited in rural areas.

The public rely on me a lot. GPs are not always around. (Pharmacist 2)

We're easy access than GPs, that's why they come to us as first choice (Pharmacist 14)

Participants identified that rural people would actively seek oral health advice from the pharmacist/pharmacy assistants. Generally pharmacists saw customers as receptive to the advice that they provided.

... they're really regulars, being rural areas, so they only come into this pharmacy but they do take our advice really well. (Pharmacist 7)

Health promotion: Health promotion was often undertaken by the community pharmacies. However, none of the participants could recall delivering a specific oral health promotion activity within their pharmacy.

We carry out all other kinds of health care promotional activities ... but not oral health care yet. (Pharmacist 16)

Some participants expressed an interest in conducting oral health promotion and provided suggestions such as including oral health as part of the existing health checks.

...to make [oral health] it as a specific service, like Meds Check, it could be a Dental Check... (Pharmacist 5)

However, some participants acknowledged barriers in providing oral health promotion at their community pharmacy such as limited time and resources and the cost of promoting oral health care:

*So my time is fairly scarce to do anything beyond what needs to be done for my customers.
(Pharmacist 8)*

Sorry I am in business as well as a professional, so you have to be able to do both. If I have to talk to somebody ... it has got to be able to promote sales as well as promote health. (Pharmacist 10)

As I said we don't really have much promotions, from the business side of things anyway we don't think it's worth the promotion cause probably it's only a small group of people having the problem and the money put in and the money you get out of it. You wanna do all sorts of stuff as a pharmacist but you're not subsidised by something kind of not worth doing so obviously that's a problem as well. (Participant 18)

Referrals: Given that pharmacies provide oral health advice on a regular basis, they play a key role in making referrals to other health care providers.

...so the role of a pharmacist is often part of the referral pathway ... (Pharmacist 6)

However, it was acknowledged that the referral pathway to dental care were often unclear:

We don't have any explicit pathways at this stage, it's something that I'd be very keen to look into. (Pharmacist 4)

Collaboration with dental practitioners

Most pharmacist participants identified that they had limited communication with local dental services.

I've never talked to the dentist. (Pharmacist 6)

Dentists ... not really, no communication. (Pharmacist 14)

Through making contact with dentists, some saw that they could start/strengthen their collaboration with dentists.

...more interactions with dentists and oral health professionals, knowing that they can refer people to the dentists, just that holistic collaborations (Pharmacist 15)

Oral health education and training

Confidence: The majority of participants (17) described that they were confident in providing oral health care. Only three described their confidence as low. Confidence in providing oral health advice was more likely to be reported by experienced pharmacists.

Very confident, I know my scope, and I know when to refer (Pharmacist 2)

I won't say that [I'm] confident, because I don't really know teeth much. (Pharmacist 7)

Oral health training: According to many participants there was little about oral health in their undergraduate training and no-one indicated that they had completed any recent oral health training. They suggested training in:

...visual identification of oral health care problems. (Pharmacist 12)

Having pharmacist and assistants trained in a broader role than we have now (Pharmacist 5)

Preferred means of training: Overall, online was the most popular modality for training for its convenience, flexibility and cost effectiveness. However, some participants acknowledged that there were some aspects of face to face that were better than online formats.

... we're so busy with the business ...so online will be the best option for me. (Pharmacist 1)

[Face to face] more appropriate format if there is a practice element involved in the topic, better questions asked [and] interactive. (Pharmacist 10)

Discussion

Our findings suggest that rural people presented to community pharmacies with a range of oral health problems. The local -due to- pharmacy was seen as -es- being readily accessible. -and- bBarriers that- prevented ~~them-residents~~ from accessing specific dental services including the cost of dental care and lack of access to dentists. This is consistent with the literature^{8-10, 18} indicating that community pharmacists are approached regularly for oral health advice. In our study, many pharmacists "fell" into the role of providing oral health advice. In a rural context, health professionals can find themselves extending their role to address health cover that may be dealt with by a more specialist health care professional in a larger population centre. In this study, in the absence of a local or resident dental practitioner, pharmacists found themselves providing oral healthcare advice to to their community. Supported by previous research,^{11, 18} our findings suggest that pharmacists recognised their oral health advisory role but many lacked sufficient oral health training, time constraints and lack of financial incentives. Pharmacists undergraduate training in dental health care was minimal. However, the majority of participants reported a high level of confidence in this area. This suggests that they may have accessed additional learning from other sources of education and clinical experience and exposure. Further investigation in this area is needed. Building skills and competence in oral health for pharmacists could help improve the quality of oral healthcare in rural areas and consequently contribute to reducing the disparity between rural and metropolitan oral health status.⁷

This study also suggests that pharmacists had a role in making referrals to dental care services. However, there was a lack of collaboration and formal referral pathways between pharmacists and dentists/dental

services. Pharmacists could play a greater role in oral health promotion which was currently limited at the pharmacies studied due to lack of time and resources. These factors were barriers to increasing pharmacy staff involvement in developing, implementing and sustaining oral health promotion activities within community pharmacies in Australia.¹⁰ Furthermore, lack of collaboration with dental practitioners was the major challenge to providing oral health services to the community.¹⁸ Rural and remote pharmacy staff showed more interest in working collaboratively with other health care providers regarding incorporating prevention, early intervention and referral to oral health services within community.¹⁰ The Australian Dental Association advocate for collaboration between non-dental care providers such as pharmacists and the dental practitioners to build professional capabilities and carry out prevention, health promotion and screening to reduce oral health disparities within communities.¹⁹ As community pharmacies already have established roles in promoting and improving the health within the community,²⁰ oral health may be incorporated in existing pharmacy health screenings. Expanded practice in this area may require a sound business model to be developed and stronger connections made with dental service providers.

A limitation of our study is that although pharmacy assistants may be the first point of contact for and have many interactions with customers within community pharmacies we did not explore their perspectives in this study. Future studies should explore their perspectives on their roles in oral health care.

Conclusion

Our findings suggest that rural community pharmacists had advisory and referring roles in oral health and could play a greater role in oral health promotion. Stronger collaborations between pharmacists and dentists and better oral health education and training for pharmacists may enhance their roles in oral health. This will potentially reduce disparities in oral health among the rural residents.

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Table 1: Demographics of participants (n=20)

<u>Demographics</u>	<u>Number (%)</u>
<u>Sex</u>	
<u>Female</u>	<u>11 (55)</u>
<u>Male</u>	<u>9 (45)</u>
<u>Years of experience</u>	
<u>1-5 years</u>	<u>7 (35)</u>
<u>6-10 years</u>	<u>6 (30)</u>
<u>11-15 years</u>	<u>2 (10)</u>
<u>More than 15 years</u>	<u>5 (25)</u>
<u>Location (ASGC)</u>	
<u>RA 2 (Inner Regional)</u>	<u>4 (20)</u>
<u>RA 3 (Outer Regional)</u>	<u>16 (80)</u>
<u>Type of business</u>	
<u>Banner group</u>	<u>14 (70)</u>
<u>Independent</u>	<u>6 (30)</u>

Table 2: Interview questions

<u>Interview questions</u>
<u>Can you estimate how many people request advice about their oral health problems or oral health product?</u>
<u>Please describe the most common oral health care problems presented in your pharmacy.</u>
<u>How confident you are in providing oral health care advice to these conditions?</u>
<u>When dealing with these issues, can you explain the demand on your time for managing oral health problems compared to other medical issues?</u>
<u>What external factors (factors apart from training) would influence your recommendation of oral health care product?</u>
<u>What are your referral pathway to access dental services? What barriers are there for the patient to access dental services in your area?</u>
<u>Can you describe the availability of oral health care services in your area? How do you think this affects the oral health care of clients?</u>
<u>Do you have any solutions that could address this shortfall?</u>
<u>When you communicate with other health professionals (GP or Dentist) about a client's oral health need, what are discussed? How often does this occur?</u>
<u>Have you received any additional training in oral health care? What was it? How would this best be delivered?</u>
<u>Have you participated in any oral health care promotional activities?</u>
<u>What is the role of pharmacy assistant in providing advice on preventative oral health care at your pharmacy?</u>