Novel Use of A Mobile Website to Increase Awareness of Dry Mouth in the Community

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Background
Dry mouth, also known as “xerostomia,” is a common health problem typically associated with salivary gland hypofunction (SGH) and reduced salivary flow (1) affecting millions of people across the United States. While xerostomia is an example of dry mouth ranging from 10-40% and varies widely depending on health status, the younger age (2). The situation is complicated as Xerostomia in South Texas, the prevalence here remains unknown.

Patients, in the community, with dry mouth exhibit symptoms of varied severity and etiology. Medication use, chronic disease and medical treatment, such as radiotherapy to the head and neck region are commonly attributed causes of dry mouth. Dry mouth increases time and health conditions including:
• Tongue demarcation
• Rancid dental caries
• Candidiasis
• Altered taste sensation
• Difficulty chewing

These conditions may negatively affect an individual’s quality of life (QoL), and become increasingly problematic in the absence of awareness and management.

The South Texas Oral Health Network (STORN), Madonna Center (MC) and Bexar County Transitional Advisory Board (TAB) have a history of working closely in the community engaged research projects. These projects have been piloted and tailored appropriately to the mouth of underserved areas of South Texas. The findings of these projects have been disseminated at various community events. STORN partnered with MC and Bexar County TAB to develop a novel web application aimed at increasing community awareness of dry mouth.

Significance
Dry mouth affects approximately 1 in 5 people (2) and can negatively impact an individual’s quality of life, yet it often overlooked by the general population. Although occasional dry mouth is normal, some people experience severe dry mouth daily. Dry mouth may be a symptom of a systemic disease and can contribute to problematic oral conditions.

It is important to understand how community members access oral health information to aid in early recognition and management of dry mouth. The innovative web application will allow individuals to self-assess their symptoms at the convenience of time, place and save state-wide information that will help identify lifestyle changes. Additionally, this partnership is aimed at enhancing communication between patients and their providers to increase overall knowledge and understanding of xerostomia.

Methods
Through UTSA IRB approval HSC 18-0048, two modified focus groups based on Technology of Participation (TOP) methods were conducted. One focus group was held with oral health professionals at the Medina County TAB office. The second focus group included community members from the Edgewood area at the Madonna center (n=25). Participants were recruited via word-of-mouth, phone calls, social networks and flyers. Attention was given to recruiting a representative sample of dentists and dental hygienists, as well as community members from different demographic groups. Participants completed a brief demographic survey at the beginning of each focus group. Thematic analysis was then begun with the question:

What information do you feel a dry mouth web application should have to increase understanding, awareness, and communication about dry mouth?

Anonymously grouped thematically and discussed to become major components for the development of the pending web-application.

Results
Oral health practitioners, Bexar County TAB members, and Edgewood community residents participated in TOP® sessions focused on investigating the best way to present oral health information to individuals suffering from xerostomia. Participants were primarily female (75%) and Hispanic (72%). Among participants dentists (4%), hygienists (14%) TAB members (31%), community members (49%), and University residences (2%). (See Table 1 below).

Table 1. Demographics

| Variable                     | Percent | Frq
|------------------------------|---------|-----
| Background                   | Oral Health Provider | 31% | 18
|                             | Edgewood Community Member | 69% | 41
| Education                    | High School Graduate | 45% | 27
|                             | 2-Year College Graduate | 30% | 18
|                             | Professional Degree (PhD) | 25% | 15
| Monthly Income              | < $10,000 | 20% | 12
|                             | $10,001 - $19,999 | 13% | 8
|                             | $20,000 or more | 65% | 39

The majority (54%) of participants were not confident in recognizing dry mouth, nor did they know how to take care of dry mouth (46%).

Given the acknowledged uncertainty of both samples, understanding how access and prioritize the information if dry mouth was a critical component in the development of a novel web application. The thematic themes emerged from both focus groups.

See Figures 1 and 2.

Conclusions
This study has the potential to improve health outcomes by increasing the oral health literacy of the community regarding dry mouth and its impact on quality of life. It also has the potential to develop links of communication between patients and their oral health and medical providers. Based on the information gathered, community members were interested in learning how to avoid, care regarding dry mouth. A segment aimed at helping users understanding how different health professionals can help treat dry mouth will be included in the novel web application pilot (Fig 3).

Fig. 1 Community Consensus Building Report

Fig. 2 Dental Practitioner Consensus Building Report

Fig. 3 Health Practitioners and Dry Mouth

The partner’s next steps include to develop and launch a culturally appropriate Dry Mouth web application pilot. By doing so, the partners hope to positively influence quality of life among those suffering from xerostomia. Once launched, factories such as ease of accessibility and comprehension of material will be evaluated by both dental practitioners and community members.

References

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Fig. 4 TOP® Session at the Madonna Center

Dry mouth makes me wake up at night. What do I do?
“Edgewood Community Participant”

Fig. 5 TOP® Session at the Madonna Center

“Common themes from both sessions included:
• Extensive information and resources on what dry mouth is and identifying the symptoms of dry mouth
• Visual aids
• Bilingual text that is easy to read

Fig. 4 TOP® Session at the Madonna Center

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