ORAL HEALTH SCREENINGS FOR PREVENTATIVE HEALTH IN A FREE CLINIC POPULATION

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

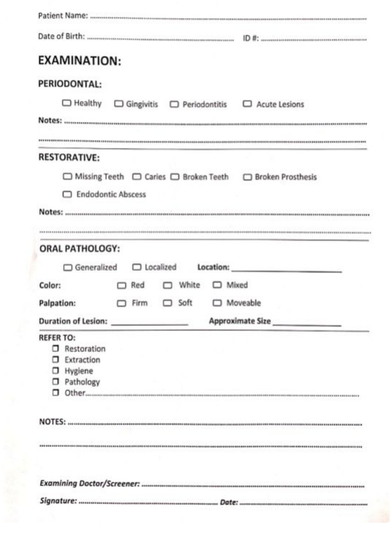
Authors: Reed Geisler, MEng[1]; Vivek Yanamadala, BS[1]; Nick Mannix, BS[1]; Nicolas Kumar, BS[1]; Jon Vardanyan, BS[1]; Mark Georgy, BS[1]; Ilesh Patel, BS[1]; Robert Konstan, BS[1]; Prit Patel, BS[1]; Shaun Rotenberg, DMD, MS[2]*
Institutional Affiliations: 1: MD Program, College of Medicine, The Ohio State University; 2: College of Dentistry, The Ohio State University

Background

Dental visits account for the second most common emergency department discharge diagnosis in young adults and are especially common among the uninsured patient population. These visits often result in opioid and antibiotic prescriptions and contribute to an average of $400 in costs per visit with repeat visits being likely. Early identification of dental needs prior to the need for emergency treatment represents a critical opportunity for preventative management in these populations.[1] Solutions involve patient education, oral health screenings, and care coordination.[2] The importance of our work lies in facilitating dental-medical coordination as well as early identification and treatment of oral health concerns. Through implementation of a pre-visit oral screening, we hoped to identify and appropriately connect free clinic patients to affordable and accessible dental care.

Purpose

Our aim in this project was to facilitate early identification and intervention of oral health concerns, and, in doing so, connect vulnerable patient populations to accessible dental care resources. Our project was developed in order to identify at-risk patients regardless of their presenting concerns when arriving at the free clinic. Dental screens were implemented as a convenient, effective intervention to connect vulnerable patients to affordable dental resources and prevent long-term complications from a lack of dental care.



Patient Name: .....
Date of Birth: ..... ID #: .....

EXAMINATION:

PERIODONTAL:
☐ Healthy ☐ Gingivitis ☐ Periodontitis ☐ Acute Lesions
Notes: .....

RESTORATIVE:
☐ Missing Teeth ☐ Caries ☐ Broken Teeth ☐ Broken Prosthesis
☐ Endodontic Abscess
Notes: .....

ORAL PATHOLOGY:
☐ Generalized ☐ Localized **Location:** .....
Color: ☐ Red ☐ White ☐ Mixed
Palpation: ☐ Firm ☐ Soft ☐ Moveable
Duration of Lesion: ..... **Approximate Size** .....

REFER TO:
☐ Restoration
☐ Extraction
☐ Hygiene
☐ Pathology
☐ Other.....

NOTES: .....

Examining Doctor/Screener: .....
Signature: ..... *Date:* .....

Figure 1: Screening form for brief oral examination

Methods

Prior to screening, patients completed a standard free clinic intake form that described whether they were currently seeking dental care coordination. Oral health screenings were then conducted on all patients during triage in a multispecialty free clinic following consent (Figure 1). Oral conditions were identified by a medical student team supervised by dentistry. When lesions were identified, patients were counseled by dentistry on appropriate recommendations and provided referrals via care coordination. Each finding and referral was securely stored for validation of the referral on followup.

Pre-visit Questionnaire	Oral Screenings	Referrals	Follow-Ups
Before visit, patients indicated whether they wanted a dentist	We collected pathological findings through quick oral exams	Appropriate referrals were made based on findings	Contacted patients to document if they did follow up with referrals

Results

81 patients were offered oral screenings, of which 71 (87.6%) consented. 87.3% of screened patients (n=62) had oral pathology, including gingivitis (n=46), caries (n=25), periodontitis (n=15), broken teeth (n=13), missing teeth (n=12), broken prostheses (n=4), sensitivity (n=5), and an endodontic abscess (n=1). Of screened patients, 47.9% (n=34) had not initially requested dental coordination in the pre-visit questionnaire. Of these, 82.4% (n=28) had positive findings and 58.8% (n=20) were referred for followup. 66.2% (n=47) of screened patients were referred to dental resources, including restoration (n=34), extraction (n=13), hygiene (n=12), new dentures (n=5), and pathology (n=2).

Challenges

Several challenges were discovered over the course of the initial implementation of pre-visit oral health screenings. Although 87.6% of patients consented to the oral screening regardless of intention to participate in dental care coordination, language barriers were a common reason for denied screenings. Followup after the free clinic visit and referral was also difficult to coordinate due to incomplete or unreliable patient contact information, language barriers, and missed followup appointments. Recommended development of an improved methodology for oral health screening will include verification of contact information and preferred language for referral and continued care coordination. Improved patient followup and care coordination will help to improve long-term patient outcomes.

Conclusions

Results elucidate the effectiveness of oral screenings by health students in identification of oral conditions and appropriate referral. Many screened patients were unaware of the opportunity to access affordable dental services, so the screening team not only identified dental pathologies but also served as a gateway to dental care.

While our results show that performing simple oral screenings on non-dental patients helps identify pathological findings, verification of followup for referred patients is necessary in order to identify outcomes and barriers to followup. Further research is needed to identify and improve downstream access to dental care following implementation of health screenings.

References

Davis, Elizabeth E., Amos S. Deinard, and Eugenie W. H. Maïga
2010 Doctor, My Tooth Hurts: The Costs of Incomplete Dental Care in the Emergency Room. Journal of Public Health Dentistry 70(3): 205–210.

Sun, Benjamin C., Donald L. Chi, Eli Schwarz, et al.
2015 Emergency Department Visits for Nontraumatic Dental Problems: A Mixed-Methods Study. American Journal of Public Health 105(5): 947–955.