An Overview of the Oral Preventive Assistant Pilot Project

Problem Statement: A conservative estimate is Missouri lost up to 10% of an already strained oral healthcare workforce during the COVID-19 pandemic years. The workforce shortage exists throughout the state, but data indicates the workforce shortage is most severely felt in rural and Medicaid clinics, where access to care may be delayed weeks to months before appropriate appointments are available[1]. The Office of Dental Health (ODH) workforce survey distributed in March and April of 2022 indicated doctors and staff are strained (more than 20% of both doctors and hygienists responded they are considering retirement in the next 5 years), and patient's needs may not be adequately served because of staff shortages and wait times for appointments. This comes at a time when approximately 170,000 newly eligible Missourians have registered for Medicaid benefits and FQHCs and clinics serving the Medicaid population will be expected to absorb the oral health care for this previously underserved population.

Oral Preventive Assistant: It has been proposed that a new oral healthcare worker, an Oral Preventive Assistant (OPA) Expanded Function Dental Assistant (EFDA), could help address access to care issues as an important part of a larger plan to better enable the oral healthcare workforce to meet the needs of Missouri citizens. The OPA-EFDA would work under the direct supervision of a hygienist or a dentist to collaborate in care for healthy children and adults, and patients with gingivitis, as defined by the American Academy of Periodontogly[2]. The premise is that OPA-EFDAs would contribute to access in two ways:

1. OPA-EFDAs increase the clinic's productive capacity for portal entry appointments to dental clinics by increasing the workforce available for initial examination and cleaning appointments for healthy children and adults and gingivitis patients. Gingivitis is defined as an inflammation of the gingiva most commonly caused by an accumulation of plaque/biofilm, that once biofilm is removed, demonstrates complete reversibility[2,4].

2. OPA-EFDAs increase the clinic's productive capacity to treat more advanced periodontal problems by freeing hygienists and dentists from the entirety of care responsibilities for the healthier segment of their patient population so hygienists and dentists can spend more clinic time operating at the top of their scopes treating more serious problems.

Since 1977, the Indian Health Service (IHS) has trained and employed Periodontal EFDAs like the OPA-EFDA being proposed in Missouri. IHS internal evaluations of the Periodontal EFDA have shown the IHS and tribal EFDAs have, in comparison with clinics of similar staffing stability and size, had an increase of 6.5% in preventive services rendered to patients[5]. An external evaluation conducted by the Johns Hopkins University Bloomberg School of Public Health in 2017 showed an increase of 12.1% in total services provided the following changes in programs with at least one Periodontal EFDA compared to clinics of similar size and staffing stability with a traditional (no EFDA) model.

1. Missouri Oral Healthcare Report of Covid-19 Impact on Workforce. Office of Dental Health, Missouri Department of Health and Senior Services. February, 2023.
2. https://members.perio.org/
3. Chappel, IL et al. Periodontal health and gingival diseases and conditions on an intact and a reduced periodontium: Consensus report. J Pero: Vol 89 Issue S1, 74-84
4. Trombelli, L, Farina, R, Silva, CO, Tatakis, DN. Plaque-induced gingivitis: Case definition and diagnostic considerations. J Periodontol. 2018; 89(Suppl 1): S46– S73.
5. Indian Health Services Periodontal EFDA Program data, Tim Ricks, DMD, MPH, US Public Health Service, April 2023

The IHS curriculum requires candidates to complete a training program that includes home-study, classroom instruction, hands-on clinical experience and a written exam. Currently there are over 1200 IHS Periodontal EFDAs who have been trained and are serving patients in 36 states. Illinois and Kansas have adopted periodontal EFDAs: Kansas already has implemented this type of EFDA, and Illinois passed the EFDA legislatively and now is preparing the educational courses for this type of oral healthcare worker.

OPA-EFDA Pilot Project: Under the provisions of 332.325 RSMo, the Office of Dental Health and the Missouri Dental Board were granted authority to approve and conduct pilot projects designed to examine new methods to extend care to medically underserved populations. The following is an explanation of how the OPA-EFDA Pilot Project specifically meets the seven provisions of 332.325 RSMo, the admission requirements for OPA-EFDA applicants, an overview of the OPA curriculum and testing, an overview of the OPA-EFDA Clinical Study design including collected metrics, a discussion about how the metrics will be analyzed and the reporting requirements to the Missouri Dental Board.

Seven Provisions of 332.325

1. **Clearly stated objective of serving a specific underserved population:** This OPA-EFDA Pilot Project is intended to increase access to oral healthcare to underserved populations in Missouri, especially rural and Medicaid clinics that currently have poor access due in part to a shortage of dental hygienists.

2. **Finite start date and termination date:** The OPA-EFDA Pilot Project will begin no later than January 1, 2024. The OPA online and hands-on educational components will be delivered January 1, 2024 through March 31, 2024. The OPA-EFDA Clinical Study will commence at the completion of the OPA educational curriculum and will terminate no later than June 30, 2025.

3. **Clearly define the new techniques or approaches it intends to examine to determine if it results in an improvement in access or quality of care:** The premise is that OPA-EFDAs would contribute to access in two ways:

    - OPA-EFDAs increase the clinic's productive capacity for portal entry appointments to dental clinics by increasing the workforce available for initial examination and cleaning appointments for healthy children and adults and gingivitis therapy appointments for gingivitis patients.

    - OPA-EFDAs increase the clinic's productive capacity to treat more advanced periodontal problems by freeing hygienists and dentists from the entirety of care responsibilities for the healthier segment of their patient population so hygienists and dentists can spend more clinic time operating at the top of their scopes treating more serious problems.

4. **Identify specific and limited locations and populations to participate in the pilot project:** To generate enough data to validly assess the OPA-EFDAs impact on clinic's productive capacity and access to care, there needs to be 2-3 trained OPA-EFDAs, in a minimum of five participating clinics for a period long enough to minimize confounding

factors like seasonal variation in missed appointment rates. (Missed appointment rates in Medicaid clinics may vary as much as 10% depending on prevailing weather patterns.) Otherwise, the sample size is too small to accurately draw conclusions.

Participating clinics selection criteria may include:

- Location in a county designated as a Dental Healthcare Provider Shortage Area by HRSA; and,
- A patient population that is comprised of at least 25% Medicaid-eligible patients in the previous year; or,
- Located in a county designated as a dental hygienist shortage area by the Missouri Office of Dental Health; and,
- Attest they understand their role in the clinical portion of the OPA-EFDA curriculum and commit to fulfilling that role; and,
- Attest they understand the data collection and reporting requirements of the OPA-EFDA Clinical Study and commit to fulfill that requirement; and,
- The sum of the participating clinics adequately samples the geographical and population diversity in Missouri.

5. **Establish minimum guidelines and standards for the pilot project including, but not limited to, provisions for protecting the safety of participating patients:** OPA-EFDA candidates must have satisfied the current prerequisites as required for the Missouri EFDA programs (Missouri Dental Assisting Skills Exam passage or be a Certified Dental Assistant (CDA)) before being admitted to the program; must take a structured curriculum modeled after the long-standing, successful Indian Health Service Periodontal EFDA program (see OPA-EFDA Curriculum section); and, must pass both hands-on and written competency exams before they participate in the clinical study portion of this pilot project. This project will be guided by written protocols that clearly define the scope of an OPA-EFDA, patient eligibility, data collection requirements, treatment outcome reporting and the standards of patient record documentation. OPA-EFDAs will operate under the direct supervision of either a hygienist or a dentist, which means the patient will be evaluated before and after the OPA-EFDA portion of care delivery. Any additional care required for the patient will be completed by the supervising hygienist and/or the dentist before the patient's dismissal. Patient reported outcome experiences also will be collected and reported. Participating clinics will be required to attend monthly quality assurance meetings to document, discuss and resolve any obstacles encountered in the study.

6. **Project plan must clearly define the measurement criteria it will use to evaluate the outcomes of the pilot project on access and quality of care:** The purpose of the measurement metrics is to determine if an OPA-EFDA improves access to care and or quality of care in clinics serving Medicaid patients or in clinics serving hinterlands with a significant shortage of hygienists. There are 3 primary investigational outcomes of the Oral Preventive Assistant (OPA-EFDA) Pilot Study. They are:

A. **To determine if the addition of OPA-EFDAs to the oral healthcare workforce can improve access to care** due to the OPA-EFDA assuming some care responsibilities for healthy and gingivitis patients thereby creating more portal entry appointment opportunities for patients. This part of the study will be an internal comparison study comparing the number of new patients and type of patients seen in each clinic during the OPA-EFDA study compared to a similar period prior to the study. The metrics used to assess the impact of OPA-EFDAs on patient access to clinics are:

- # of new patients examined (by all providers) in clinic during OPA-EFDA Pilot Project period:
  - # of patients seen in each age grouping (child <17; adult >18)
  - # of patients in each periodontal diagnostic categories (health, gingivitis, periodontitis as diagnosed by the supervising dentist)
- # of patients seen by OPA-EFDAs during the OPA-EFDA Pilot Project period:
  - # of patients seen by OPA-EFDAs in each age grouping (child <17; adult >18)
  - # of patients seen by OPA-EFDAs in each eligible periodontal diagnostic categories (health, gingivitis as diagnosed by supervising dentist)
- # of new patients examined (by all providers) in clinic during a similar period prior to the OPA-EFDA Pilot Project period:
  - # of patients seen in each age grouping (child <17; adult >18)
  - # of patients in each periodontal diagnostic categories (health, gingivitis, periodontitis as diagnosed by the supervising dentist)

B. **To assess the treatment outcomes of OPA-EFDAs for healthy and gingivitis patients from a clinical and patient perspective.** The included patients in this arm of the study will be healthy and gingivitis patients as diagnosed by the supervising dentist using the 2017 American Academy of Periodontology Diagnostic Classification System. This will be an internal cohort study comparing treatment outcomes of OPA-EFDA healthy and gingivitis patients for a finite period to treatment outcomes of hygienists and dentists in the same clinic for same patient categories and the same finite period. The re-evaluation period will be 2-4 weeks post treatment. 100% of the gingivitis patients will be appointed for re-evaluation. 20% of the healthy patients will be requested to return for re-evaluation. Re-evaluations will be conducted by a hygienist or dentist assisted by the OPA-EFDA to facilitate periodontal data collection. Patient outcomes will be categorized as Healthy, Improved-Not Resolved, Not Significantly Improved-Localized problems, Not Significantly Improved or Declined-Generalized problems. All patients will be requested to complete a Patient-Centered Evaluation. The metrics used to assess the quality of OPA-EFDAs treatment outcomes are:

- Clinical Outcome Assessment (cites: Chappel Table 1[3] and Trombelli Table 6[4])
  - <u>% Healthy</u>: Treatment outcome is healthy patient (<10% sites demonstrate inflammation)

- % Patient Improved: Patient with inflammation improves after treatment w/o complete resolution (5%-15% reduction in bleeding points)
- % Patient Status Not Significantly Improved with Localized Problems: Patient presented w/localized inflammation (10-30% of sites still inflamed at re-evaluation)
- % Patient Status Not Significantly Improved or Declined with Generalized Problems with Generalized Inflammation: Patient's generalized inflammation did not resolve (>30% sites still inflamed at re-evaluation)

- Patient-Centered Evaluation: Each re-evaluation patient will complete a brief evaluation of treatment including a 1-5 Likert scale and comment section. *Metric: Average Patient Likert Evaluation.*

C. **To determine if the addition of OPA-EFDAs to the oral healthcare workforce can improve access to care for patients with more serious periodontal problems** by freeing hygienists and dentists to use some time previously devoted to healthy patients to serve patients with more serious or urgent periodontal needs. This is an internal comparison study comparing the number of periodontitis related procedures performed by dentists and hygienists during a finite period of the OPA-EFDA study to the number of periodontitis procedures performed by dentists and hygienists during the same finite period before the OPA-EFDA study. The metrics used to assess OPA-EFDAs impact on access for patients with more serious periodontal problems are:
   - # Patients Diagnosed with Periodontitis
   - # Gross Debridement appointments
   - # Scale and Root Plane appointments
   - # Periodontal Surgeries
   - # Periodontal Maintenance appointments

7. **Identifies reporting intervals to communicate interim and final outcomes to the Missouri Dental Board:** ODH will provide interim reports to the Missouri Dental Board every three months and within two months after the termination of the OPA-EFDA Pilot Study. When enough data has been generated to validly assess the OPA-EFDAs impact on clinics productive capacity and access to care, a final report will be submitted.

Oral Preventive Assistant Curriculum: The curriculum for the OPA-EFDA has been modeled after the curriculum used by the Indian Health Service (IHS) for its certification process for the Periodontal Expanded Function Dental Assistant 1 program (IHS Perio EFDA 1). The scope of practice of the IHS EFDA 1 closely mirrors the scope of practice proposed for the Missouri OPA-EFDA.

The training and certification program for the IHS Perio EFDA 1 has been in place since 1977 and has trained, certified, and successfully deployed more than 1200 Perio EFDA 1 providers in 36 states. The IHS curriculum provides for home study curriculum, followed by 35 hours of in-person training, and culminates in the execution of a minimum of 20 satisfactory supragingival

debridement, prophylaxis and oral hygiene consultation visits supervised and graded by a dentist or hygienist.

Rear Admiral Tim Ricks, DDS, Chief Dental Officer for the U.S. Public Health Service and IHS Continuing Dental Education Coordinator, has indicated that IHS and tribal dental programs with Periodontal EFDAs have, in comparison with clinics similar staffing stability and size, an:

i. increase of 0.7% per year in clinic utilization
ii. increase of 5.1% in total dental services rendered to patients
iii. increase of 6.5% in preventive services rendered to patients
iv. increase of 7.5% in total services per patient visit[5]