



Integrating Oral Health at a Free Medical Program

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Abstract

Free medical clinics offer crucial access to primary care services for underinsured and uninsured patients. Most patients served by these clinics lack dental coverage. Oral health is an important part of overall health, but few free clinics currently offer basic preventive oral health care like fluoride varnish and dental hygiene education. The purpose of this article is to describe the process of integrating oral health services into an existing free medical clinic, discuss challenges and elements of success, and convey hopes for the clinic's future.

Introduction

In 2017, 9% of people living in the United States (US) (approximately 28 million people) did not have health insurance.¹ Meanwhile, it was estimated in 2016 that 34% of adults living in the US (approximately 110 million people) did not have dental insurance.² Free and charitable clinics are important access points for these patients seeking health and dental care. Free clinics have existed for decades, provide care regardless of one's ability to pay, and serve as a vital part of the safety net system for the economically disadvantaged, new immigrants, and others.

According to the National Association of Free & Charitable Clinics (NAFCC), there are over 1,200 free and charitable clinics across the country.³ In 2014, the NAFCC reported that these clinics conduct 5 million patient encounters each year and that the demand is projected to grow.

While 94% of these clinics provide medical care, less than a third offer dental services.³ This is problematic, as the dentally uninsured rate is approximately four times the medically uninsured rate, even with the dental coverage expansion created through the Affordable Care Act.⁴ Further, for patients who have dental coverage through their state's Medicaid program, there remains difficulty accessing care as only about a third of US dentists accept Medicaid.²

Patients who are dentally uninsured visit the dentist less frequently than those with dental benefits.⁵ This is a missed opportunity for oral health promotion, oral disease prevention, and early treatment. With one in four American adults suffering from untreated tooth decay, poor oral health is a prevalent issue that has dramatic effects on a patient's health status and quality of life.⁶ Frankly, oral health is an important part of overall health and wellbeing. For instance, periodontitis is known to affect diabetes control⁷ and cardiovascular outcomes,⁸ while dental abscesses have been shown to impact work⁹ and school absences.¹⁰

Oral health promotion interventions can have profound effects on reducing the burden of oral disease. Some of these interventions, including fluoride varnish application and oral hygiene education, can be implemented at low cost and need not be performed by dentists. Studies have shown that for every dollar spent on preventive dental care, between \$8 and \$50 can be saved in restorative and emergency treatments and potentially more in additional types of medical treatment.¹¹

Massachusetts (MA) has a similar dental health burden to the national average.¹² With this in mind, we created Oral Health Night at Epworth (OHNaE), a free oral health clinic that was

integrated into an existing free medical program run by students. The oral health clinic is staffed by dental hygienists, operates on a low budget, and has served as an oral health safety net for our local community.

Establishing the Oral Health Clinic

The Epworth Free Medical Program began in 1994 with the aim of offering health care services to people in the Worcester, MA community who had difficulty accessing care. Staffed by volunteers from the church, local physicians, medical school students, a phlebotomist, and other community volunteers, the clinic opens its doors weekly to patients without requiring appointments or proof of identification. This clinic was selected as the site for an oral health clinic because the authors had previous clinical work experience there and observed oral disease in both pediatric and adult patients.

A project team was created in late 2016 consisting of a medical student, a professor of family medicine and community health, and two faculty dental hygienists at a local dental hygiene school. The group brainstormed ideas to address oral health in the clinic and discussed logistics about how to provide services.

The project team approached the free medical program's Board of Directors to pitch the idea for integrated oral health care in early 2017. The team cited the lack of local free oral health care in the region, the declining number of local dentists accepting Medicaid, and the observations of oral disease in the clinic's patients as grounds for establishing a free oral health clinic. The board unanimously approved the proposal.

To gauge patient interest and learn about what services were desired, an anonymous survey was rolled out to patients at the Epworth Free Medical Program. A total of 19 responses were collected over two clinic sessions, a response rate of 68%. Twelve patients indicated in a yes/no question that they would be interested in oral health services if they were offered at the clinic. For those who specified that they were interested, there was a 'select all that apply' question that asked about what types of services they would utilize. Six respondents marked that they were interested in dental cleanings, four checked that

they would like help finding a dentist, and two noted that they hoped for assistance with obtaining dental insurance.

Next, a site visit was conducted with all members of the project team to assess spatial needs, equipment and resources, and to discuss workflow. The dental hygiene school donated a portable exam chair, examination supplies, and toothbrushes to give to all patients (Figure 1). The Epworth Free Medical Program allocated a curtained-off space measuring 10 feet by 8 feet to ensure privacy (Figure 2). Clinic leadership and volunteers were invited to share ideas about workflow. It was decided that the free oral health clinic would occur on the first Monday of each month.

The first OHNaE was held in July 2017. To maximize patient recruitment, the workflow decided upon was an "opt-out" method. Following a visit to the medical team, patients were guided by clinic volunteers toward the oral health team space and told; "oral health is an important part of overall health so you will now be seen by the oral health team unless you opt not to." This workflow promoted the idea that oral health services were a standard part of the clinic (Figure 3).

The team saw four patients the first night and one patient declined care. Each patient was asked a standardized set of interview questions

Figure 1. Supplies



Figure 2. Clinic space



Figure 3. Sign posted to inform patients of Oral Health Night at Epworth

Tonight is...
Oral Health Night
 at Epworth



We offer:

- Dental screenings
- Fluoride applications
- Oral health education
- Referrals for free cleanings
- Referrals to dentists

All patients receive a free oral health bag with toothbrush and toothpaste!

Ask a clinic volunteer for more information
 Services are offered the 2nd Monday of the month



by the hygienists to gauge their oral health status. A logbook was utilized to record the number of patients, ages, genders and what services were provided.

Table 1. Monthly number of patients seen by oral health team and number of patient refusals

Month	Patients Seen	Patient Refusals
July 2017	4	1
August 2017	10	11
September 2017	6	7
October 2017	9	4
November 2017	7	3
December 2017	Clinic cancelled	Clinic cancelled
January 2018	10	4
February 2018	7	2
March 2018	5	3
April 2018	4	3
May 2018	7	2
June 2018	4	2
July 2018	9	3
August 2018	7	5
September 2018	2	4
October 2018	14	6
November 2018	6	3
December 2018	5	2

The dental hygienists then conducted a thorough dental exam, discussed their findings with the patient and indicated what, if any, follow-up would be needed. Subsequently, the hygienists applied fluoride varnish for pediatric and high-risk adults. Lastly, the hygienists provided patient-specific education regarding oral health. For patients needing a dental cleaning, they were given a voucher for a free cleaning at the local dental hygiene school. Patients requiring services provided by dentists were referred to the two federally qualified health centers (FQHCs) nearby. For patients requiring acute care, they were referred to the FQHC that accepts walk-in patients daily. Every patient was given a free toothbrush and dental floss.

Early Indicators

Since the clinic's inception, oral health services continue to be offered on a monthly basis during the free medical program's usual hours. Over one hundred patients have accessed the services, averaging seven patients seen by the oral health team per clinic. Table 1 details the number of patients seen and the number of refusals by month

since inception. The age range of patients seen spans from six months to eighty-one years. Most of the patients are referred for a free cleaning at the Massachusetts College of Pharmacy and Health Sciences clinic and approximately half are referred for care at the two local FQHCs. Patients who indicate that they do not have transportation to access care at these sites are given round-trip bus tokens funded by a private donation.

After a few months, the church (where the clinic is held) began receiving phone calls from individuals in the community interested in learning about how to access care at the oral health clinic. Similarly, patients began presenting to the clinic solely for the oral health services without medical needs. When asked how they heard about the oral health clinic, most people indicated they had heard about it from friends or family members.

Some of the oral pathology seen by the hygienists includes carious lesions, gingival pyogenic granulomas, abscesses, denture stomatitis, and periodontal disease. One patient was referred from a physician on the medical side of the free clinic to the dental hygienists for a suspicious black ulcer on the upper palate for an assessment and was ultimately referred to an ear, nose, and throat specialist for a biopsy to rule out melanoma.

Discussion

Establishing an oral health clinic in an existing free medical program has promoted oral health as an important part of overall health, provided services and education to a vulnerable patient population, and fostered interdisciplinary work amongst health care professionals.

The success of OHNaE hinges on the diverse expertise of the project team. The family physician is a champion for medical dental integration and was able to pitch the project to the clinic's medical director. Two dental hygienists have served on the project team since its inception and both came with experiences in caring for underserved patients. Each was familiar with oral health services available in the community at low cost and could speak to local dentists who offered sliding fee scales. A medical student helped

coordinate the oral health clinic's operations and serves as a liaison to the medical volunteers.

Obtaining buy-in from the clinic's primary care physicians and leadership helped to improve overall clinic efficiency and maximize the number of patients seen by the oral health team. When the medical clinic team was functioning above capacity, patients were approached in the waiting room to inquire about their interest in being seen for oral health services while they were waiting to see the physician. Approaching patients during this wait decreased the total time they spent in the clinic, improved turnout at the oral health clinic, and subjectively increased patient satisfaction with services.

As for the clinic's future, a handful of local dentists have recently reached out to inquire about how to support its efforts. The project team is working with them to establish a list of dentists who are willing to take on 1-2 patients per year for pro bono care. Ideally, these pro bono patients would be those without dental insurance, who are not comfortable accessing care at the FQHCs, and who have more acute needs. Other future goals include expanding oral health services to the other three free clinics in our city and having medical students work with the dental hygienists to offer more inter-professional learning.

Now that the clinic is transitioning from a pilot project to a continuation project, we hope to begin collecting data that would allow the clinic to evaluate its impact. Some of the target data include impact on local emergency room utilization for non-traumatic dental complaints, completion rate of referrals to dental clinics at community health centers, and cost savings. While this data is being developed for OHNaE, the experiences of other clinics suggest that free clinics can positively impact both the patients and the local community. The Free Clinic of the New River Valley in Virginia, for example, reported that 3 years after implementing their free clinic, the percentage of visits for emergency dental care dropped from 80% to 50%.¹³ While this model offers a more traditional dental clinic setting with dentists, it demonstrates that improving access to preventive services impacts utilization of emergency services. This is especially important considering that non-traumatic dental concerns

comprise approximately 1.4% of all emergency room visits.¹⁴

The OHNaE model is not particularly costly or spatially prohibitive to implement. At OHNaE, the oral health team utilizes foldable chairs and a table rented from the medical program for equipment. As for the cost of supplies, using conservative estimates, the total cost per patient for a dental exam and evaluation is \$2.10 and includes a dental bib, a tongue depressor, a tooth mirror, dental gauze, fluoride varnish, a dental mask, and a pair of gloves. Providing a patient with a generic complimentary toothbrush, toothpaste, and floss costs an additional \$1.00 and brings the total cost per patient seen at an oral health clinic to \$3.10.[†]

We share our process and reflections to encourage other student-run free clinics to consider integrating oral health services into existing medical programs. Including dental professionals at these clinics is crucial but starting small with distributing toothbrushes and basic hygiene education to patients of the clinic would reinforce the message that oral health is an important part of overall health.

Disclosures

The authors have no conflicts of interest to disclose.

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[†]The cost per unit was estimated from an average-priced, 4+ star product sold on the e-commerce website, Amazon.com, divided by the number of units contained in that product.