

Verrill Dana^{LLP}

Attorneys at Law

ANDREW P. RUSCZEK
PARTNER
arusczek@verrilldana.com
Direct: (617) 274-2856

ONE BOSTON PLACE
BOSTON, MA 02108-4407
617-309-2600 • FAX 617-309-2601
www.verrilldana.com

September 14, 2017

VIA EMAIL ONLY

Nora Mann, Esq.
Determination of Need Program
Massachusetts Department of Public Health
250 Washington Street, 6th Floor
Boston, MA 02108

**Re: Henry M. Goldman School of Dental Medicine
Responses to Questions from the Department of Public Health**

Dear Nora:

Enclosed please find responses from the Henry M. Goldman School of Dental Medicine to questions provided by the Department of Public Health's Determination of Need Program on August 31, 2017 (revised September 6, 2017).

Please feel free to contact us if you have any questions or would like additional information.

Sincerely,



Andrew P. Rusczeck

APR/mj
Enclosure



Henry M. Goldman School of Dental Medicine
Responses to Questions from the Department of Public Health

This document provides answers from the Henry M. Goldman School of Dental Medicine ("School" or "GSDM") to questions provided by the Department of Public Health's Determination of Need Program ("DPH") on August 31, 2017, as revised September 6, 2017. DPH's numbered questions are reproduced below before the School's responses.

1. What are the programs in place at the Clinic that address the chronic conditions referenced in the Application and how will you measure impact of the proposed project on these programs, and on outcomes?

The School's Programs Addressing Chronic Medical Conditions

Chronic medical conditions contribute to dental problems, just as dental problems may contribute to chronic medical conditions. For this reason, the comprehensive dental care provided in the School's Pre-Doctoral Treatment Center is an essential component of public health. By treating dental problems of patients who have chronic medical conditions, dentists prevent exacerbation of those conditions. In other circumstances, as discussed in more detail below, the dental care provided at the School's Pre-Doctoral Treatment Center may prevent the onset of chronic disease or contribute to the prompt diagnosis and treatment of chronic disease by other health care providers. The School's Pre-Doctoral Treatment Center is the core of the School's contribution to identifying, responding to and coordinating care for chronic medical and dental conditions.

The programs at the Pre-Doctoral Treatment Center that address specific chronic medical conditions are described below. Since inflammation, a component of many chronic dental diseases such as periodontal disease, is linked to several chronic medical conditions, we describe that relationship first.

Periodontal Disease and Other Chronic Dental Conditions

Periodontal disease is an inflammatory disease affecting the tissues surrounding the teeth. Periodontitis involves progressive loss of the alveolar bone around the teeth, and if left untreated, can lead to the loosening and loss of teeth. Periodontitis is very common, and is widely regarded as the second most common dental disease worldwide, after dental decay. In the United States, 30–50% of the population suffers from periodontitis at one time or another; about 10% of those have severe forms of the disease. Periodontitis occurs more often in people from the lower end of the socioeconomic scale than in those from the upper end of the socioeconomic scale.

The loss of bone and teeth due to periodontitis, and related pain and difficulties eating, have a serious adverse impact on patients' lives. While advanced or complex periodontal disease is

usually treated in a separate more specialized treatment center at the School, the Pre-Doctoral Treatment Center is the dental “home” of the School’s patients and prevention and treatment of periodontal disease is a key component of the curriculum and care.

In addition to the direct impact on oral health, this disease is considered to be a contributor to diabetes, heart disease and other chronic medical conditions. Below we discuss the impact of dental care on heart disease and diabetes, two chronic conditions seen in many of the School’s patients.

Heart Disease

An association exists between periodontal disease and cardiovascular disease. It seems from the available scientific evidence that interventional periodontal care remains invaluable not only for oral health but for general health as well.

High blood pressure has also been linked to heart disease. The school takes patients’ blood pressure at each visit. When high blood pressure is found, the dentists play a key role in identifying the medical significance, educating the patient as to the significance of the findings, referring the patient to their primary care physician or other appropriate provider and providing repeat measurements at subsequent visits. This interaction is taught in the School’s curriculum and enacted in the Pre-Doctoral Treatment Center by the student dentists under the supervision of faculty.

Diabetes

Periodontal disease is the most common dental disease affecting those living with diabetes, with nearly 22% of diagnosed diabetics suffering from periodontal disease. Diabetes affects oral health in a number of ways. Diabetics often have less saliva, causing the mouth to feel dry. Dry mouth can cause soreness, ulcers, infections, and tooth decay; smoking has been shown to worsen these problems. Dry mouth also can result in a higher risk of cavities, as individuals with diabetes often have less saliva to protect the teeth. Gums may become inflamed and bleed often, and wounds may be slow to heal. Diabetes may also interfere with tasting food and difficulty chewing.

Conversely, periodontal disease is recognized as impacting a diabetic’s ability to control blood glucose levels. Research suggests that treating periodontal disease can help improve blood sugar control in patients living with diabetes, decreasing the progression of the disease. Regular professional cleanings provided in the Pre-Doctoral Treatment Center are critical. Moreover, the thorough medical history and examination conducted in the Pre-Doctoral Treatment Center is as much a benefit to diabetic patients as to those with heart disease.

Cancer

General dentists play an important role in recognizing signs of head and neck cancer. It is standard procedure in the Pre-Doctoral Treatment Center to screen for head and neck cancers

by examining all aspects of the patient's oral cavity, including lips, cheek lining, gums, the tongue, the floor of the mouth and the roof of the mouth, as well as the throat (pharynx) and the tonsils. The dental student also feels each patient's jaw and neck for any lumps or abnormalities. Since this sort of screening is typically not done by primary care physicians, dentists will play a significant role in the early detection of these types of cancer.

When cancer is found or suspected, the student discusses the matter with supervising faculty dentists and may refer the patient to faculty dentists specializing in oral surgery, or back to their primary care provider as a referral for a consultation, depending upon the individual circumstances. The prompt detection and early treatment of head and neck cancers is a major contribution to a favorable outcome.

The student dentists also educate all patients on risk factors for oral cancers, for example, that men are twice as likely to get oral cancer as women, and that tobacco use and excessive alcohol consumption are factors that are associated with head and neck cancers.

Impact of the Proposed Project on Patients with Chronic Medical Conditions

The proposed project is designed to modernize a 46-year old building, support interdisciplinary oral health care and facilitate the group practice model of dental education. Patients with chronic conditions will benefit in three ways. First, they will benefit from the updated building and infrastructure, including the heating and cooling systems; the larger patient treatment (operatory) spaces; the easier access to imaging, and the light-filled, modern structure. The proposed project also benefits all patients by separating the educational facilities from the treatment areas, creating separate entrances for patient areas with dedicated elevators, contributing to patient privacy.

Second, patients with chronic conditions are expected to benefit particularly from the project's larger treatment room size and dedicated consultation rooms equipped with modern teleconference equipment. These aspects of the proposed project are designed for a variety of purposes, including consultation and coordination with patients' other providers; that is, of course, more often necessary for patients with a more complex health state, including chronic medical conditions.

Third, patients with chronic medical conditions benefit from dental treatment that incorporates a holistic approach to patient care. The School's pre-doctoral curriculum and its supervised clinical care emphasize coordination of the patient's oral health care with the patient's overall dental and physical health. Student providers in the Pre-Doctoral Treatment Center take a thorough medical history at the start of treatment; incorporate that information into the patient's treatment plan, which is discussed with and approved by the student's faculty advisor; coordinate with the patient's medical providers as needed; and monitor the patient's overall health at each visit by routinely taking the patient's blood pressure and other vital signs.

Measures of Success

The School measures the success of the services provided in its Pre-Doctoral Treatment Center in preventing and controlling chronic disease in each individual dental health record. In addition, as discussed in the Application and below, the School collects quality of life data on all patients as a means of measuring the impact of dental care on patients' lives. Finally, the School routinely surveys patients on their satisfaction with their care. The School anticipates that satisfaction will be measurable greater once the proposed project is completed.

2. Describe efforts to facilitate access to healthcare services by underserved patients. What processes are in place, and what measures are used with respect to helping patients to secure access to primary or other care providers? How does the clinic facilitate follow up treatment? Is compliance measured?

The School views access to dental and other healthcare services as a challenge best met by a variety of programs which, taken together, provide access to dental health care and dental screening; dental health education; and referral to dental and non-dental healthcare providers. These programs are aimed primarily at underserved populations throughout the greater Boston area.

The School facilitates access to dental services for underserved patients in several ways. First, the School offers excellent dental treatment at a fee schedule that is significantly lower than the average Massachusetts dental fee schedule, which allows persons of limited financial means to access regular dental care. An even lower fee schedule is offered to all MassHealth beneficiaries for procedures that MassHealth no longer covers ("Bump-Up program") to assist that population in affording dental care and lessen the impact of the cutback in coverage. The School's approach to its fee schedule is described in the Application for Determination of Need.

Second, the School's faculty members advocate through professional, public and community organizations for better access to dental and other health care, as described below.

Third, the School has developed extensive dental care programs in Boston area public schools and preschools that serve primarily low-income and underserved populations, also described below.

Fourth, the School offers treatment to patients with HIV and AIDS throughout New England through support from the Ryan White Care Act. A network for education and referral has been established and includes Cambridge Cares about AIDS, Boston University Medical Center, and the AIDS Support Group of Cape Cod.

Finally, the School organizes and/or partners with other organizations to conduct community outreach programs that provide dental education, screenings, and referrals to thousands of residents in the greater Boston area. Many of these programs are described below and in response to Questions 9, 10 and 11.

Advocacy for Public Health and Access to Health:

The School's faculty members are leaders in promoting public health, including efforts to expand access to dental and other health care. Examples of faculty members' activities include the following:

Dr. Michelle Henshaw:

- Massachusetts Association of Community Health Workers' Oral Health Advisory Board

- Boston Task Force on Improved Perinatal Clinical Care
- Healthy Birth Boston
- Massachusetts Coalition for Oral Health
- Advisory Boards the Massachusetts Early Childhood Oral Health Consortium
- Advisory Board of the Better Oral Health for Massachusetts Coalition

Kathy Lituri:

- Oral Health Consultant to ABCD Head Start and Early Head Start
- Health Advisory Board of the South Boston Head Start, Dorchester Early Head Start, and Roxbury Early Head Start
- Dental representative of the Boston Eligible Metropolitan Area (EMA) Planning Council and the Boston EMA Planning Committee

Dr. Corinna Culler:

- Massachusetts Early Childhood Oral Health Consortium
- Chair of the Surveillance Work Group for the Better Oral Health for Massachusetts Coalition

Dr. Mohammad Mourad:

- Lawrence Mayor's Oral Health Task Force
- Health Services Advisory Committee for Lawrence Community Day Care's Early Head Start Program

Dr. Gladys Carrasco:

- CAPIC Head Start Health Advisory Committee in Chelsea, Massachusetts
- Chelsea Family Network Advisory Council

School-Based Oral Health Programs

The School of Dental Medicine runs five citywide school-based oral health programs that operate in 62 schools and 21 preschools in Boston, Chelsea, Framingham, Natick, and Lawrence. These programs deliver preventive services to thousands of children, including oral health education, dental screenings, fluoride applications, and sealant placement. During the 2015-16 academic year, these programs served 17,880 children; of those, 16,374 children were provided oral health education, 5,889 received oral screenings, 5,799 received fluoride, and 4,516 dental sealants were placed for 1,486 children. Descriptions of some of the programs is provided below.

Chelsea Comprehensive School-Based Dental Program: For the 16th year in Chelsea, GSDM provided citywide comprehensive services including classroom education, dental screenings, dental sealant placement, fluoride varnish applications, and restorative dental care for children enrolled in Chelsea's five public elementary schools. Through partnerships with CAPIC Head Start and the Chelsea Family Network, services are also provided to many of Chelsea's preschoolers. This comprehensive oral health program is

included in the Agency for Healthcare Research and Quality's ***Health Care Innovations Exchange***, a national program designed to support health care professionals in sharing and adopting innovations that improve the delivery of care to underserved patients.

During the 2015-16 school year, this school-based program provided classroom oral health education to 2917 students in pre-kindergarten through grade four in Chelsea Public Schools. Dental screenings were provided to 1575 students, fluoride varnish treatments to 1558 students, and 904 dental sealants were placed for 305 first through fourth graders.

Located in the Williams Middle School, the CSDC gives care to Chelsea public school students regardless of their grade level or ability to pay for services. Many of the patients, who range in age from preschoolers to high school seniors, have never been to the dentist previously, and would have no other source of dental care if it were not for the CSDC. Five bilingual dentists devote time to treating patients in the clinic.

Framingham School Dental Program: GSDM operates a town-wide school-based oral health program in Framingham for grade school children within eight public elementary schools. During the 2015-16 school year, oral health education was provided to 2969 students in grades kindergarten through fourth grade. Additionally, 809 children received a dental screening and fluoride treatment. A total of 578 sealants were placed for 176 children.

Lawrence School Dental Program: Children in all nine elementary schools and four middle schools in the City of Lawrence are provided oral health education, dental screenings, fluoride applications, and sealants. In total, GSDM faculty and staff presented oral health education to 5596 students, dental screenings and fluoride for 1591 students, and 1077 sealants were placed on 344 students.

Natick School Dental Program: GSDM runs a town-wide school-based dental program for grade school children within all five public elementary schools in Natick. During the 2015-16 school year, 544 children received oral health education, 99 received oral screenings and fluoride, and 120 sealants were placed on 34 children.

Orchard Garden Comprehensive School-Based Dental Program: GSDM provided comprehensive services including classroom education, dental screenings, dental sealant placement, fluoride varnish applications, and restorative dental care for children enrolled in the Orchard Garden public elementary school.

Smart Smiles in Boston Public Schools: During the 2015-16 school year, GSDM provided education for 3726 children; dental screenings, fluoride application and dental cleanings for 1282 children; and 1131 sealants were provided to 372 children in 31 Boston Public Schools including: Beethoven, Boston Teachers Union, Clap, Conley, Dudley Charter, EDCO Youth Alternative, English High, Everett, Grew, Hale, Haley, Henderson Lower,

Higginson-Lewis, Holmes, Hurley, Kilmer Lower, Kilmer Upper, Lyndon, Mason, McKay, McCormack Middle School, Mission Hill, Mozart, Orchard Gardens, Perkins, Roosevelt Lower, Roosevelt Upper, Sumner, Trotter, Winthrop, and Young Achievers. In addition to preventive services, restorations were provided at the Orchard Gardens School during the 2015-16 school year. Supervised by GPS faculty, 4 pre-doctoral students worked at this school as part of their pediatric rotation. Three hundred sixty restorations were completed for 141 children.

Preschool-Based Oral Health Programs

GSDM's community outreach programs provided screenings and/or oral health education to over 2000 children in Boston area preschools, day care centers, Early Head Start, and Head Start programs and oral health education to preschool administrators, staff, teachers, and parents.

Action for Boston Community Development (ABCD) Early Head Start (EHS): GSDM faculty conducted Early Head Start oral health examinations, fluoride varnish, and referrals for children enrolled in eight ABCD Early Head Start Centers located in Bradshaw, Dorchester, East Boston, Jamaica Plain, Parker Hill, Roxbury, South Boston, and the South End.

Chelsea Family Network: GSDM faculty provided oral health education and dental screenings for 30 children between the ages of three and five years at Kangaroo's Pouch during the 2015-2016 school year.

Community Action Programs Inter-City (CAPIC) Head Start: Dental screenings and fluoride applications were provided twice during the 2015-2016 school year for 265 Head Start children ages three to five years enrolled in the CAPIC Head Start (Chelsea, Revere, Winthrop) Program.

Crispus Attucks Children's Center: GSDM faculty and 12 GSDM students visited the Crispus Attucks Children's Center in Dorchester as part of the school-based dental outreach program. For four days, the team went into six classrooms of children ages three to six years old. During the visits, the children took part in circle time where the GSDM students engaged them in hands-on dental health lessons. The 190 children participating received dental screenings and oral hygiene supplies.

Framingham South Middlesex Opportunity Council (SMOC) Head Start: As a part of the Framingham School Dental Program, 190 preschool age children were provided oral health education, and 86 children received dental screenings and fluoride treatments.

Greater Lawrence Community Action Council Child Care Center: Oral health education was provided for 162 preschool children, and dental screenings and fluoride varnish was

applied for 40 children enrolled at the Greater Lawrence Community Action Council Child Care Center.

Government Center Child Care Corporation: GSDM faculty presented an oral health lesson to 28 preschool children enrolled in two classes at the Government Center Child Care Corporation in Boston.

Lawrence Community Day Care Early Head Start: Oral exams and fluoride varnish treatments were conducted for 67 infants and toddlers enrolled in Lawrence Community Day Care's Early Head Start Program.

Nurtury (formerly known as Associated Early Care and Education): GSDM pre-doctoral students joined GSDM faculty for nine days of dental outreach at four sites run by Nurtury, a preschool-based program serving infants, toddlers, and preschool-aged children. GSDM students engaged the children with the use of puppets, taught them a tooth brushing song, and provided screenings and fluoride varnish applications. This activity is linked with the third year pre-doctoral Pediatric Dentistry course for third year pre-doctoral students and is designed to provide pre-doctoral students additional experience with pediatric patients in non-clinical settings and to improve the oral health of preschool age children.

Pine Village Preschool: GSDM faculty presented an oral health lesson to 30 preschool children enrolled in three classes at the Pine Village Preschool in Boston's South End.

Project Hope: Seventeen preschool children at Project Hope received oral health screenings, fluoride, and oral health lessons.

Healing Our Community Collaborative (HOCC) Collaborative Health Fair: HOCC is a non-profit organization for women infected with, affected by, or at risk for HIV/AIDS. Through ongoing HIV health education and prevention programming, HOCC strives to help eliminate health disparities among women without access to optimal health care. GSDM students celebrated National Women's Checkup Day by participating in the Healing Our Community Collaborative 6th Annual Health Fair. The HOCC Health Fair was an opportunity for volunteers to meet with women and encourage regular checkups in order to improve their overall health and help lower the risk of health conditions through early detection of heart disease, diabetes, Hepatitis-C, cancer, mental health illnesses, sexually transmitted infections, HIV infection, and other conditions. GSDM students provided oral health education to women by showing proper brushing techniques and providing information about oral care. Over 100 women participated in the event, which was held at the Old South Church on Boylston Street in Boston.

Referral and Follow Up

The Pre-Doctoral Treatment Center follow-up care or referral for all patients it sees. Generally, follow up appointments are made in order to follow-up on specific procedures, or for regular dental screening and cleaning, as the patient is leaving a treatment or diagnostic session, and reminders are sent as needed to promote compliance.

The School is the dental participant in a network for education and health care referral for patients with HIV and AIDS throughout New England. The network includes Cambridge Cares about AIDS, Boston University Medical Center, and the AIDS Support Group of Cape Cod. It is an excellent source for referrals to non-dental providers for persons with HIV/AIDS.

In the school-based programs described above where dental screening and preventive care is offered, referral to another provider is made when appropriate. For example, if a patient needs restorative work beyond the scope of the program, the program's faculty and student providers inform the child's parent of the need and recommend an appropriate provider for the additional care. Similarly, if a patient needs general medical care, the program's faculty and student providers are familiar with the community and its resources and can make appropriate referrals. When providing care in Boston, the providers would inform patients about dental services available at the School and medical services at nearby Boston Medical Center, which is a safety net hospital and offers financial assistance. Since the School does not use its community programs as a referral source, it only promotes the School's services when it makes sense for the patient. For patients living at a distance from Boston, referral would be made to a local, easily accessed provider. Referrals are frequently made to community health centers, as many provide care at no or a low cost. The School does not follow up to learn whether the patients acted on the recommendation.

3. Please describe the response to or referral of patients presenting with substance use disorder.

The School has led education in safe prescribing practices in its pre-doctoral curriculum. Before undertaking responsibility for patients in the Pre-Doctoral Treatment Center, students are taught safe management of acute dental pain and opioid prescribing. The first mandatory course (Pain Control I) is taken in the second year of pre-doctoral training, and provides the fundamentals related to pain management: anatomy, neurophysiology, pharmacology, patient evaluation (including evaluating the risk of substance abuse and recognizing drug-seeking behavior), management of medical emergencies and prescription writing. Classroom training is supplemented by clinical exercises prior to the students undertaking responsibility for patients in the Pre-Doctoral Treatment Center. Pain Control II is mandatory in the third year, and provides more depth in pain and anxiety control, including psychological factors and the recognition of substance abuse disorders and drug seeking behavior.

Please note, however, that in the Pre-Doctoral Treatment Center, the students who provide care are typically 3rd and 4th year pre-doctoral students who do not (and cannot) order Schedule II and higher drugs on their own. They do, however, assess patient's pain control needs and propose a treatment plan, including pain control as appropriate, to their faculty supervisors, who are licensed dentists and are therefore involved with every narcotic (or other) prescription. This includes recognition of behavior indicating substance abuse, or a risk of abuse, again with faculty supervision.

Cognizant of the growing epidemic of narcotic abuse, the School teaches a conservative approach to the use of narcotics. That approach is reflected in practice at the Pre-Doctoral Treatment Center, where only 24 prescriptions were written in 2016 for acetaminophen/codeine, 34 for oxycodone/acetaminophen and one for tramadol. The numbers for 2017 to date are even lower: 7 prescriptions for acetaminophen/codeine, 2 for oxycodone/acetaminophen and one for tramadol.

When indications of substance abuse are recognized, the Pre-Doctoral students discuss the matter with their faculty supervisors. There is not a single course of action, as every case is considered on its own merits, but generally patients presenting with known or suspected substance abuse disorders are referred to their primary care providers for a medical assessment and referral to substance abuse treatment. This may involve discussions with the primary care provider, and/or furnishing of copies of the dental records that may be pertinent to substance abuse. Patients who do not have a primary care provider are referred to the practices and community programs that best meet their needs, as described in the response to Question 2.

Pre-doctoral dental students are also trained to recognize drug overdose and other medical emergencies, and in the use of naloxone to treat a drug overdose. This education is described in response to Question 5.

4. What are the referral patterns for patients coming to the clinic? What if any changes and/or improvements in referral patterns are anticipated as a result of this project? Describe any positive impact on interdisciplinary practice, including helping to support access by dental patients to comprehensive health care, resulting from this project?

While the GSDM Dental Treatment Centers do not track the referral patterns for patients coming to the clinic, GSDM has observed that most patients choose the School's treatment centers based on a friend or family member recommendation, or based on information about the Pre-Doctoral Treatment Center services on the School's website. We believe a number of MassHealth patients seek our services because of our special pricing on services formerly covered under MassHealth, and patients with HIV/AIDS may select us because we provide a broader range of services under the Ryan White grant program than some other dental facilities, and due to our participation in a medical referral network for persons with HIV/AIDS. Some patients prefer to be treated in an academic environment and have heard of our reputation for excellent care. Finally, some seek treatment with a particular student at the Pre-Doctoral Treatment Center.

The School does not expect any significant changes in referral patterns as a result of the proposed project because no new services are being added; the proposed project does not significantly add to capacity and the fee schedule will not change as a result of the proposed project. The School foresees increased patient satisfaction with overall patient experience once its facility is updated and improved by the proposed project. This may result in patients referring friends and family when they may not have done so before.

The School anticipates the proposed project will have a positive effect on interdisciplinary practice, including helping to support access by dental patients to comprehensive health care and collaboration by the School's providers with other health care professionals. In fact, this was one of the driving goals behind the planning process. The School's accrediting body requires the School to ensure its graduates are competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care. This includes ensuring students understand the roles of various members of the health care team. It also requires clinical educational experiences that involve working with students and practitioners in other healthcare professions so that they can learn to coordinate patient care within the health care system relevant to dentistry.

Therefore, the proposed facility was designed to include collaborative spaces to allow the pre-doctoral student clinicians to interact with each other, with trainees and faculty in the post-doctoral dental specialties, as well as with medical, public health, nursing, pharmacy, physical therapy and other health care providers. Philosophically, GSDM strives towards providing education through live, or as close to live, interaction with other health care professionals as possible. Live interactions require collaboration space for discussions, and sufficient space around the patient's chair for several providers to confer. Therefore, the School sought to design a clinical environment where this level of inter-professional education and care can occur.

Not all collaborations will be in person. Therefore, the School prioritized facilities for electronic communication with other members of the patients' health care team. These include conference rooms, collaboration rooms, as well as space and equipment for telemedicine services. The proposed project incorporates significant facilities for audio-visual communications that will support interdisciplinary collaboration.

Studies have demonstrated that the integration of oral health care into a patient's total health care can improve a patient's overall health and decrease overall health care costs. In this way, the Pre-Doctoral Treatment Center will contribute to the transformation of health care delivery and the provision of safe, efficient, high quality care, available to all, at a relatively low cost both for its existing patients and for the patients of the dentists being educated in this model.

5. With the recent studies showing the dental profession being the third leading prescribers of opioids, and the leading prescribers in the 10-19-year-old age cohort, describe efforts to train dentists in the prescribing of opioids for pain.

(<https://www.ncbi.nlm.nih.gov/entrez/eutils/efetch.fcgi?dbfrom=pubmed&retmode=ref&cmd=prlinks&id=21467282>)

The School has been a leader in education of dentists in safe pain management and responsible use of opioids. In collaboration with the Boston University School of Medicine, the School developed two online courses to train dentists in safely prescribing opioids for pain. These courses are taken by all of the School's pre-doctoral students as well as by community dentists and health care providers. The first course, "Safe and Effective Opioid Prescribing for Acute Dental Pain," http://www.opioidprescribing.com/dental_landing, focuses on effective communication skills; the potential risks and benefits of opioids; and when and how to initiate, maintain, modify, continue or discontinue opioid therapy. It also teaches indications of drug seeking behavior and substance abuse disorders in patients, while emphasizing the nuanced nature of assessing behavior when patients do not self-identify.

The second online course, "Prescribe to Prevent, Overdose Prevention and Naloxone Rescue Kits for Pharmacists and Prescribers," http://www.opioidprescribing.com/naloxone_module_1-landing, was developed for prescribers (including dentists), pharmacists, and other healthcare providers to help them prevent overdoses among their patients and their social networks. This course provides focused instruction on the epidemiology of overdose; demonstrates the importance of dentists and others in educating patients about overdose risk reduction; and teaches proper use of naloxone rescue kits.

When completed together, these online courses have been accepted by the Massachusetts Board of Registration in Dentistry as evidence that appropriate training has occurred in pain management and pain medication prescribing. It is worth noting that these online courses are offered free of charge, and that they were the first courses approved by the Department of Public Health to satisfy the licensing requirement for education in narcotic prescriptions and substance abuse.

As described in response to Question 3, the GSDM Pre-Doctoral Treatment Center approaches the prescription of narcotics very conservatively; that is particularly so for minors. A review of our records indicates that in calendar years 2016 and 2017, no narcotic prescriptions were written for patients under age 17, and only 6 were written in this two-year period for 17- to 19-year-old patients. In 2016, there were 2 prescriptions written for acetaminophen/codeine (one for a 17-year old and one for a 19-year old) and one prescription for hydrocodone/acetaminophen for a 19-year old. In calendar year 2017, three prescriptions have been written for acetaminophen/codeine, one each for patients 17, 18 and 19 years old.

6. Please provide the OHRQoL measures that the school uses and what steps are taken for the evaluation and resolution of systemic versus individual patient problems encountered.

The following Oral Health Quality of Life questions are asked of patients before and after a treatment period:

- Do you avoid going out because of teeth and gums?
- Do you avoid eating certain foods because of teeth and gums?
- Do you have pain and distress because of teeth and gums?
- Are you nervous or self-conscious because of teeth and gums?
- Do you have problems with dentures?
- Do you have problems with being able to relax because of teeth and gums?

Ultimately, the Dean and the School's Executive Committee (composed of the Dean and Assistant/Associate Deans as well as the Chairs of each of the departments) are responsible for the quality of care in the Pre-Doctoral Treatment Center. The School's Quality Assurance Committee reviews and evaluates the outcomes measures, and is responsible for identifying and addressing any systemic issues. This committee reports significant developments to the School's Executive Committee at its monthly meetings.

7. Describe the impact of the project on the patient experience, from the first encounter to the follow-up care, if any. How will you monitor the impact of this project on your patient panel, specifically the access of those underserved and/or high acuity patients to oral health and other medical care?

The School believes the proposed project will have an enormous and positive impact on the patient experience. Overall, the proposed project is designed to significantly improve the patient experience by facilitating collaborative, interdisciplinary patient-centered care in a pleasant and comfortable environment.

Architecturally, the facility will be modern, attractive and welcoming to all who enter it. Many patients are anxious about dental treatments, and that anxiety is exacerbated in a crowded environment, with inadequate heating, cooling and elevator infrastructure and treatment areas (operatories) that are cramped and crowded. The School anticipates an overall higher level of comfort for all patients.

Currently, patients share an entrance and over-taxed elevators with staff, students and faculty. Due to the aging heating and air conditioning systems, conditions in the treatment rooms are not, at present, always ideal and cannot be easily adjusted. The proposed project incorporates modern, efficient and effective air conditioning.

The proposed project creates a new entrance for patients on Albany Street. This entrance will be more visible than the current East Newton Street entrance that 'academic' entrance will be reserved for staff, students, residents and faculty). Patients will enter through a light-filled lobby, and will find dedicated patient elevators. This separation of spaces will enhance patient privacy and make patient arrival more efficient, eliminating the delays sometimes caused by inadequate elevator availability.

Patients will no longer need to travel to other floors for radiology and endodontics because the proposed project includes adequate space for radiology, emergency and endodontic services. The design allows patients to receive all of their care within a well-defined, specific area within the Pre-Doctoral Treatment Center rather than traveling to and from the 1st floor as is currently necessary. This improvement is also anticipated to decrease the anxiety that accompanies changes in setting, and will increase efficiency of care, reducing overall time.

Similarly, patients needing endodontic services (root canals) will be able to have those services provided within the Pre-Doctoral Treatment Center. Two chairs in each Group Practice will be "multi-functional," i.e., they can support general dentistry and endodontics. Scheduling of root canals will be easier and the patients will be able to have that service in a convenient and familiar environment.

Patients will benefit as well from a design that facilitates interactions with the patient's primary care and other providers. The larger treatment spaces will comfortably allow up to 4

professionals to participate in or observe care. Crowding is another factor that may increase anxiety in patients, so the larger space will help to ease anxiety. In addition, patients clearly benefit from interdisciplinary collaboration, and the new space is designed to support that.

The proposed project significantly increases the number of conference and collaboration rooms, with up-to-date electronic communications facilities to allow for easier conferencing with other health care providers.

In terms of measuring the impact of the proposed project, the School anticipates responses to its patient satisfaction surveys will show improved patient satisfaction.

8. What is your patient panel mix in terms of acuity – the mix of patients needing restorative or other complex care versus those needing more general dentistry?

The Pre-Doctoral Treatment Center provides general dentistry treatments including a thorough examination, diagnostic imaging, preventive and restorative care (filling cavities and simple crowns). Moreover, even patients with more complex needs typically begin treatment in the Pre-Doctoral Treatment Center before being referred to one of the School's specialty clinics, and after receiving treatment in a specialty clinic, those patients typically return to the Pre-Doctoral Treatment Center. The School believes screening in this general dentistry setting provides the most comprehensive care to all patients. Fewer than 2% of new patients begin care outside of the Pre-Doctoral Treatment Center, most commonly prosthodontic patients who may be seen only in the Prosthodontic Treatment Center, where post-doctoral residents provide services under the supervision of faculty dentists.

9. What is your payer mix? Do you turn patients away? If so, please describe any policies for declining treatment to a patient.

- Self-pay: 59.98%
- MassHealth: 34.6%
- Private insurance: 2.34%
- Ryan White: 1.93%
- Medicare: 1.08%

It is sometimes necessary to refer patients to other providers, rather than treating them at the Pre-Doctoral Treatment Center. That typically occurs in the following circumstances:

- When patients need dental services not available in the Pre-Doctoral Treatment Center (though that is rare), the dentists will refer the patient to another provider offering the needed services. If it is a service provided in one of the School's specialty Treatment Centers, referral is typically to one of those Patient Treatment Centers. As noted above, even patients with complex dental needs typically begin treatment in the Pre-Doctoral Treatment Center and return there when their specialty procedures are completed.
- When patients decline to have students provide their care, they are referred to GSDM's Dental Health Center at 930 Commonwealth Avenue or on the 7th floor at 100 East Newton where care is provided by dentists, and not by dental students, residents or fellows.
- When patients are unable to pay the Pre-Doctoral Treatment Center's fees, they typically are offered a monthly payment plan. If they cannot manage even monthly payments, they are referred to clinics that may meet their needs. Depending upon the patient's geographical preference, the School would refer them to a community health center that provides low or no fee care and other programs such as Pine Street Inn and Rosie's Place, which offer or coordinate health care services for eligible populations. Through its Office of Global and Population Health, the School is well aware of community resources, and is therefore in a good position to refer patients for care. Referrals may well be made to one of the School's GPH programs described in the response to Question 2, or programs available at partner organizations.
- While the Pre-Doctoral Treatment Center does not provide free care, the School's Office of Global and Populations Health runs many programs that do provide free care, and is sometimes able to refer patients to those programs if they are eligible. Many of these programs are highlighted in the School's responses to Questions 2, 10 and 11.

10. Explain the community outreach work that the school and its students are involved in to address the needs of the patient panel and the health priority needs identified by the Department.

Community outreach and community based oral health promotion have been a cornerstone of the School since its inception. Improving overall population health is a key component of the School's mission. GSDM's Global and Population Health ("GPH"), formerly the Division of Community Health Programs, is dedicated to enhancing students' educational experience and improving our community's oral health. This is accomplished through strategic partnering, health education and promotion, and implementation of public health initiatives.

In addition to GSDM's work in Boston area elementary schools and preschools described above, the School was involved in 117 oral health promotion programs, initiatives, school field trips, and other community-based outreach activities. These programs and events have reached individuals of very diverse backgrounds and educational levels, including populations that have difficulties accessing oral health services such as the homeless, those with special needs, the financially disadvantaged, the uninsured and underinsured, elders, refugees, and individuals with HIV.

Examples of some of the School's many community programs follow. Please see also the programs listed in response to Questions 2, 9 and 11.

Action for Boston Community Development (ABCD) Early Head Start (EHS) Teacher Workshops: Held at the EHS Child Care Centers located in Charlestown, East Boston, and Dorchester, staff and the ABCD health manager participated in an informative PowerPoint presentation and engaging discussion regarding information and guidance on oral health issues specific to preschool children.

American Student Dental Association (ASDA) Winter Clothing & Oral Health Kit Drive: Members of GSDM's ASDA Community Outreach Committee held a winter clothing and oral health kit drive to benefit Boston's homeless and underserved. These were given to Rosie's Place and to the BU Medical School for distribution through its Outreach Van.

Boston Medical Center Diabetes Group Oral Health Presentation: A GSDM student and a faculty member led a workshop on oral health recommendations for diabetes management for a group of people with diabetes who meet monthly for support.

Framingham South Middlesex Opportunity Council (SMOC) Head Start Parents Night: As part of the Framingham School-based Oral Health Program, two oral health information sessions were presented to 70 SMOC staff and parents of enrolled children, providing an opportunity to educate both staff and parents about oral health and to increase parents' awareness of the many community services available to them in the Framingham area.

Healthy Smile, Healthy You: GSDM's Muslim Student Association, in collaboration with the Islamic Society of Boston Cultural Center in Boston and Al Huda Society in Chelsea organized two *Healthy Smile, Healthy You* events for their local communities. At the two events, 49 GSDM students, faculty, and volunteers provided a wide range of oral health promotion activities, including 109 screenings and referrals.

McGlynn Elementary Kindergarten Oral Health Presentation: Classroom dental education was provided to kindergarten children enrolled at McGlynn Elementary School in Medford. The children enjoyed interactive activities such as counting and brushing the teeth of a dental puppet, and goodie bags were distributed at completion of the program.

Notre Dame Educational Center (NDEC) Oral Health Promotion: GSDM faculty and students from the BU chapter of the American Student Dental Association served at the annual Notre Dame Educational Center Dental Health Fair, where they conducted dental screenings and promoted oral health. The volunteers gave one-on-one oral health instructions, demonstrated flossing, and had visitors practice on a model. Since NDEC students are also eligible to enroll in the Boston University GSDM student dental health plan, the benefits of enrollment in the plan were explained.

St. Catherine of Siena School 4th Grade Classroom Education: GSDM students visited a fourth-grade classroom at St. Catherine of Siena School in Norwood to talk with the children about oral health. A variety of interactive educational materials were used and goodie bags were handed out at the conclusion of the program.

Susan S. Bailis Assisted Living Oral Health Presentation: Two events were held at Susan S. Bailis Assisted Living in Boston. GSDM students gave a presentation and question-answer session focusing on the importance of oral health and oral hygiene techniques. Volunteers and residents played BINGO, and toothbrushes and toothpaste were given out as prizes.

Work Inc. Oral Health Workshops: Twice in the spring GSDM volunteers visited Work, Inc., a nationally recognized community-based program for individuals with disabilities. The first workshop targeted the adults receiving support from Work, Inc. while the second workshop was for the caregivers at the agency. Each session provided an opportunity for attendees to receive oral hygiene and dental health recommendations and interact with GSDM faculty and students.

Yawkey Club of Roxbury Passport to a Healthy Smile Dental Health Fair: The GSDM chapter of the American Student Dental Association (ASDA) participated in two events for children who attend the Yawkey Club of Roxbury, a Boys and Girls Club of Boston. During the first event, student volunteers prepared the educational materials and games for the Yawkey Club Health Fair and for the second event, the students engaged

the 200 children at the fair with the interactive educational activities they had prepared and gave out the goodie bags they had assembled. The GSDM chapter of ASDA works with Global and Population Health to host this event each year as part of Give Kids a Smile, a nationwide initiative co-sponsored by the American Dental Association. At this annual event, children visit five dental themed tables to learn about proper brushing and flossing; healthy eating; tooth protection such as mouth guards, fluoride, and sealants; smoking and oral piercing; and careers in dental medicine. In addition, on two separate occasions in August of 2015, GSDM students served at the Yawkey Club of Roxbury during GSDM orientation.

11. Discuss the role of the students in the community, including in the context of supporting referral to care providers and improving care coordination.

Community service programs at the School provide indispensable learning opportunities for students. The School's community outreach activities reflect its belief that opening the eyes of future health care professionals to health disparities in our nation is a vital part of a complete education in dental medicine. In 2015-2016, 69% of GSDM's pre-doctoral students (415/600) participated in school-sponsored service activities. Additionally, 15 postdoctoral students/residents and 107 faculty and staff volunteered to serve in one or more community outreach activities.

The School's community programs are overseen by Global and Population Health (described above). GPH's strategy is to improve community health while providing important educational experiences through strategic partnerships with 145 organizations. These programs provide health education and promotion, as well as dental screenings, preventive care and referral to providers for follow up care.

In addition to GSDM's work in Boston area elementary schools and preschools, the School was involved in 117 oral health promotion programs and other community-based outreach activities. These programs and events have reached individuals of very diverse backgrounds and educational levels, including populations that have difficulties accessing oral health services such as the homeless, those with special needs, veterans, the financially disadvantaged, the uninsured and underinsured, elders, refugees, and individuals with HIV. At the same time, GSDM's pre-dental, pre-doctoral, and post-doctoral students have been trained to provide oral health services for these underserved, at-risk populations.

Examples of such programs, staffed primarily by students but on occasion in collaboration with faculty and staff, are below. Please also see information provided in response to questions 2, 9, and 10.

Nurtury (formerly known as Associated Early Care and Education): GSDM pre-doctoral students joined GSDM faculty for nine days of dental outreach at four sites run by Nurtury, a preschool-based program serving infants, toddlers, and preschool-aged children. GSDM students engaged the children with the use of puppets, taught them a tooth brushing song, and provided screenings and fluoride varnish applications. This activity is linked with the third year pre-doctoral Pediatric Dentistry course for third year pre-doctoral students and second year students and is designed to provide pre-doctoral students additional experience with pediatric patients in non-clinical settings and improve the oral health of preschool age children.

Baldwin Early Learning Pilot Academy Steps for Success: Oral health promotion activities were carried out and dental screenings offered to the 50 three- to six-year-old children attending this Baldwin School event. Interactive oral health games and activities were enjoyed by children and their parents.

Bay Cove Human Services Wellness Fair: Bay Cove Human Services is a private, non-profit corporation that provides a wide range of services to individuals and their families with developmental disabilities, aging, mental illness, and drug and alcohol addiction. Bay Cove holds wellness fairs to improve health awareness through education and prevention. At this year's annual fair held at the Gill Wellness Center in Jamaica Plain, oral health promotion activities were provided by members of GSDM's student chapter of the American Association of Public Health Dentistry and Global and Population Health faculty. The volunteers offered oral health education, screenings, and referrals to the fairgoers.

Boston Public Schools Beethoven School Family Health Fair: This community health event held at the Beethoven School in West Roxbury brought families together to learn about a variety of health topics. GSDM faculty and staff distributed educational materials and talked with parents about GSDM's Smart Smiles School-based Oral Health Program. Oral health promotion activities included a demonstration of proper tooth brushing techniques. Goodie bags with oral hygiene supplies were given out at the end of the program.

Open House Events held at Holmes, Clap, Hurley, Winthrop, Henderson Upper, Perkins, and Everett Schools. GSDM promoted the Smart Smiles School-based Oral Health Program and emphasized the importance of good oral health at each of these schools' back-to-school events. Hundreds of families attended these open houses, which featured a wide variety of community-based organizations presenting health information of interest to families with grade school children.

JF Kennedy Family Wellness Event: The JF Kennedy Wellness Night featured numerous organizations with health and wellness displays and educational discussions and handouts. GSDM set up a table with toothbrushes, toothpaste, and tooth models for children to practice their brushing techniques. Tips for maintaining good oral health were presented to each attendee. Over 150 parents and children benefitted from the oral health materials and presentation.

John Winthrop School's Family Night: John Winthrop School's Health & Wellness Committee utilized a raffle system to encourage the 40 families in attendance to visit each of the healthy living workshops. Families were allowed to participate in the raffle after they had received stamps, marks, or stickers at every workshop, ensuring that all in attendance received the full benefit of each fun and informative station. The workshops included Healthy Snacks, Oral Health, Gardening Tips and Exercise.

Brazilian Independence Day Outdoor Festival: GSDM volunteers participated in the annual Brazilian Independence Day Festival which brings area residents together to experience Brazilian culture, history and heritage. Many health-related organizations were on site to offer various health screenings for attendees. Fourteen GSDM faculty

and students provided 20 dental screenings and saw dozens more attendees, promoting oral health and handing out educational brochures, toothbrushes, and toothpaste. The GSDM volunteers worked alongside volunteers from the Massachusetts Alliance of Portuguese Speakers (MAPS), who offered free HIV and Hepatitis C screenings.

Charles Yancey Book Fair and MY CHIP (Child ID Program) Event: Six members of the GSDM community donated their time to the 29th Annual Charles C. Yancey Book Fair. This annual event is held at the Reggie Lewis Track and Athletic Center promotes literacy and encourages the love of reading among Boston youth. More than 100 families were in attendance. GSDM faculty and students obtained bite registrations and DNA samples for the Child Identification Program (MY CHIP), while others were stationed at a dental resource table to promote oral health to school-aged children and their families.

Open House for Berkowitz and Hooks Elementary Schools: GSDM faculty introduced the Chelsea School-based Oral Health Program to 200 parents of first graders in attendance at these two open house events. They presented the importance of preventive oral care by showing parents pictures of sealants and fluoride varnish and explaining how and why these are used to protect children's teeth. An emphasis was placed on the importance of follow up care with a dentist when dental treatment is needed.

Chelsea Back to School Celebration: Two thousand students and parents attended the annual Chelsea Back to School Celebration held at Williams Middle School in Chelsea. Forty school and community groups welcomed students back to school with games, prizes, giveaways, and resource information. Four GSDM staff members were on hand to talk with guests about oral health, GSDM's School-based Oral Health Program, and the Chelsea School Dental Center.

MGH Chelsea Summer Safety Fair: The MGH Chelsea Health Center offered its 19th Annual Summer Safety Fair in June. GSDM's Oral Health School-based Program faculty and staff provided oral health education, promoted the use of mouth guards when playing sports, and distributed toothbrushes and toothpaste to about 300 individuals. Volunteers passed out flyers and reminded the community that the Chelsea School Dental Center is available for all Chelsea Public School students. They also helped the Masons obtain bite registrations and DNA samples for their Child Identification Program.

Christmas in the City (CITC): GSDM faculty, students, and staff joined thousands of volunteers at the 23rd annual Christmas in the City. Held at the Boston Convention & Exhibition Center, this festive event benefited 3800 homeless children, parents, and caregivers from Boston area homeless shelters. The holiday party featured a banquet, live entertainment, and a "Winter Wonderland" with games, rides, a petting zoo, and other kid-friendly activities. This marks the fourth year that GSDM participated in CITC. Faculty and students offered dental screenings and helped address oral issues pertaining to individual children. They also promoted oral health by providing age-

appropriate, hands-on activities and distributed toothbrushes and information on proper oral hygiene.

Countdown to Kindergarten Boston: Twenty-seven members of the GSDM community volunteered their time at the 16th Annual Countdown to Kindergarten Celebration, held at the Boston Children's Museum. Countdown to Kindergarten Boston is a non-profit collaborative that offers resources and events throughout the year to celebrate and support the transition into kindergarten. This was GSDM's 12th year participating in the event. Volunteers provided dental screenings and led oral health activities for parents and kids in attendance, including instructing the children on brushing techniques and teaching about oral health through arts and crafts. Parents also had the opportunity to talk to the volunteers and ask questions while their children were learning. The evening was a huge success for both Countdown to Kindergarten and GSDM. After three hours, GSDM volunteers had performed 90 dental screenings and interacted with hundreds of families.

East Boston Kiwanis Bicycle Safety Rodeo: GSDM faculty and staff served at the annual East Boston Bicycle Safety Rodeo at the Salesian Boys and Girls Club. Approximately 300 families attended. Children received free bicycle safety checks while local organizations distributed information about their services. GSDM provided resource materials about the importance of oral health and the use of mouth guards, and goodie bags were given to all who visited the table.

Father's Family Fun Day: Six GSDM volunteers served at the Boston Public Health Commission's two Father's Family Fun Days, which took place at Harambee Park in Dorchester in the fall of 2015 and the summer of 2016. The purpose of these events was to highlight the importance of fatherhood by attempting to identify, engage, and support fathers' relationships with their children. GSDM volunteers conducted dental screenings, provided oral health information, promoted positive oral health habits, and provided interactive age-appropriate health promotion activities to all attendees.

Healing Our Community Collaborative *Women, Oral Health, and HIV Connection*: The GSDM community volunteered at the *Women, Oral Health, and HIV Connection* event sponsored by Healing Our Community Collaborative. The volunteer event, a collaborative effort between the GSDM Student Chapter of the American Association of Public Health Dentistry and the Boston Public Health Commission HIV Dental Program, attracted 80 at-risk women from the community. The women in attendance participated in oral health discussions and many received screenings from the GSDM volunteers.

Healthy Baby/Healthy Child (HB/HC) Summer Camp Picnic: The Healthy Baby/Healthy Child Program is an innovative home-visiting program whose mission is to promote the health and wellbeing of women, children, and families in Boston, particularly those living in communities that are disproportionately impacted by infant mortality and other

health disparities. Each year GSDM participates in the Boston Public Health Commission's HB/HC summer camp picnic activities, and this year three GSDM students joined GSDM faculty at Stony Brook Reservation in Hyde Park to promote oral health, offer fun interactive children's activities, provide dental screenings, and hand out free toothbrushes and toothpaste to families in attendance.

Frost Middle School Healthy Living Expo: The City of Lawrence held its *Healthy Living Expo* at the Frost Middle School. Over 25 organizations were at the school to promote a healthy lifestyle to the Lawrence community. GSDM's interactive activities included puppet shows, games, and educational materials teaching the importance of proper oral hygiene, a healthy diet, regularly scheduled dental visits, preventive measures for tooth decay, dental sealants, healthy eating, periodontal disease, and tobacco avoidance/cessation.

Lawrence Community Resource Fair – Fiesta de Salud: The Greater Lawrence Community Action Council held a community resource fair for the families of the Greater Lawrence area. The purpose of the fair was to educate residents about the various resources available in the Lawrence community to help put families on the road to success. GSDM's faculty and staff were on hand to talk with participants about oral health, healthy eating, and oral hygiene and to discuss the work of its school-based Oral Health Program in Lawrence. About 500 families participated in this highly successful event.

Leventhal-Sidman Jewish Community Center (JCC) Wellness Expo: GSDM members participated in the JCC Wellness Expo in Newton, which provided wellness and fitness activities for the whole family, including everything from expert running advice to a make-your-own-smoothie station. The Alpha Omega-sponsored GSDM table was staffed by students, faculty, and alumni. Volunteers handed out toothbrushes and toothpaste and provided oral hygiene instructions to visitors. Oral health promotion posters were displayed, and coloring books and brochures about a child's first visit to the dentist were distributed.

Massachusetts Stand Down: Massachusetts Stand Down, co-sponsored by Volunteers of America and the Department of Veterans Affairs, is a community program designed to help homeless and at-risk veterans. Held toward the end of August, the annual daylong event gives veterans in need a chance to receive food, shelter, clothing, health services, and more. This year the event was held at the International Brotherhood of Electrical Workers (IBEW) 103 in Dorchester. Thirty-four GSDM volunteers eagerly offered assistance to more than 500 veterans in attendance, providing 87 dental screenings, denture cleaning and labeling, dental hygiene supplies, and educational materials.

MassCARE Health and Fitness Fair: Members of the GSDM community volunteered at the MassCARE Health and Fitness Fair at the Cedardale Center in Groveland,

Massachusetts. The Health and Fitness Fair serves HIV positive women, children, youth, and their families with a day of fun activities, as well as health and wellness screenings and information. Sixteen GSDM student and faculty volunteers spent the day giving 22 dental screenings and a presentation on oral health to 100 guests at the fair. Attendees stopped by the GSDM booth to pick up health and wellness information and pamphlets promoting oral health. Children enjoyed dental-related activities and games.

Mattapan Health Revival: Twenty-one members of the GSDM community volunteered at the Mattapan Health Revival held at the Mattapan Health Center in Hyde Park. The mission of this event is to improve the quality of life for residents of Mattapan and surrounding communities by providing health care services. Through a collaborative effort between the Office of Global & Population Health and the Boston University chapter of the National Student Dental Association, volunteers provided 55 dental screenings for adults and children. Faculty and students interacted with and provided oral health information to people from the community in the GSDM main tent and in the children's areas.

Moon Festival: GSDM's Asian Dental Student Organization (ADSO) and Global & Population Health faculty participated in the Mid-Autumn Moon Festival at Townfield Park in Dorchester. Over 100 members of Chinese and Vietnamese communities attended the free festival. ADSO members were on site to promote oral health.

Project Hope School Readiness Resource Fair: Project Hope is a multi-service agency in Boston providing low-income women with children access to education, jobs, housing, and emergency services. This resource fair for families with children 0-5 years is part of the year-round Countdown to Kindergarten/Boston Children's Museum events that take place in various Boston neighborhoods. GSDM promotes oral health as it relates to young children and parents/caregivers with age appropriate and interactive activities.

Project Hope Childcare Staff Training: GSDM faculty led two interactive workshops, one with Project Hope staff and one with parents, on oral health issues specific to preschool children.

Project Hope Shelter Oral Health Promotion: A GSDM faculty member discussed oral health recommendations with women living in the Project Hope Shelter and gave out educational materials and oral hygiene supplies.

Puerto Rican Festival: This three-day outdoor event held at Boston's City Hall Plaza is dedicated to Puerto Rican families. Over 100 adults and families in attendance enjoyed a day of entertainment and received up to date information on various health topics and community resources. GSDM's chapter of the Massachusetts Student Hispanic Dental Association alongside dental students from Tufts and Harvard University as well as members of the Massachusetts Hispanic Dental Association promoted oral health and gave out free toothbrushes and toothpaste.

Rosie's Place: Located in the South End only a few blocks from GSDM, Rosie's Place describes itself as a sanctuary for women in need of a little extra care and support. It was founded in 1974 with a mission to "provide a safe and nurturing environment that helps poor and homeless women maintain their dignity, seek opportunity, and find security in their lives." Rosie's Place accepts no government funds and relies instead on committed volunteers and private supporters to accomplish its effective and innovative work. GSDM collaborates with Rosie's Place in the following events:

Franklin Field Health Fair: GSDM students and faculty participated in the Franklin Field Health Fair, a collaborative event between Rosie's Place and the Boston Housing Authority. The event took place at the Franklin Field Housing Development in Dorchester. Onsite, students provided participants with dental screenings, educated the participants about proper oral hygiene, and handed out oral health information geared to adults, children, the elderly, and disabled.

Franklin Field Oral Health Presentations: An oral health presentation on smoking and oral health was given to residents of the Franklin Field housing development in Dorchester, where Rosie's Place has an office set up to serve the Franklin Field family.

Rosie's Place Wellness Fair: GSDM has a long-standing program that enables women at Rosie's Place to receive oral health information and complementary hygiene supplies. At this year's annual Rosie's Place Wellness Fair, GSDM faculty and student volunteers distributed toothbrushes and toothpaste and talked with those attending the fair about the importance of dental health, healthy eating, consequences of tobacco use, and other health topics of interest.

Women to Women Program: A GSDM initiative, faculty and students join together each month at Rosie's Place to volunteer their time for women in need. Their efforts are the fruit of a collaboration between the GSDM chapter of the American Association of Women Dentists, the Office of Global and Population Health, and the Wellness Clinic at Rosie's Place. Volunteers spend the second Friday of every month at Rosie's Place talking with women and answering oral health related questions, as well as offering oral health advice, oral screenings, referrals, and personal oral health products. Over the past twelve months, the students screened 112 women. In addition to serving at-risk women in the South End, the *Women to Women* program contributes to the holistic education of the GSDM student volunteers. It gives them the opportunity to better understand the plight of women in their community and it enables the students to work alongside other healthcare professionals in an interdisciplinary environment.

Special Olympics Special Smiles® Program: Students, faculty, and staff of GSDM participated in the Healthy Athletes® Special Smiles® initiative at the Special Olympics Massachusetts Summer Games at Harvard University's Murr Center. Over 1,200 athletes from the Greater Boston area attended. Dentists and dental students were on hand at the Special Smiles® clinic to offer oral screenings, health education and prevention services, and referrals to athletes who need follow-up care. They also provided individually-fitted mouth guards to participating athletes. The Special Smiles® clinic was staffed by 30 GSDM volunteers who were joined by volunteers from Forsyth School of Dental Hygiene, Harvard University School of Dental Medicine, Massachusetts College of Pharmacy and Health Sciences, Mount Ida College, and Tufts University School of Dental Medicine.

Suffolk University Health and Wellness Fair: Oral health promotion activities, including screenings, referrals, and education, were provided by GSDM faculty and students at the Suffolk University Health and Wellness Fair. The annual fair is an opportunity for GSDM to provide valuable oral health related information to Suffolk University students, faculty, and staff and allows Suffolk University students to increase their awareness of healthy lifestyle choices, behaviors, and resources within the Boston area.

Tet in Boston Festival: GSDM students participated in the annual Tet in Boston Festival, a Vietnamese New Year festival organized by the Vietnamese-American Community of Massachusetts and New England Intercollegiate Vietnamese Student Association. At the dental table, students promoted oral health with kid-friendly activities and handed out oral health education materials.

Veterans and Military Families Resource Fair: Held at St. Anthony's Shrine by its Veterans' Outreach Ministry, this kick-off event was for veterans to gather and learn about services available to them. GSDM students answered oral health questions for veterans and networked with other providers of services.

Wang YMCA Holiday Party: GSDM's Asian Dental Student Organization, in collaboration with the Office of Global and Population Health, sustained a holiday tradition by participating in the Wang YMCA Holiday Party in Chinatown prior to the holidays. Stations run by GSDM students featured interactive oral health activities along with toothbrush and toothpaste giveaways. For the past eight years, GSDM has participated in this festive event which draws over 400 families from the community.

Waymark Seventh-Day Adventist Church Community Health and Wellness Fair: At the Waymark Seventh-day Adventist Church's Health and Wellness Fair, GSDM faculty and students from the Asian Dental Student Organization offered a variety of oral health promotion activities, including dental screenings, to fair attendees. The many families who turned out for the event received a variety of health and wellness information and free wellness products, including toothbrushes and toothpaste.

Yankee Dental Congress 41/HIV Dental Work Group: Students from GSDM volunteered at the HIV Dental Work Group booth at the 2016 Yankee Dental Congress (YDC). They joined students from Boston-area dental and dental hygiene schools as well as staff from GSDM and the Boston Public Health Commission to provide information to visitors about HIV and oral health. This marked the HIV Work Group's 18th year of providing an educational exhibit at YDC on HIV/AIDS oral health issues and infection control. Volunteers handed out information packets, talked to visitors, and assisted in collecting consumables to donate to programs for people living with HIV/AIDS in Massachusetts. Many of the GSDM volunteers who helped organize the effort are from the student chapter of the American Association of Public Health Dentistry.

12. Describe the measures, including benchmarks and baselines that will be used to measure improvements in public health outcomes of the proposed project

The School will continue measuring the outcomes of treatment on its patients' quality of life through its Oral Health Quality of Life measures. The impact of care in the Pre-Doctoral Patient Treatment Center on patients with chronic medical conditions will be recorded in individual dental health records. The School will also continue its patient satisfaction surveys, and anticipates a positive trend arising from the improved patient experience. The School's Office of Global and Population Health will continue annually assessing the impact of its extensive community programs on the number of children and others served.