

**APPLICATION FOR DETERMINATION OF NEED FOR
A SUBSTANTIAL CAPITAL EXPENDITURE BY HENRY
M. GOLDMAN SCHOOL OF DENTAL MEDICINE**

SUBMITTED

JULY 31, 2017

APPLICATION NUMBER

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INTRODUCTION AND OVERVIEW

INTRODUCTION

Henry M. Goldman School of Dental Medicine (“GSDM”, or the “School”) submits this request for a determination of need (“DoN”) for its expansion and renovation of its Pre-Doctoral Treatment Center and the acquisition of an additional cone beam computed tomographer (the “Project”) at 100 E. Newton Street. The DoN regulations require the School to demonstrate the Project’s meaningful contribution to advancing the Commonwealth’s goals for:

- cost containment,
- improved public health outcomes, and
- delivery system transformation.

As described in more detail in the Application, the Project contributes to each of these goals. However, in order to fully understand the need for the Project, as well as the planning, implementation, and goals of the Project, it is necessary to understand the educational mission of the School and the academic standards that the Project will also satisfy. This Introduction is intended to provide an overview of the School, its facilities, and its approach to clinical care within the context of dental education.

The clinical space that is the subject of this Application is a general dental clinic, known as the Pre-doc Treatment Center because care is provided by students enrolled in the School’s DMD program, under the supervision of licensed faculty members. The Pre-Doctoral Treatment Center sets its fees for nearly all of its services in the lower 50th percentile of dental fees in the Commonwealth, which compensates patients for the need to spend at least 50% more time in clinic than they would in a private clinic. The School thus provides excellent care, at a low cost, and serves to promote the availability of basic dental services to persons with limited incomes. The Project is essential to continuation and enhancement of this mission.

Needs of the Dental Curriculum

Dental curricula have changed to develop a new type of dentist, one that is trained to engage allied colleagues and other health care professionals so as to provide dental health care as a member of the patient’s integrated health care team. In addition, GSDM has found the Group Practice Model in its Pre-Doctoral Treatment Center to be the best option for educating dental students and providing high quality patient care. In the Group Practice Model, small groups of pre-doc student providers form the Pre-doc Treatment Center care teams. GSDM also promotes integrating dental care into the care of the whole patient by involving the patients’ other care providers to better coordinate the patient’s care. This model has been adopted by the vast majority of dental schools in this country. While this model has been well received by students, faculty, patients and other health care providers, it has been challenging to implement at the School given the tight space constraints. Patient care by all team members will emphasize evidence-based practice, quality improvement approaches, the application of technology, emerging information, and outcomes assessment. But all this can occur only with a facility that supports and facilitates these goals.

Goals of the Project

The Project addresses the School’s need to update and improve its 44-year old building to better address educational and clinical care needs. In designing the renovation, the School took into

consideration its educational methods, accreditation standards, and the patient care needs of the Pre-Doctoral Treatment Center, which led to the following goals and values:

- Safe and high-quality general dental care in the Pre-Doctoral Treatment Center;
- Collaboration by the dental health providers with the patient's other health care providers, which requires space and technology;
- Full implementation of an educational program organized on the Group Practice Model;
- Locating all general dentistry services in the same area;
- A building with up to date, efficient mechanical systems, adequate elevators, and separation of clinical from administrative, educational and research spaces;

Special Needs and Circumstances

M.G.L. Ch. 111 § 25C(g) recognizes that clinics that are essential to the training of health care providers have special needs and circumstances not faced by ordinary clinics providing similar services. These special needs and circumstances may be taken into account if the project meets three criteria:

The department may also recognize the special needs and circumstances of projects that: (1) are essential to . . . the training of health care personnel; (2) are unlikely to result in any increase in the . . . outpatient load capacity of the facility; and (3) are unlikely to cause an increase in the total patient care charges of the facility to the public for health care services, supplies, and accommodations, . . .

The School's Project meets these criteria. GSDM's Pre-Doctoral Treatment Center is essential to the education and training of pre-doctoral dental students. As found by the School's consultant, the present 44-year-old building is at the end of its useable life, and if not renovated or replaced, will cease to be useful to students or acceptable by patients. The project is, therefore, "essential to ... the training of health care personnel."

The Project is highly unlikely to result in an increase of the Pre-Doctoral Treatment Center's outpatient load capacity. The Project adds only 6 chairs to the School's total number of chairs. (The total number of chairs at the School is increasing from 169 to 175.) Additional space and chairs are being allocated to the Pre-Doctoral Treatment Center to facilitate changes in the educational program, and to allow endodontic, emergency and radiology services to be provided in the Pre-Doctoral Treatment Center, rather than in dedicated chairs on another floor. Thus, the overall capacity of the Pre-Doctoral Treatment Center is not anticipated to increase. However, the School anticipates providing better service, in smaller groups, with more effective faculty supervision and a better educational program.

Finally, the Project will not cause an increase in the total patient care charges of the Pre-Doctoral Treatment Center for its dental services. Care is offered to patients at a fee schedule that is, with few exceptions, in the bottom 50th percentile of charges in the Commonwealth. This allows persons of limited financial means to access critical care, and also compensates patients for the longer visits required to accommodate the student-providers' learning experience. University funds will be used for the Project, and nothing about the Project is designed in a manner that will increase the cost of dental health care service.

The School's special needs and circumstances in regard to this Application are described at length in this Application. The Project is necessitated primarily due to the age of the present building, rendering it

inadequate for either education or patient care. Secondly, the Project specifications have been designed to fulfill the dual goals of the Pre-doc Treatment Center: providing excellent general dental health care and providing clinical experience to general dentistry pre-doctoral students, who act as the health care providers under faculty supervision. Fortunately, the accreditation standards with which the School must comply support excellence in patient care in an educational model that encourages team care, interdisciplinary collaboration, closer faculty supervision, a smaller learning group and, we hope, increased patient satisfaction. The Pre-doc Treatment Center is a school clinic, not a private clinic in competition with other private clinics, and the design of the Project reflects that character. The Department should recognize these needs and take them into account as it reviews this Application.

Overview of the School

The School originated in 1963 as a School for Graduate Dentistry. In 1970, the School moved to the current facility at 100 East Newton Street, then a newly-constructed three-story building. In 1972 the school initiated a pre-doctoral program leading to the Doctor of Dental Medicine degree. In 1973 the school constructed four more floors, bringing the East Newton Street building to its current seven stories. At present, the Pre-Doctoral Treatment Center, which is at issue in this Application, is housed on the 4th, 5th and 6th floors of the building, with additional services for Pre-Doctoral Treatment Center patients on the 1st floor.

The School offers a full spectrum of pre-doctoral and post-doctoral specialty education programs and a complete range of graduate programs and degrees. The School is comprised of more than 700 students, a faculty of more than 325 educators, clinicians, and researchers and more than 250 staff members.

GSDM is accredited by the Commission on Dental Accreditation (“CODA”). CODA’s accreditation standards recognize the crucial role patient care plays in dental education. Two principles are emphasized throughout the standards with regard to dental patient care: it must be comprehensive and patient centered; evidenced-based; and delivered in collaboration with the patient’s other health care providers. The standards also require dental schools to ensure they deliver, and train students to deliver, dental services in a culturally sensitive manner.

Overview of the General Dental Care Provided in the Pre-Doctoral Treatment Center

Supervised clinical care is the core of the clinical training. The Pre-Doctoral Treatment Center is the largest clinic at the School, and is staffed by Pre-Doctoral students who provide general dental care to patients under the supervision of the School’s faculty members. The Pre-Doctoral Treatment Center accepts all patients without regard to race, ethnicity, language ability, age, gender, sexual preference or source of payment. Patients receive excellent care by supervised students. This entails a certain amount of inconvenience to patients; nearly all appointments take significantly longer than a similar service in a private, non-educational clinic. To compensate for that and to attract a sufficient number of patients, the Pre-Doctoral Treatment Center sets its fees at the lower end of the scale, typically in the lower 50th percentile of charges throughout the Commonwealth.

General Dental Health Care Promotes Less Costly, More Effective Care

The basic preventive and restorative care provided in this general dental clinic is critical to public health. As reported in the World Health Organization's "World Oral Health Report 2003,"¹ oral health is integral to general health. Periodontal disease, for example, is associated with general health conditions such as cardiovascular disease and diabetes. Those patients with complex health conditions are at greater risk of oral diseases that, in turn, further complicate their overall health. Some general health diseases manifest in the mouth, and oral lesions may be the first signs of other life-threatening diseases such as HIV/AIDS. Moreover, some common medications and therapies used to treat general health conditions can compromise the health of the mouth and oral functioning. If left untreated even for a short period of time, oral diseases can have adverse health and financial consequences. Oral infection can kill. It has been considered a risk factor in a number of general health conditions. The systemic spread of bacteria can cause, or seriously aggravate, infections throughout the body, particularly in individuals with suppressed immune systems. Treating such rampant infections is far more expensive than preventing them through comprehensive general dental care. People with cardiovascular disease and diabetes are particularly vulnerable. The Project is focused on developing appropriate spaces that support collaboration with the entire health care team.

The dental services provided in the Pre-Doc Treatment Center are of the type that can lower overall medical costs (and by correlation, improve the overall health) of patients with chronic conditions. A recent study concluded that regular dental care lowered health care costs for patients with any of 6 comorbid conditions (diabetes, chronic heart failure, COPD, etc). The study also demonstrated a potential link between the lack of a preventive dental services and overall medical costs.²

Overall, total medical costs were considerably lower for individuals with chronic medical conditions who received periodontal treatment or cleanings within the timeframe of this study even when considering the costs of additional dental treatments. Net savings were realized, irrespective of medical compliance. However, savings were substantially greater (\$1,849) for non-medically compliant individuals than they were for individuals who were compliant with their medical condition (\$264). Savings for individuals receiving preventive dental care were observed across all chronic medical disease categories in this study.

Conversely, members receiving extractions, root canals, restorative treatments and no preventive or periodontal treatment had the highest health care spend, demonstrating a potential link between the lack of a preventive dental pattern and overall medical costs.

Overview of the Planning Process

In 2009, GSDM developed a strategic plan that outlined a vision to make the school a premier institution in the country, promoting excellence in dental education, research, oral health care, and community service to improve overall health of the global population. The plan identified a dramatically improved facility as a critical driver of success. School and University leaders have spent the ensuing eight years engaging in thoughtful and thorough planning and dialogue with alumni,

¹ Available at http://www.who.int/oral_health/media/en/orh_report03_en.pdf

² United Healthcare and Optum, Medical Dental Integration Study (March 2013), hereinafter "Optum Study."

faculty, students, administrators, and the community. After careful exploration of numerous possibilities, an expansion and selected renovation of the School's current facility emerged as the best option.

The School's values, incorporated into the planning process, include commitments to:

- outstanding service to a diverse group of students, patients, faculty, staff, alumni, and health care professionals within our facilities, our community, and the world.
- shaping the future of the profession through scholarship, creating and disseminating new knowledge, developing and using innovative technologies and educational methodologies, and promoting critical thinking and lifelong learning.
- acting in an ethical, supportive environment, consistent with core values of trust, responsibility, respect, fairness, compassion, excellence, service, and effective communication in synergy with the strategic plan of Boston University.
- using responsible financial policies and philanthropy.

These values underlie the design and planning of the Project, as described in greater detail below. Strategic planning began in 2008 with establishing overall goals for the institution. The primary goals established focused on the dual purposes of the Pre-Doctoral Treatment Center: clinical education and patient care.

Known Facility Problems at Commencement of Planning

In the past 44 years, no comprehensive renovations or expansions of the building have occurred to the School's Pre-Doctoral Treatment Center, despite enormous expansion of the School's educational, research, and community outreach programs. The leadership of the School concluded the building was inadequate to serve even the School's existing educational, research and clinical needs, and so it commenced a lengthy (from 2008-2011) strategic analysis of the School's educational and clinical programs and physical space which led ultimately to the Project.

Consensus on Problems with the Facility

With regard to the clinical space used by the Pre-Doctoral program in 2008 (and still in use today), a number of significant problems were clear to patients, faculty, trainees and staff even before the planning process began:

- Operatories (patient treatment rooms) are small and cramped, on average 90 sq. ft. The nature of the Pre-Doctoral Treatment Center requires faculty and one or more trainees to examine the patient, counsel the patient and discuss care in a room that does not easily accommodate this practice.
- Clinic space and educational space are intermixed. Patients, staff and faculty all enter through the same lobby, mix in the same hallways, and use the same elevators, which has the potential to impede patient privacy and is inconvenient to patients, students, faculty and staff.
- The two public elevators serving all 7 floors of the building have, for quite a few years, been insufficient to transport patients, faculty, staff and students.
- In 2012, the School introduced Group Practice Comprehensive Dental Medicine model of care described above. While this model has been well received by students, faculty, patients and other health care providers, it has been challenging to implement at the School given the tight space constraints.

- Providing comprehensive care to patients requires interactions with the patient's primary care and other providers. Yet the Clinic lacks dedicated clinical collaboration and conference space, and it has fallen behind current communications equipment.
- The present Pre-Doctoral Treatment Center space is inadequate to house the radiology, emergency and endodontic services needed by patients in the Pre-doc Treatment Center. Those services were therefore moved to the first floor, introducing inefficiencies and barriers to comprehensive care as patients have to navigate their way between floors to receive their general dentistry services.
- The 1st floor services are limited in capacity. The Pre-Doctoral Endodontic area had only 4 chairs, which means that only 4 root canals can be scheduled at the same time, even when patient need requires more. Five radiology chairs on the 1st floor serve the entire Pre-doc Treatment Center, and 4 emergency chairs accommodate patients who appear with dental emergencies.
- The specificity of chair design limits the services that can be provided, and require patients to move from floor to floor for general dentistry services. For example, when the 4 chairs equipped for endodontic procedures are not in use, they cannot be used for general dentistry because faculty on the 5th or 6th floors cannot supervise the care on the 1st floor.
- While the School prides itself on the high quality of care provided in the Pre-Doctoral Treatment Center, its dated, faded surroundings and scattered patient treatment areas are far less welcoming than that found in a private dental office.
- As the facility's mechanical systems aged, it has become increasingly difficult to control the climate, resulting in uncomfortable conditions for patients and providers.
- While the effect of all of these many inconveniences and discomforts is difficult to measure precisely, the fact is that many patients arrive to their appointments with anxiety about any dental procedures. While some level of anxiety is unavoidable for many patients, the environment exacerbates rather than alleviates patients' concerns.

A Professional Assessment Confirmed Consensus

The School's architectural consultant, SmithGroupJJR, evaluated the existing physical facilities including the main School building at 100 E. Newton Street. Its findings presented in September 2011, were stark:

An assessment of the facility was conducted, and many of the current building systems are nearing the end of their life cycle. The program is scattered throughout the building making the vertical distribution of patients and students inefficient and making the building difficult to navigate. The clinical spaces are outdated and the area is not large enough to support the mission of the GSDM.

With the exception of a few pieces of equipment that were recently replaced, most of the building's mechanical systems are thirty-five to forty years old and approaching the end of their expected life. Some equipment, such as the Wing building rooftop units, are in poor condition and have surpassed their expected service life. Building operators are starting to have increased problems with leaking pipes that have corroded over time. The HVAC systems are not very efficient and do not meet today's energy standards. The building functions have changed over the years and the existing mechanical systems in many areas have not adapted resulting in uncomfortable conditions.

From a facilities perspective, major expansion is required to sustain curriculum transformation through early and integrated clinical training.

Thus, age of the building and its systems alone necessitated either a new building or a major renovation and expansion of the existing building to allow the building to continue to serve the needs of the School's clinical, educational and other missions.

Comparison of the School's Clinic Facilities with Those of Other Schools

The consultants also advised that the School's physical facilities were far smaller than those of peer institutions. That survey found that the total allocation of space for the School's clinics was lower than that of other dental school clinics (60 nsf below average per student for clinic space), and also below average in patient treatment room space per student (115 nsf below average per student).

Professional Assessment of Impact of Facility on Patient Care

Turning to the effect of this on the patient experience, the report commented:

GSDM clinical enterprise is distributed throughout 100 East Newton, and is comprised of space of varying quality. Treatment areas range from cramped and visibly dated to recent renovations with adequate space for treatment and high levels of finish. The vertical organization of the facility further complicates the patient experience: way-finding systems are incomplete and patient registration and management are onerous. Developing a clinical environment that supports students and patient-centered care is major goal of the master plan.

Consideration of the Needs of the Educational Program in Planning

The method that GSDM used to develop the proposed project was their 2009 applied strategic planning process, led by Fraser and Associates with collaboration from the national architectural consulting firm, the SmithGroupJJR. Planning was focused on supporting GSDM's mission to become the premier dental academic institution in the country, in terms of education, research, and community service.

The focus of planning was on designing space that would support the dual missions of the Pre-doc Treatment Center, those of training students and of providing care to patients. There are two innovations that are key to understanding the space needs of the Pre-Doctoral Treatment Center and the Project specifications: implementation of the Group Practice Model in the Pre-Doctoral Treatment Center, and the School's commitment to educating students in interdisciplinary interaction, involving the patient's primary care and other providers in the care provided in the Pre-Doctoral Treatment Center and educating non-dental health providers on oral health. Both are described in more detail below.

The accreditation standards that the School must follow support comprehensive, patient-centered care, provided by dentists as part of a collaborative, interdisciplinary team. These educational and clinical goals are the foundation of the Project's design, as described in more detail below.

Impact of the Group Practice Model of Comprehensive, Patient-Centered Care on the Project

CODA's accreditation standards require the School to demonstrate and teach a patient-centered approach to clinical care:

Comprehensive, Patient-Centered Care

The Standards reconfirm and emphasize the importance of educational processes and goals for comprehensive patient care and encourage patient-centered approaches in teaching and oral health care delivery. Administration, faculty, staff and students are expected to develop and implement definitions, practices, operations and evaluation methods so that patient-centered comprehensive care is the norm.

Institutional definitions and operations that support patient-centered care can have the following characteristics or practices:

1. ensure that patients' preferences and their social, economic, emotional, physical and cognitive circumstances are sensitively considered;
2. teamwork and cost-effective use of well-trained allied dental personnel are emphasized;
3. evaluations of practice patterns and the outcomes of care guide actions to improve both the quality and efficiency of care delivery; and
4. general dentists serve as role models for students to help them learn appropriate therapeutic strategies and how to refer patients who need advanced therapies beyond the scope of general dental practice.

The School accomplishes this through a practice style known as the Group Practice Model of care. This was introduced to its Pre-doc Treatment Center in 2012. Under this model, the School's 300 clinically active³ Pre-Doc students have been divided into 9 Patient Care Teams. Each team has about 33 students assigned to it, and is led by three faculty members. The faculty leaders supervise the care provided by the students in the Pre-doc Treatment Center. At present, each Team has 8 chairs, for a total of 72 Pre-Doc chairs on the 5th and 6th floors. This model has been adopted by the vast majority of dental schools in this country, and has been found to improve comprehensive patient care (as noted in Nader A. Nadershahi, D.D.S., M.B.A.; Eric S. Salmon, D.D.S.; Nava Fathi, D.D.S.; Karl Schmedders, M.S., Ph.D.; Jace Hargis, Ph.D., M.S. "Review of Outcomes from a Change in Faculty Clinic Management in a U.S. Dental School " J Dent Educ 2010 74:961-969.)

While this model has been well received by GSDM students, faculty, patients and other health care providers, it has been challenging to implement at the School due to the space constraints of the operatories, the layout of chairs in long lines, lack of adequate conference and collaboration space, and lack of modern telecommunications facilities. The Group Practice model works most efficiently when geographic adjacencies are established that support collaboration with faculty, specialists and other health care providers.

In designing the Project, the space needed to allow modification of the Group Practice Model to provide for even closer supervision and a lower student-to-faculty ratio. The School decided to increase the number of teams from 9 to 10, each with 10 chairs and three faculty leaders. Thus, a priority in design, as based on "Crossing the Quality Chasm: A New Health System for the 21st century (March 2001,

³ The number of clinically active students has been around 300 for several years and is expected to remain about the same; at present there are 305 Pre Doctoral students. The number 300 is used here for illustrative purposes.

Washington, DC: National Academies Press), was to create space that would best allow implementation of this model. The arrangement best suited to this practice style is a “pod” arrangement, with the chairs in each pod arrayed around a central area. Each team will work in a pod of 8 to 10 chairs, supervised by a supervising faculty member. These considerations were key to the design of the Project.

Impact of Interdisciplinary Collaboration Needs on the Project

Interdisciplinary collaboration has become an important focus throughout the healthcare system, particularly since the 2001 Institute of Medicine (IOM) study that concludes: “All health care professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and information.”⁴

This view was adopted by the ADEA Commission on Change and Innovation in Dental Education and became part of the CODA accreditation philosophy and standards:

Collaboration with other Health Care Professionals

Access to health care and changing demographics are driving a new vision of the health care workforce. Dental curricula can change to develop a new type of dentist, providing opportunities early in their educational experiences to engage allied colleagues and other health care professionals. Enhancing the public’s access to oral health care and the connection of oral health to general health form a nexus that links oral health care providers to colleagues in other health professions. Health care professionals educated to deliver patient-centered care as members of an interdisciplinary team present a challenge for educational programs. Patient care by all team members will emphasize evidence-based practice, quality improvement approaches, the application of technology and emerging information, and outcomes assessment. Dental education programs are to seek and take advantage of opportunities to educate dental school graduates who will assume new roles in safeguarding, promoting, and caring for the health care needs of the public.

More specifically, CODA Standard 2-19 requires education in an interdisciplinary practice:

Graduates must be competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care.

Intent: Students should understand the roles of members of the health care team and have educational experiences, particularly clinical experiences that involve working with other healthcare professional students and practitioners. Students should have educational experiences in which they coordinate patient care within the health care system relevant to dentistry.

Thus, dental education must train students to become integral members of a patient’s health care team along with physicians, nurses, medical assistants, physical therapists, nutritionists, psychotherapists and speech pathologists to name a few. The intended outcome from this educational improvement will be better patient care for the patients of the School’s Pre-doc Treatment Center, and for future patients of the dentists being trained.

⁴ The Institute of Medicine, Crossing the quality chasm: a new health system for the 21st century. Washington, DC: National Academies Press, 2001

For that reason, the School's proposed facility was designed to include collaborative spaces to allow the Pre-Doc student clinicians to interact with each other, with trainees in the Post-Doc 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 clinic 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 members of the patients' health care team. These include conference rooms, collaboration rooms, as well as space and equipment for telemedicine services. The 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.⁵ In this way, the Pre-doc 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.

Overview of the Project

The facility plan that emerged from this planning process is designed to:

- Update an inefficient, aging facility to create a modern clinical environment welcoming to patients, thereby solving the fundamental infrastructure problems noted at the beginning of the planning process;
- Provide space and a configuration of space that supports the Group Practice Model of clinical training;
- Provides facilities that support collaboration by the dental student providers with other members of the care team, in support of a comprehensive, patient-centered model of care; and
- Accomplish this without interruption to patient care or education; in a cost-effective manner; while remaining within the center of the Boston University-BMC Medical Campus.

Updates to Aging Facility

- Clinic space will be separate from educational space. Patients will enter through a new entrance on Albany Street, with new elevators for clinic use. The entrance at 100 E. Newton will remain to serve staff and faculty. This separation of spaces will enhance patient privacy and make the clinic experience more efficient for patients, students, faculty and staff.
- Radiology, emergency and endodontic services will be moved from the 1st floor to the Pre-doc Treatment Center. This will eliminate the inconvenience and inefficiency of commencing treatment in the Pre-Doctoral Treatment Center, then escorting the patient to the 1st floor for radiology, and back to the Pre-Doctoral Treatment Center for the remaining services. Similarly,

⁵ See Optum Study.

patients needing endodontic or emergency services will be able to have those services provided within the Pre-doc Treatment Center.

- General dentistry will be centered on the 4th, 5th, and 6th floors; the 1st floor services (Endodontics, Radiology and Emergency) will be moved to those floors so that patients and student providers have a more efficient experience.
- The facility's updated mechanical systems will provide efficient, environmentally responsible heating and air conditioning.
- Architecturally, the facility is welcoming to all who enter it. The Pre-Doctoral Treatment Center has been configured to accommodate a patient-centered approach to patient care. The contiguous design allows patients to receive all of their care within a well-defined and specific area (rather than traveling to the 1st floor).

A Design That Supports the Group Practice Model and Collaborative, Patient Centered Care Provided by Dental Students as Part of an Interdisciplinary Team

The Project includes reallocation of chairs and space in order to support the Pre-Doctoral educational program and alleviate the inefficiencies the present cramped space necessitated. The emergency, radiology and endodontic services on the 1st floor will be closed, with their functions to be absorbed within the Pre-Doctoral treatment pods. That will be made possible by ensuring that 2 chairs in each pod is "multi-functional," i.e., can support general dentistry, endodontics and radiology. Following completion of the Project there will be 100 chairs in the Pre-doc Treatment Center; scheduling of root canals will be easier to manage; supervision will be closer; teams smaller; and each team will have the flexibility to offer its patients the full range of general dentistry services within the pod, rather than walking them to another floor.

- Interactions with the patient's primary care and other providers will be able to take place in the conference and collaboration rooms, which will contain up-to-date electronic communications facilities.
- Each operatory will be significantly larger. This will provide a more comfortable experience for patients; will comfortably allow up to 4 professionals to participate in/observe care; and will facilitate the Group Practice Model of comprehensive, patient-centered care and interdisciplinary collaboration.
- The treatment teams are being reorganized so that teams are smaller, with closer faculty supervision
- The new space will have chairs arranged in "pods" (rather than in a long line, as they are presently). This will facilitate faculty supervision, ensuring patient safety and quality of care.
- The chairs will be multi-functional; today most chairs are suitable only for general dentistry, and patients must go to a different area for root canals (Endodontics). More general dentistry chairs will have the functionality needed for endodontic practice, allowing the patient to be treated in the same space as the rest of the patient's general dental care, and the scheduling of root canals will depend less on finding a suitable chair.
- Treatment chairs will be arranged in groups of 8-10 for ease of faculty supervision in a flexible, open environment

A Cost- Effective Design

The architects provided the School with an initial assessment of the space required to continue providing the current services and programs offered by the School, as well as options to significantly expand the clinical and teaching areas. The first plan, allowing continuation of the existing programs and services, was referred to as the “right sized” projection. While the School considered other options to significantly increase its available square footage, in 2011 it chose the “right sized” approach, and that is the basis for the Project.

Eight site opportunities were initially identified for consideration in the master planning process:

- Renovation and expansion at the existing GSDM facility located at 100 East Newton
- Demolition of 100 East Newton and construction of a new facility in its place
- Renovation of an existing building within the Boston University Medical Campus
- New construction on an alternate site within the Boston University Medical Campus (4 parcels reviewed)
- Purchase and renovation of a property near the Boston University Medical Campus

The option selected is renovation and expansion at the existing facility, based on the availability of property along Albany Street to the east of 100 East Newton, the synergy with existing neighbors in the Boston University Medical Campus, the benefits to the School and its patients from continuing to operate in the current visible and familiar location, and was the most cost-effective, and could be undertaken without closing either educational or patient care facilities. After several planning studies, each including conceptual cost models, it was determined that the most prudent and cost-effective use of University funds (to meet the strategic goals of the School) would be to moderately expand and renovate a portion of the current facility housing the School’s Pre-doc Treatment Center.

The Project is funded from University funds, and not from clinical revenue. There are no increases planned in the clinical care fee schedule to contribute to the construction.

- The School anticipates continuing to set its fee schedule below the 50th percentile state-wide. The School does this to attract patients to its clinics, to ensure a broad range of patients to support the clinical program. Many of the Pre-doc Treatment Center patients are attracted by the low fee schedule, and found it a satisfactory trade-off for the additional time required of a patient at each visit.
- As noted above, studies have shown that general dental services reduce the overall costs of healthcare for patients who receive such care.
- The School does not anticipate the cost of providing care to increase as a result of the Project; to the extent it does, it likely will be attributable to the educational aspects of the clinic. For example, the operatories are larger than one would find in a private clinic to allow multiple trainees, faculty, specialists and other health care providers to collaborate and coordinate care.

DON APPLICATION



Massachusetts Department of Public Health

Determination of Need

Application Form

Version: DRAFT
3-15-17b

DRAFT

Application Type: Hospital/Clinic Substantial Capital Expenditure

Application Date: 07/31/2017 2:16 pm

Applicant Information

Applicant Name: Henry M. Goldman School of Dental Medicine

Mailing Address: 100 East Newton Street

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Facility Information

List each facility affected and or included in Proposed Project

1 Facility Name: Henry M. Goldman School of Dental Medicine

Facility Address: 100 East Newton Street

City: Boston

State: Massachusetts

Zip Code: 02118

Facility type: Dental Clinic

CMS Number: GSDM does not have a CMS Number

Add additional Facility

Delete this Facility

1. About the Applicant

1.1 Type of organization (of the Applicant): nonprofit

1.2 Applicant's Business Type: ☒ Corporation ☐ Limited Partnership ☐ Partnership ☐ Trust

1.3 What is the acronym used by the Applicant's Organization?

GSDM

1.4 Is Applicant a registered provider organization as the term is used in the HPC/CHIA RPO program?

☐ Yes ☒ No

1.5 Is Applicant or any affiliated entity an HPC-certified ACO?

☐ Yes ☒ No

1.6 Is Applicant or any affiliate thereof subject to M.G.L. c. 6D, § 13 and 958 CMR 7.00 (filing of Notice of Material Change to the Health Policy Commission)?

☐ Yes ☒ No

1.7 Does the Proposed Project also require the filing of a MCN with the HPC?

☐ Yes ☒ No

- 1.8 Has the Applicant or any subsidiary thereof been notified pursuant to M.G.L. c. 12C, § 16 that it is exceeding the health care cost growth benchmark established under M.G.L. c. 6D, § 9 and is thus, pursuant to M.G.L. c. 6D, §10 required to file a performance improvement plan with CHIA? ☐ Yes ☒ No

1.9 Complete the Affiliated Parties Form

2. Project Description

2.1 Provide a brief description of the scope of the project.

In 2009, the Henry M. Goldman School of Dental Medicine (GSDM) developed a strategic plan that outlined a vision to make the school a premier institution in the country, promoting excellence in dental education, research, oral health care, and community service to improve overall health of the global population. The plan identified a dramatically improved facility as a critical driver of success. School and University leaders have spent the ensuing eight years engaging in thoughtful planning and dialogue with alumni, faculty, students, administrators, and the community. After careful exploration of numerous possibilities, an expansion and selected renovation of the School's current facility emerged as the best option (Project).

By almost every measure, the current facility constrains what the GSDM community can undertake, and so the proposed expansion and renovation seeks to, essentially, "right size" the School's space.

The Project provides flexible, contemporary dental operatories for clinical training. The new operatories can accommodate a broad range of procedures, and as many as three learners with an instructor. The Project plan also emphasizes providing appropriate support space for the introduction of new pedagogies, emerging technologies and creating integrated learning experiences for GSDM students.

2.2 and 2.3 Complete the Change in Service Form

3. Delegated Review

- 3.1 Do you assert that this Application is eligible for Delegated Review? ☐ Yes ☒ No

4. Conservation Project

- 4.1 Are you submitting this Application as a Conservation Project? ☐ Yes ☒ No

5. DoN-Required Services and DoN-Required Equipment

- 5.1 Is this an application filed pursuant to 105 CMR 100.725: DoN-Required Equipment and DoN-Required Service? ☒ Yes ☐ No

- 5.2 If yes, is Applicant or any affiliated entity thereof a HPC-certified ACO? ☐ Yes ☒ No

5.3 See section on DoN-Required Services and DoN-Required Equipment in the Application Instructions

6. Transfer of Ownership

- 6.1 Is this an application filed pursuant to 100 CMR 100.735? ☐ Yes ☒ No

7. Ambulatory Surgery

- 7.1 Is this an application filed pursuant to 105 CMR 100.740(A) for Ambulatory Surgery? ☐ Yes ☒ No

8. Transfer of Site

- 8.1 Is this an application filed pursuant to 105 CMR 100.745? ☐ Yes ☒ No

9. Research Exemption

- 9.1 Is this an application for a Research Exemption? ☐ Yes ☒ No

10. Amendment

10.1 Is this an application for a Amendment?

☐ Yes ☒ No

11. Emergency Application

11.1 Is this an application filed pursuant to 105 CMR 100.740(B)?

☐ Yes ☒ No

12. Total Value and Filing Fee

Enter all currency in numbers only. No dollar signs or commas. Grayed fields will auto calculate depending upon answers above.

Your project application is for: Hospital/Clinic Substantial Capital Expenditure

12.1 Total Value of this project:	<div>\$37,076,692.00</div>
12.2 Total CHI commitment expressed in dollars: (calculated)	<div>\$1,853,834.60</div>
12.3 Filing Fee: (calculated)	<div>\$74,153.38</div>
12.4 Maximum Incremental Operating Expense resulting from the Proposed Project:	<div>\$300,000.00</div>
12.5 Total proposed Construction costs, specifically related to the Proposed Project, If any, which will be contracted out to local or minority, women, or veteran-owned businesses expressed in estimated total dollars.	<div></div>

13. Factors

Required Information and supporting documentation consistent with 105 CMR 100.210

Some Factors will not appear depending upon the type of license you are applying for.

Text fields will expand to fit your response.

Factor 1: Applicant Patient Panel Need, Public Health Values and Operational Objectives

F1.a.i Patient Panel:

Describe your existing Patient Panel, including incidence or prevalence of disease or behavioral risk factors, acuity mix, noted health disparities, geographic breakdown expressed in zip codes or other appropriate measure, demographics including age, gender and sexual identity, race, ethnicity, socioeconomic status and other priority populations relevant to the Applicant's existing patient panel and payer mix.

Over the past 36 months, 50,081 patients were new to the School's clinics. A small number of these may be assigned directly to a post-doc specialty clinic, but most are seen in the General Dentistry Pre-Doctoral Treatment Center. The School's current patient panel is notable for the chronic medical conditions they present; their behavioral risk factors; and the wide geographic range of their residence. The School's clinics effectively address the panel's dental needs in a manner which has been proven to improve overall health and lower costs of medical care overall, as described below.

General demographics:

Slightly more of the patient panel is female (54.76%), while 45.24% of the patient population is male. The School does not ask patients to report their sexual preference or gender identity.

The Pre-Doctoral Treatment Center sees patients of all ages; the average age of our patients is 34.

Chronic medical conditions:

Forty-seven percent (23,582) patients have reported at least one chronic medical condition. Specifically:

- A full 20% report suffering from high blood pressure;
- nearly 13% are under psychiatric care;
- 12% have diabetes; and
- nearly 12% suffer from lung diseases.

Behavioral risk factors:

Of our patient population 57% report alcohol as a behavioral risk factor. 33% use tobacco, and just under 9% use recreational drugs.

Tobacco use is well-understood as a significant risk factor for oral health, possibly leading to oral cancer, periodontitis, and other chronic conditions. "Oral Health in Massachusetts: A Fact Sheet" <http://www.mass.gov/eohhs/docs/dph/com-health/oral-health-tobacco.pdf>

Similarly, drinking alcohol to excess is associated with a risk of adverse health and social effects related to its intoxicating, toxic and dependence-producing properties. In addition to the chronic diseases that may develop in those who drink large quantity of alcohol over a number of years, alcohol use may adversely affect oral health in the following ways:

- it may adversely affect the salivary glands, leading to tooth decay.
- It may cause irritation and inflammation of oral soft tissues including the gingiva and the tongue.
- non-carious destructions of teeth like dental erosion are also related to regular alcohol drinking.
- alcohol abuse may be linked to the development of oral cancers, but the precise role is not yet established.

The third behavioral risk factor, drug abuse, complicates dental care because of the emotional/behavioral/personality issues of the addict, the addict's often poor general health and poor nutrition, ongoing problems of oral hygiene and the effects of drugs on the oral mucosa, gingiva and dentition. (As referenced in: J Evid Based Dent Pract. 2014 Jun;14 Suppl:127-35.e1. doi: 10.1016/j.jebdp.2014.04.007. Epub 2014 Apr 5. Under the influence: informing oral health care providers about substance abuse., Riemer L1, Holmes R2.)

Geographic breakdown:

Our patient population covers a range of 142 zip codes. Nearly 30% reside in Roxbury (02118 and 02119). The next largest group, nearly 6% (2950) are from Dorchester (02124, 02121). 30% from Boston zip codes; 64% from Massachusetts outside of Boston; 2.4% outside Massachusetts.

Race and Ethnicity:

The School does not have meaningful data on race and ethnicity of its patient population, because less than 3% of patients volunteered their race and/or ethnic background upon registration. Based on those who did respond, .012% of patients identified as White, Non-Hispanic; .006% as Black or African American; and .004 as White, Hispanic. The other categories had fewer responses. (The School is developing a more reliable method of determining patient ethnic and racial composition and languages used by patients with limited

English proficiency to facilitate research as well as providing a solid basis for ensuring the services are provided effectively to all and in a culturally sensitive manner.)

The School has been a leader in studying disparities in accessibility of dental health. The Center for Research to Evaluate and Eliminate Dental Disparities (CREDD) is funded by a 7-year grant from the National Institute of Dental and Craniofacial Research (NIDCR), part of the National Institutes of Health (NIH).

The School is not aware of any data to suggest its Pre-Doctoral patient acuity and disparities in accessibility to dental health care are different than those encountered by other dental providers in this area.

F1.a.ii Need by Patient Panel:

Provide supporting data to demonstrate the need for the Proposed Project. Such data should demonstrate the disease burden, behavioral risk factors, acuity mix, health disparities, or other objective Patient Panel measures as noted in your response to Question F1.a.i that demonstrates the need that the Proposed Project is attempting to address. If an inequity or disparity is not identified as relating to the Proposed Project, provide information justifying the need. In your description of Need, consider the principles underlying Public Health Value (see instructions) and ensure that Need is addressed in that context as well.

The Project is not designed specifically to address an inequity or disparity. The need for the Project is found in the following:

- The School needs to update its 44-year old clinic space. The current space at 100 East Newton is a facility that is nearing the end of its useable life. Its age rendered it inefficient and uncomfortable, and imposed serious constraints on education and clinical care.
- The School needed a space design that will allow full implementation of its innovative Group Practice Model of dental education.
- The School needed space and facilities for interdisciplinary collaboration between the general dental student providers and the Post-Doc specialist student providers and supervising faculty members, as well as collaboration with the patient's primary and other providers. This is important for educational reasons, as well as to help address the chronic health conditions experienced by a large portion of the School's patients.
- The School needed to do this in a cost-effective manner, remaining in the same academic medical area, without disruption to education or clinical care.

Evidence based planning

The School engaged in a thorough and thoughtful process of planning in order to create the building plan reflected in the Project:

- It engaged an expert consultant to lead a strategic planning process focused on the educational and clinical needs of the facility
- The facility is designed to allow the School to meet CODA accreditation standards
- The facility is designed to facilitate a patient-centered, comprehensive care model
- The facility is designed to facilitate implementation of a collaborative, interdisciplinary dental practice.

Outcome oriented

The School's Quality Assurance Committee is responsible for ensuring outcomes are measured and improving. The School uses an assessment tool known as Oral Health Related Quality of Life (OHRQoL) measures. This tool is a multi-dimensional construct that includes a subjective evaluation of the individual's oral health, functional well-being, emotional well-being, expectations and satisfaction with care, and sense of self.

The OHRQoL questionnaire is administered to all patients at the time of their registration and intake to establish a baseline. The tool is based on eight OHRQoL questions that pertain to the impact of the patient's oral health on overall quality of life including functional well-being, emotional well-being, expectations and satisfaction with care, and sense of self.

When a phase of treatment for the patient is completed, the patient answers the same eight questions as part of the Post-Treatment Evaluation. This data is reported to the Quality Assurance Committee of the school, which can then compare the original responses on intake to the post-treatment responses and analyze the data. While data obtained so far reflect the care provided contributes to patients' overall quality of life, the School is interested in seeing if the improvements to the facility, along with the full implementation of its Group Practice Model and collaborative, interdisciplinary care, result in even higher measures.

These measures are now regarded as essential to evidence-based dental care in the professional and academic literature as well as in dental schools. OHRQoL enhances dental care providers' understanding of the relationship between oral health and general health, and demonstrates practitioners that improving the quality of a patient's well-being goes beyond simply treating dental maladies. Many view OHRQoL as a tool that can support the elimination of health disparities and inequities. One commentator summarizes the value of the

tool as follows:

"OHRQoL is important for both theoretical and practical reasons. The Surgeon General has identified OHRQoL as a health priority (DHHS, 2000), and "QoL issues are now at the forefront of public health policy" (Slade, 2002, 29). The Surgeon General's report and conference, The Face of the Child, highlighted the importance of children's oral health to their overall health and well-being and the profound impact that oral health can have on children's QoL (Mouradian, 2001; Wilson-Genderson et al., 2007). Oral health can affect anyone's life; OHRQoL research has shown its utility in the study of diverse populations including patients with oral cancer (Ship, 2002), toddlers with early childhood caries (ECC) (Filstrup et al., 2003), or children with craniofacial anomalies (Broder, 2007).

Assessment of OHRQoL allows for a shift from traditional medical/dental criteria to assessment and care that focus on a person's social and emotional experience and physical functioning in defining appropriate treatment goals and outcomes (Christie et al., 1993). Patients' subjective evaluation of the healthcare decision-making process is changing the dynamics of clinical practice and health outcomes monitoring and research (Inglehart and Bagramian, 2002). Medical and dental research on HRQoL has flourished because of: (1) the patient's more active role as a member of the treatment team; (2) the need for evidence-based approaches in health practices; and (3) the fact that many treatments for chronic diseases fail to 'cure' the health condition, thereby elevating the importance of HRQoL as a valuable health outcome variable (Najman and Levine, 1981).

Finally, OHRQoL is important because of its implications for oral health disparities and access to care. Unfortunately, socio-economic and racial/ethnic oral health disparities constitute a major social problem (Petersen et al., 2005). Health disparities can be explained, in part, by limited access to care. Locations within developing countries may have minimal dental health professionals, and rural areas often lack facilities offering dental services. In developed countries, treatment access is limited by high costs and sometimes by transportation difficulties (Sisson, 2007). OHRQoL can be useful in measuring the impact of oral health disparities on overall health and QoL. Policy implications are discussed in the "Implications" section.

The use of OHRQoL as an evaluative outcome measure is congruent with patient-centered care. Along with other clinical assessments, it allows oral healthcare professionals to evaluate the efficacy of treatment protocols from patients' perspectives (Wright et al., 2009). With multiple evaluative tools, professionals are better equipped to accurately weigh the risks and benefits associated with treatment. In addition, it provides evidence that costs associated with treatment protocols are worth the expense if they generally improve patients' OHRQoL (Slade, 2002). Analysis of data from research using OHRQoL as an outcome measure will also assist patients and their families in treatment decision-making. (As referenced in L. Sischo and H.L. Broder, "Oral Health-related Quality of Life: What, Why, How, and Future Implications," J Dent Res. 2011 Nov; 90(11): 1264–1270.)"

Health Equity is Assured

The School assures equal access to its services by all, regardless of race, ethnicity, gender, sexual orientation or preference, age or source of payment. It is notable that the Project will benefit all of the Pre-doc Treatment Center's patients equally; all will benefit from a space designed as a clinic, separate from educational and administrative spaces. They will benefit from the larger operatories, more flexible chairs, concentration of all services together in a pod, provided by a set group of student practitioners, and from the interdisciplinary consultations and interactions the space will allow.

The School further assures equitable access to its Post-Doc Treatment Center services by conspicuously posting the availability of language interpretation for the hearing impaired and patients with limited English proficiency. Additionally, the low-cost fee schedule allows many to afford care at the Pre-doc Treatment Center; additional programs such as the Bump Up fee schedule promote access to dental healthcare that is not covered by MassHealth.

F1.a.iii **Competition:**

Provide evidence that the Proposed Project will compete on the basis of price, total medical expenses, provider costs, and other recognized measures of health care spending. When responding to this question, please consider Factor 4, Financial Feasibility and Reasonableness of Costs.

The School does not consider its Pre-doc Treatment Center to be in competition with most dental clinics, because it is a student clinic. Its volume is determined not by revenue goals, but by the volume of patients needed for the clinical educational experience of the students. The Pre-doc Treatment Center does not attract all patients; many are not interested in spending the extra time necessary at each appointment because the care is provided by students. However, for those with limited financial resources, it provides a valuable option because its low-cost fee schedule (generally in the lower 50th percentile of charges for similar services throughout the Commonwealth) allows many to afford care at the Pre-doc Treatment Center; additional programs such as the GSDM's Bump Up fee schedule promotes access to dental healthcare that is not covered by MassHealth.

In addition to facilitating access to care through a low fee schedule, the dental services provided in the Pre-doc Treatment Center are of the type that have been shown to lower overall medical costs (and by correlation, improve the overall health) of patients with chronic conditions. A recent study concluded that regular dental care lowered health care costs for patients with any of 6 comorbid conditions (diabetes, chronic heart failure, COPD, etc). The study also demonstrated a potential link between the lack of a preventive dental services and overall medical costs. (See Optum Study.) In this way, the facility will contribute to overall public health in the Commonwealth.

The Group Practice Model and collaborative, comprehensive care being implemented at the School is not only a superior way to train dentists; it has been shown to correlate to lower overall costs. Studies (As referenced in Nader A. Nadershahi, D.D.S., M.B.A.; Eric S. Salmon, D.D.S.; Nava Fathi, D.D.S.; Karl Schmedders, M.S., Ph.D.; Jace Hargis, Ph.D., M.S. "Review of Outcomes from a Change in Faculty Clinic Management in a U.S. Dental School " J Dent Educ 2010 74:961-969) have shown that implementation of the Group Practice model did not increase provider productivity or the volume of patients seen. And it did not result in an increase of clinic revenue. However, patient care provided by small teams in a dental school clinic under closer supervision improved comprehensive patient care, meaning there was an increase in preventive care and a decrease in the number of procedures needed to be performed. GSDM therefore concluded this model is optimal both for teaching and for comprehensive patient care, despite being disadvantageous to the School's clinical income (always a secondary consideration in operating a student clinic as part of an educational program).

The cost of patient care will not increase as a result of this project, because the Project is funded with University funds rather than from patient fees. This, and the facility design, assures a high quality of care equally available to all, without an increase of health care costs. The alternative selected in the planning process, renovation and expansion of the existing facility, was chosen in large part because it was the most cost-effective route to obtaining the type of facility that will support excellence in both education and clinical care.

F1.b.i Public Health Value /Evidence-Based:

Provide information on the evidence-base for the Proposed Project. That is, how does the Proposed Project address the Need that Applicant has identified.

As noted in the Introduction, CODA accreditation standards require the School to demonstrate and teach a comprehensive, patient-centered approach to clinical care. The School accomplishes this through a practice known as the Group Practice Model. This model has been adopted by the vast majority of dental schools in this country, and it has been found to improve comprehensive patient care. As described in part F1.a.i, the School's patient panel is notable for the chronic medical conditions they present. The School's patient panel, particularly those with chronic medical conditions, will benefit from the comprehensive, patient-centered model in which dental care is provided as part of an interdisciplinary team. As described in more detail below, the Project is designed, in large part, to better implement this model of care, which is integral to the School's educational mission as well as clinical care and public health. The Project also addresses outdated facilities and inefficient design that are barriers to improvement in both the educational and clinical realms.

The Project is designed to:

- Update an inefficient, aging facility to create a modern clinical environment welcoming to patients, thereby solving the fundamental infrastructure problems noted at the beginning of the planning process;
- Provide space and a configuration of space that supports the Group Practice Model of clinical training;
- Provides facilities that support collaboration by the dental student providers with other members of the care team, in support of a comprehensive, patient-centered model of care; and
- Accomplish this without interruption to patient care or education; in a cost-effective manner; while remaining within the center of the Boston University-BMC Medical Campus.

Updates to Aging Facility:

- Clinic space will be separate from educational space. Patients will enter through a new entrance on Albany Street, with new elevators for clinic use. The entrance at 100 E. Newton will remain to serve staff and faculty. This separation of spaces will enhance patient privacy and make the clinic experience more efficient for patients, students, faculty and staff.
- Radiology, emergency and endodontic services will be moved from the 1st floor to the Pre-doc Treatment Center. This will eliminate the inconvenience and inefficiency of commencing treatment in the Pre-doc Treatment Center, then escorting the patient to the 1st floor for radiology, and back to the Pre-doc Treatment Center for the remaining services. Similarly, patients needing endodontic or emergency services will be able to have those services provided within the Pre-doc Treatment Center.
- General dentistry will be centered on the 4th,5th and 6th floors; the 1st floor services (Endodontics, Radiology and Emergency) will be moved to those floors so that patients and student providers have a more efficient experience.
- The facility's updated mechanical systems will provide efficient, environmentally responsible heating and air conditioning.
- Architecturally, the facility is welcoming to all who enter it. The Pre-doc Treatment Center has been configured to accommodate a patient-centered approach to patient care. The contiguous design allows patients to receive all of their care within a well-defined and specific area (rather than traveling to the 1st floor).

A Design That Supports the Group Practice Model and Collaborative, Patient Centered Care Provided by Dental Students as Part of an Interdisciplinary Team

The Project includes reallocation of chairs and space in order to support the Pre-Doc educational program and alleviate the inefficiencies the present cramped space necessitated. The emergency, radiology and endodontic services on the 1st floor will be closed, with their functions to be absorbed within pods. That will be made possible by ensuring that 2 chairs in each pod is “multi-functional,” i.e., can support general dentistry, endodontics and radiology. Following completion of the Project there will be 100 chairs in the Pre-doc Treatment Center; scheduling of root canals will be easier to manage; supervision will be closer; teams smaller; and each team will have the flexibility to offer its patients the full range of general dentistry services within the pod, rather than walking them to another floor.

- Interactions with the patient’s primary care and other providers will be able to take place in the conference and collaboration rooms, which will contain up to date electronic communications facilities.
- Each operatory will be significantly larger. This will provide a more comfortable experience for patients; will comfortably allow up to 4 professionals to participate in/observe care; and will facilitate the Group Practice Model of comprehensive, patient-centered care and interdisciplinary collaboration.
- The treatment teams are being reorganized so that teams are smaller, with closer faculty supervision
- The new space will have chairs arranged in “pods” (rather than in a long line, as they are presently). This will facilitate faculty supervision, ensuring patient safety and quality of care.
- The chairs will be multi-functional; today most chairs are suitable only for general dentistry, and patients must go to a different area for root canals (Endodontics). More general dentistry chairs will have the functionality needed for endodontic practice, allowing the patient to be treated in the same space as the rest of the patient’s general dental care, and the scheduling of root canals will depend less on finding a suitable chair.
- Treatment chairs will be arranged in groups of 8-10 for ease of faculty supervision in a flexible, open environment

A Cost- Effective Design

The architects provided the School with an initial assessment of the space required to continue providing the current services and programs offered by the School, as well as options to significantly expand the clinical and teaching areas. The first plan, allowing continuation of the existing programs and services, was referred to as the “right sized” projection. While the School considered other options to significantly increase its available square footage, in 2011 it chose the “right sized” approach, and that is the basis for the Project.

Eight site opportunities were initially identified for consideration in the master planning process:

- Renovation and expansion at the existing GSDM facility located at 100 East Newton
- Demolition of 100 East Newton and construction of a new facility in its place
- Renovation of an existing building within the Boston University Medical Campus
- New construction on an alternate site within the Boston University Medical Campus (4 parcels reviewed)
- Purchase and renovation of a property near the Boston University Medical Campus

The option selected is renovation and expansion at the existing facility, based on the availability property along Albany Street to the east of 100 East Newton, the synergy with existing neighbors in the BUMC, the benefits to the School and its patients from continuing to operate in the current visible and familiar location, and was the most cost-effective, and could be undertaken without closing either educational or patient care facilities. After several planning studies, each including conceptual cost models, it was determined that the most prudent and cost-effective use of University funds (to meet the strategic goals of the School) would be to moderately expand and renovate a portion of the current facility housing the School’s Pre-doc Treatment Center.

The Project is funded from University funds, and not from clinical revenue. There are no increases planned in the clinical care fee schedule to contribute to the construction.

- The School anticipates continuing to set its fee schedule below the 50th percentile state-wide. The School does this to attract patients to its clinics, to ensure a broad range of patients to support the clinical program. Many of the Pre-doc Treatment Center patients were attracted by the low fee schedule, and found it a satisfactory trade-off for the additional time required of a patient at each visit.
- Studies have shown that general dental services reduce the overall costs of healthcare for patients who receive such care.
- The School does not anticipate the cost of providing care to increase as a result of the Project; to the extent it does, it likely will be attributable to the educational aspects of the clinic. For example, the operatories are larger than one would find in a private clinic to allow multiple trainees, faculty, specialists and other health care providers to collaborate and coordinate care.

F1.b.ii Public Health Value /Outcome-Oriented:

Describe the impact of the Proposed Project and how the Applicant will assess such impact. Provide projections demonstrating how the Proposed Project will improve health outcomes, quality of life, or health equity. Only measures that can be tracked and reported over time should be utilized.

The School's Quality Assurance Committee is responsible for ensuring outcomes are measured and improving. The School uses an assessment tool known as Oral Health Related Quality of Life (OHRQoL) measures. This tool is a multi-dimensional construct that includes a subjective evaluation of the individual's oral health, functional well-being, emotional well-being, expectations and satisfaction with care, and sense of self.

The OHRQoL questionnaire is administered to all patients at the time of their registration and intake to establish a baseline. The tool is based on eight OHRQoL questions that pertain to the impact of the patient's oral health on overall quality of life including functional well-being, emotional well-being, expectations and satisfaction with care, and sense of self.

When a phase of treatment for the patient is completed, the patient answers the same eight questions as part of the Post-Treatment Evaluation. This data is reported to the Quality Assurance Committee of the School, which can then compare the original responses on intake to the post-treatment responses and analyze the data. While data obtained so far reflects the care provided contributes to patients' overall quality of life, the School is interested in seeing if the improvements to the facility, along with the full implementation of its Group Practice Model and collaborative, interdisciplinary care, result in even higher measures.

These measures are now regarded as essential to evidence-based dental care in the professional and academic literature as well as in dental schools. OHRQoL enhances dental care providers' understanding of the relationship between oral health and general health, and demonstrates to practitioners that improving the quality of a patient's well-being goes beyond simply treating dental maladies. Many view OHRQoL as a tool that can support the elimination of health disparities and inequities. One commentator summarizes the value of the tool as follows:

"OHRQoL is important for both theoretical and practical reasons. The Surgeon General has identified OHRQoL as a health priority (DHHS, 2000), and "QoL issues are now at the forefront of public health policy" (Slade, 2002, 29). The Surgeon General's report and conference, The Face of the Child, highlighted the importance of children's oral health to their overall health and well-being and the profound impact that oral health can have on children's QoL (Mouradian, 2001; Wilson-Genderson et al., 2007). Oral health can affect anyone's life; OHRQoL research has shown its utility in the study of diverse populations including patients with oral cancer (Ship, 2002), toddlers with early childhood caries (ECC) (Filstrup et al., 2003), or children with craniofacial anomalies (Broder, 2007).

Assessment of OHRQoL allows for a shift from traditional medical/dental criteria to assessment and care that focus on a person's social and emotional experience and physical functioning in defining appropriate treatment goals and outcomes (Christie et al., 1993). Patients' subjective evaluation of the healthcare decision-making process is changing the dynamics of clinical practice and health outcomes monitoring and research (Inglehart and Bagramian, 2002). Medical and dental research on HRQoL has flourished because of: (1) the patient's more active role as a member of the treatment team; (2) the need for evidence-based approaches in health practices; and (3) the fact that many treatments for chronic diseases fail to 'cure' the health condition, thereby elevating the importance of HRQoL as a valuable health outcome variable (Najman and Levine, 1981).

Finally, OHRQoL is important because of its implications for oral health disparities and access to care. Unfortunately, socio-economic and racial/ethnic oral health disparities constitute a major social problem (Petersen et al., 2005). Health disparities can be explained, in part, by limited access to care. Locations within developing countries may have minimal dental health professionals, and rural areas often lack facilities offering dental services. In developed countries, treatment access is limited by high costs and sometimes by transportation difficulties (Sisson, 2007). OHRQoL can be useful in measuring the impact of oral health disparities on overall health and QoL. Policy implications are discussed in the "Implications" section."

The use of OHRQoL as an evaluative outcome measure is congruent with patient-centered care. Along with other clinical assessments, it allows oral healthcare professionals to evaluate the efficacy of treatment protocols from patients' perspectives (Wright et al., 2009). With multiple evaluative tools, professionals are better equipped to accurately weigh the risks and benefits associated with treatment. In addition, it provides evidence that costs associated with treatment protocols are worth the expense if they generally improve patients' OHRQoL (Slade, 2002). Analysis of data from research using OHRQoL as an outcome measure will also assist patients and their families in treatment decision-making. (As referenced in L. Sisco and H.L. Broder, "Oral Health-related Quality of Life: What, Why, How, and Future Implications," J Dent Res. 2011 Nov; 90(11): 1264-1270.)

F1.b.iii Public Health Value /Health Equity-Focused:

For Proposed Projects addressing health inequities identified within the Applicant's description of the Proposed Project's need-base, please justify how the Proposed Project will reduce the health inequity, including the operational components (e.g. culturally competent staffing). For Proposed Projects not specifically addressing a health disparity or inequity, please provide information about specific actions the Applicant is and will take to ensure equal access to the health benefits created by the Proposed Project and how these actions will promote health equity.

The School assures equal access to its services by all, regardless of race, ethnicity, gender, sexual orientation or preference, age or source of payment. It is notable that the Project will benefit all of the Pre-Doctoral Treatment Center's patients equally; all will benefit from a space designed as a clinic, separate from educational and administrative spaces. They will benefit from the larger operatories, more flexible chairs, concentration of all services together in a pod, provided by a set group of student practitioners, and from the interdisciplinary consultations and interactions the space will allow.

The School further assures equitable access to its Post-Doctoral Treatment Center services by conspicuously posting the availability of language interpretation for the hearing impaired and patients with limited English proficiency. Additionally, the low-cost fee schedule allows many to afford care at the Pre-doc Treatment Center; additional programs such as the GSDM Bump Up fee schedule promotes access to dental healthcare that is not covered by MassHealth.

F1.b.iv Provide additional information to demonstrate that the Proposed Project will result in improved health outcomes and quality of life of the Applicant's existing Patient Panel, while providing reasonable assurances of health equity.

The Surgeon General has identified Oral Health Related Quality of Life (OHRQoL) as a health priority. Assessment of OHRQoL allows for a shift from traditional medical/dental criteria to assessment and care that focus on a person's social and emotional experience and physical functioning in defining appropriate treatment goals and outcomes.

F1.c Provide evidence that the Proposed Project will operate efficiently and effectively by furthering and improving continuity and coordination of care for the Applicant's Patient Panel, including, how the Proposed Project will create or ensure appropriate linkages to patients' primary care services.

Dental medicine, like the entire healthcare system, has been impacted by the 2001 Institute of Medicine (IOM) study that concludes: "All health care professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and information." (The Institute of Medicine, Crossing the quality chasm: a new health system for the 21st century. Washington, DC: National Academies Press, 2001)

This view was adopted by the American Dental Education Association ("ADEA") Commission on Change and Innovation in Dental Education and became part of the CODA accreditation philosophy and standards:

Collaboration with other Health Care Professionals

Access to health care and changing demographics are driving a new vision of the health care workforce. Dental curricula can change to develop a new type of dentist, providing opportunities early in their educational experiences to engage allied colleagues and other health care professionals. Enhancing the public's access to oral health care and the connection of oral health to general health form a nexus that links oral health care providers to colleagues in other health professions. Health care professionals educated to deliver patient-centered care as members of an interdisciplinary team present a challenge for educational programs. Patient care by all team members will emphasize evidence-based practice, quality improvement approaches, the application of technology and emerging information, and outcomes assessment. Dental education programs are to seek and take advantage of opportunities to educate dental school graduates who will assume new roles in safeguarding, promoting, and caring for the health care needs of the public.

More specifically, CODA Standard 2-19 requires education in an interdisciplinary practice:

"Graduates must be competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care.

Intent: Students should understand the roles of members of the health care team and have educational experiences, particularly clinical experiences, that involve working with other healthcare professional students and practitioners. Students should have educational experiences in which they coordinate patient care within the health care system relevant to dentistry."

Thus, dental education must train students to become integral members of a patient's health care team along with physicians, nurses, medical assistants, physical therapists, nutritionists, psychotherapists and speech pathologists to name a few. The intended outcome from this educational improvement will be better patient care for the patients of the School's Pre-doc Treatment Center, and for future patients of the dentists being trained.

For that reason, the Project was designed to include collaborative spaces to allow the Pre-Doc student clinicians to interact with each

other, with trainees in the Post-Doc 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 clinic 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 members of the patients' health care team. These include conference rooms, collaboration rooms, and adequate space in the operatories. The Project also 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.

The Project includes reallocation of chairs and space in order to support the Pre-Doc educational program and alleviate the inefficiencies the present cramped space necessitated. The emergency, radiology and endodontic services on the 1st floor will be closed, with their functions to be absorbed within pods. That will be made possible by ensuring that 2 chairs in each pod is "multi-functional," i.e., can support general dentistry, endodontics and radiology. Following completion of the Project there will be 100 chairs in the Pre-Doctoral Treatment Center; scheduling of root canals will be easier to manage; supervision will be closer; teams smaller; and each team will have the flexibility to offer its patients the full range of general dentistry services within the pod, rather than walking them to another floor.

- Interactions with the patient's primary care and other providers will be able to take place in the conference and collaboration rooms, which will contain up to date electronic communications facilities.
- Each operatory will be significantly larger. This will provide a more comfortable experience for patients; will comfortably allow up to 4 professionals to participate in/observe care; and will facilitate the Group Practice Model of comprehensive, patient-centered care.
- The treatment teams are being reorganized so that teams are smaller, with closer faculty supervision
- The new space will have chairs arranged in "pods" (rather than in a long line, as they are presently). This will facilitate faculty supervision, ensuring patient safety and quality of care.
- The chairs will be multi-functional; today most chairs are suitable only for general dentistry, and patients must go to a different area for root canals (Endodontics). More general dentistry chairs will have the functionality needed for endodontic practice, allowing the patient to be treated in the same space as the rest of the patient's general dental care, and the scheduling of root canals will depend less on finding a suitable chair.
- Treatment chairs will be arranged in groups of 8-10 for ease of faculty supervision in a flexible, open environment.
- We will also be adding an additional dental cone beam computed tomography unit (CBCT) to the Pre-Doctoral Treatment Center to facilitate efficient radiographic service to our patients. The additional CBCT is not a new type of equipment of GSDM student and is being added for patient convenience. Rather than needing to travel to a subsequent floor we would prefer to have this service available on all of our treatment floors. Having a CBCT will support our educational needs with respect to implementing the group practice model, helping provide the most recent technology to support teaching, learning, and patient care and it will not increase costs to patients in any manner because the project is being funded through university resources.

F1.d Provide evidence of consultation, both prior to and after the Filing Date, with all Government Agencies with relevant licensure, certification, or other regulatory oversight of the Applicant or the Proposed Project.

In preparing to submit this Application and to comply with the conditions of the DoN, GSDM has consulted on several occasions with Nora Mann, Director of the Determination of Need Program and Ben Wood, Bureau of Community Health and Prevention. GSDM consulted with Samuel Louis and Rodrigo Monterrey in the Office of Health Equity by teleconference on July 25, 2017.

GSDM has also consulted with the following state and local regulatory agencies and will continue to cooperate with such agencies in the implementation of the Project:

- Massachusetts Department of Public Health Dental Clinic License (valid until April 11, 2018). Have engaged DPH Division of Health Care Facility Licensure and Certification in several conversations regarding this project and are intending to meet with plan review staff following the submission of this application to obtain feedback and approval of this Project prior to construction.
- Massachusetts Department of Public Health Radiation Control Program Certificate of Registration (valid until December 31, 2017). We have notified this group of our proposed Project and will engage as necessary for review and approval prior to operations.
- Massachusetts Department of Environmental Protection - We have notified this group of our proposed Project and will engage regarding the Notification Prior to Construction or Demolition, Source Registration for Emergency Generator, and Elevator Permit; we will ensure documents are filed and approved prior to construction and occupancy.

- Boston Planning and Development Agency (BPDA) - Conversations and meetings held related to: Article 80B Large Project Review, Cooperation Agreement, Schematic Design Approval, Design Development Approval, Construction Document Approval, Boston Residents Construction Employment Plan, Certification of Compliance with Article 80B, Certification of Consistency with Article 80D, Development Impact Project Agreement. Initial meetings were held on 3.09.17 4.26.17, and 6.02.17. The following subsequent meetings were held: 6.08.17 Community Meeting/Task Force Meeting at the Dental School, 6.07.17 Scoping Meeting, 6.02.17 Urban Design Meeting. Subsequent meetings will focus on community input, design approval, and construction approval.
- City of Boston Inspection Services Department - Initial meeting held on 5.11.17. More conversations and meetings will be held related to: Building Permit, Certificate of Occupancy, Flammable Storage and Garage Permit, all which will be filed and approved prior to construction and occupancy.
- Boston Civic Design Commission - Initial meeting held on 7.11.17, and follow up meeting held on 7.25.17. Focus on meetings is to seek recommendation to the BPDA Board to be filed and approved prior to construction. The Commission reviews the design to ensure it is consistent with the neighborhood.
- Boston Zoning Commission -Meeting yet to be held, but will plan to meet with this group in October 2017 to support updating our Institutional Master Plan to seek approval of this Project prior to construction.
- South End Landmarks Commission - Initial meetings on held on 6.03.17 to review Project and design. There will be no significant impact to the historical district as a result of the Project.
- Boston Transportation Department - Meetings yet to be held, but plan to meet with this group in August and September 2017 to review Transportation Access Plan Agreement, Construction Management Plan, which is required to be filed and approved prior to construction.
- Boston Water and Sewer Commission - Initial meeting held on 7.20.17 to review Site Plan and Groundwater Recharge Plan, approval of the plans is required prior to construction.
- Boston Public Improvement Commission - Meetings yet to be held, but plan to meet with this group in August and September to obtain Specific Repair Plan Approval, which is required prior to construction. This approval is related to improvements to the public realm, such as sidewalks, parking, and streetscape.

F1.e.i Process for Determining Need/Evidence of Community Engagement: For assistance in responding to this portion of the Application, Applicant is encouraged to review *Community Engagement Standards for Community Health Planning Guideline*. With respect to the existing Patient Panel, please describe the process through which Applicant determined the need for the Proposed Project.

The primary purpose of the Project is to support the educational mission of the School. The Project, including both renovations to existing spaces in the Pre-Doc Treatment Center and the addition of new spaces in the Pre-Doc Treatment Center, is designed to help the School remain current—as the health care delivery system evolves into a group practice model of care, the School's educational facilities, including the Pre-Doc Treatment Center, must evolve accordingly.

The need to modify the educational approach was developed through GSDM's Applied Strategic Planning process. A component of this process was to assess future needs through communities of interest. The communities that were represented were Education, Clinical, Community and Research. Along with the communities of interest each committee member had their own shadow team. The function of shadow teams was to provide feedback from individuals both inside and outside of the dental school. As goals and objectives were developed the information was shared with the shadow teams and incorporated into the plan.

F1.e.ii Please provide evidence of sound Community Engagement and consultation throughout the development of the Proposed Project. A successful Applicant will, at a minimum, describe the process whereby the "Public Health Value" of the Proposed Project was considered, and will describe the Community Engagement process as it occurred and is occurring currently in, at least, the following contexts: Identification of Patient Panel Need; Design/selection of DoN Project in response to "Patient Panel" need; and Linking the Proposed Project to "Public Health Value".

We have held two community meetings thus far, and will have one to two more prior to Project approval. Community participation is vital to the success of the Project. Members of the public, including patients, neighbors, staff, and students have been invited to sessions to learn about the Project, provide comments and insights, and help refine the design. In addition to these meetings, the GSDM has posted to the video displays in building describing how we are developing/proposing a Project that follows the group practice model that will improve quality of care and teaching at the School.

Through the community meetings, GSDM recognizes this Project will have impacts on the surrounding community, and in these conversations we have reinforced our underlying objective to update and improve the 44-year old building to better address educational and clinical care needs. In designing the renovation, the School took into consideration its educational methods, accreditation standards, and the patient care needs of the Pre-Doctoral Treatment Center, which led to the following goals and values:

- Safe and high-quality general dental care in the Pre-Doctoral Treatment Center;
- Collaboration by the dental health providers with the patient's other health care providers, which requires space and technology;
- Full implementation of an educational program organized on the Group Practice Model;
- Locating all general dentistry services in the same area;
- A building with up-to-date, efficient mechanical systems, adequate elevators, and separation of clinical from administrative, educational and research spaces.

Further building upon these goals, planning and community engagement has been focused on designing space that would support the dual missions of the Pre-Doc Treatment Center, those of training students and of providing care to patients. There are two innovations that are key to understanding the space needs of the Pre-Doc Treatment Center and the Project specifications: implementation of the Group Practice Model in the Pre-Doc Treatment Center, and the School's commitment to educating students in interdisciplinary interaction, involving the patient's primary care and other providers in the care provided in the Pre-Doc Treatment Center and educating non-dental health providers on oral health. Both are described in more detail below.

The School does not anticipate the cost of providing care to increase as a result of the Project; to the extent it does, it likely will be attributable to the educational aspects of the clinic. For example, the operatories are larger than one would find in a private clinic to allow multiple trainees, faculty, specialists and other health care providers to collaborate and coordinate care.

The School's special needs and circumstances in regard to this Application are described at length in this Application. The Project is necessitated primarily due to the age of the present building, rendering it inadequate for either education or patient care. Secondly, the Project specifications have been designed to fulfill the dual goals of the Pre-Doc Treatment Center: providing excellent general dental health care and providing clinical experience to general dentistry pre-doctoral students, who act as the health care providers under faculty supervision. Fortunately, the accreditation standards with which the School must comply support excellence in patient care in an educational model that encourages team care, interdisciplinary collaboration, closer faculty supervision, a smaller learning group and, we hope, increased patient satisfaction. The Pre-Doc Treatment Center is a school clinic, not a private clinic in competition with other private clinics, and the design of the Project reflects that character. The Department should recognize these needs and take them into account as it reviews this Application.

Finally, the Project will not cause an increase in the total patient care charges of the Pre-Doc Treatment Center for its dental services. Care is offered to patients at a fee schedule that is, with few exceptions, in the bottom 50th percentile of charges in the Commonwealth. This allows persons of limited financial means to access critical care, and also compensates patients for the longer visits required to accommodate the student-providers' learning experience. University funds will be used for the Project, and nothing about the Project is designed in a manner that will increase the cost of dental health care service

Factor 2: Health Priorities

Addresses the impact of the Proposed Project on health more broadly (that is, beyond the Patient Panel) requiring that the Applicant demonstrate that the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment, improved public health outcomes, and delivery system transformation.

F2.a **Cost Containment:**

Using objective data, please describe, for each new or expanded service, how the Proposed Project will meaningfully contribute to the Commonwealth's goals for cost containment.

A key factor in deciding to renovate and expand the existing facility is cost. Unlike building a new building at this or another site, or attempting to renovate other buildings, the planning process demonstrated that this option is the most prudent and cost-effective use of University funds that meets the School's strategic goals. The updated facility will operate in a far more efficient manner, as the updated mechanical systems will provide efficient, environmentally responsible heating and air conditioning.

Not only will the facility be built and operated in a cost-efficient manner, the services that will be provided, and the manner of providing them, will contribute to containing and lowering health care costs generally. 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. The primary drivers of this contribution are:

- The School's proposed facility was designed to include collaborative spaces to allow the Pre-Doctoral student clinicians to interact with each other, with trainees in the Post-Doc specialties, as well as with medical, public health, nursing, pharmacy, physical therapy and other health care providers. Collaborative, comprehensive care is regarded as a superior model that is designed to provide more effective, coordinated care to reduce both morbidity and cost.
- The type of care provided at the Pre-Doctoral Treatment Center contributes to cost containment. If left untreated even for a short period of time, oral diseases can have adverse health and financial consequences. Oral infection can kill. It has been considered a risk factor in a number of general health conditions. The systemic spread of bacteria can cause, or seriously aggravate, infections throughout the body, particularly in individuals with suppressed immune systems. Treating such rampant infections is far more expensive than preventing them through comprehensive general dental care.
- Cost containment from the collaborative, comprehensive approach is particularly notable for patients with comorbid conditions. A recent study concluded that regular dental care lowered health care costs for patients with any of 6 comorbid conditions (diabetes, chronic heart failure, COPD, etc). The study also demonstrated a potential link between the lack of a preventive dental services and overall medical costs. (See Optum Study).
- The Group Practice Model in student dental clinics has been shown to result in better care and lower costs, as discussed above.

Because this is a clinic that not only provides general dental services to patients, but educates future dentists, the impact of the Project goes far beyond the current patient panel. The Project allows the School's Pre-Doctoral students to be educated in a system that favors access to care through a low fee schedule, improvement in outcomes over clinic revenue, and that provides services of the type, and in a manner, shown to lower overall health expenses. Many of the School's graduates open practices and provide services in the Commonwealth. Their training at this renewed facility will enable them to contribute to high quality, low cost, more effective care throughout their careers

F2.b **Public Health Outcomes:**

Describe, as relevant, for each new or expanded service, how the Proposed Project will improve public health outcomes.

- The type of care provided at the Pre-doc Treatment Center contributes to cost containment. If left untreated even for a short period of time, oral diseases can have adverse health and financial consequences. Oral infection can kill. It has been considered a risk factor in a number of general health conditions. The systemic spread of bacteria can cause, or seriously aggravate, infections throughout the body, particularly in individuals with suppressed immune systems. Treating such rampant infections is far more expensive than preventing them through comprehensive general dental care.
- Cost containment from the collaborative, comprehensive approach is particularly notable for patients with comorbid conditions. A recent study concluded that regular dental care lowered health care costs for patients with any of 6 comorbid conditions (diabetes, chronic heart failure, COPD, etc). The study also demonstrated a potential link between the lack of a preventive dental services and overall medical costs. (See Optum Study).

- The Group Practice Model in student dental clinics has been shown to result in better care and lower costs, as discussed above.
- Because this is a clinic that not only provides general dental services to patients, but educates future dentists, the impact of the Project goes far beyond the current patient panel. The Project allows the School's Pre-Doc students to be educated in a system that favors access to care through a low fee schedule, improvement in outcomes over clinic revenue, and that provides services of the type, and in a manner, shown to lower overall health expenses. Many of the School's graduates open practices and provide services in the Commonwealth. Their training at this renewed facility will enable them to contribute to high quality, low cost, more effective care throughout their careers. The Group Practice Model adopted by the School for the Pre-doc Treatment Center and the collaborative, comprehensive care being implemented at the School is not only a superior way to train dentists; it has been shown to correlate to lower overall costs. Studies (As referenced in Nader A. Nadershahi, D.D.S., M.B.A.; Eric S. Salmon, D.D.S.; Nava Fathi, D.D.S.; Karl Schmedders, M.S., Ph.D.; Jace Hargis, Ph.D., M.S. "Review of Outcomes from a Change in Faculty Clinic Management in a U.S. Dental School " J Dent Educ 2010 74:961-969.) have shown that implementation of the Group Practice Model did not increase provider productivity or the volume of patients seen. And it did not result in an increase of clinic revenue. However, patient care provided by small teams in a dental school clinic under closer supervision improved comprehensive patient care, meaning there was an increase in preventive care and a decrease in the number of procedures needed to be performed. GSDM therefore concluded this model is optimal both for teaching and for comprehensive patient care, despite being disadvantageous to the School's clinical income (always a secondary consideration in operating a student clinic as part of an educational program).

It is important to note that health outcomes will be improved not only for the current patient panel at the Pre-doc Treatment Center, but also for future patients of these future dentists.

F2.c **Delivery System Transformation:**



Because the integration of social services and community-based expertise is central to goal of delivery system transformation, discuss how the needs of their patient panel have been assessed and linkages to social services organizations have been created and how the social determinants of health have been incorporated into care planning.

As described above, the Project is focused on creating a facility that promotes collaborative, interdisciplinary patient care. The Pre-Doctoral Treatment Center does not expressly incorporate linkages to social services organizations. In the experience of the School, those linkages are best managed by a patient's primary care provider. When the student providers in the Pre-doc Treatment Center observe a patient in need of assistance in housing, public benefits, assistance in obtaining food, or other health care services, they typically discuss those needs with the patient's primary care provider and allow that provider to coordinate with social services. This is typical in dental practices, and helps avoid duplication of effort and confusion on the part of the patient.

Factor 3: Compliance

Applicant certifies, by virtue of submitting this Application that it is in compliance and good standing with federal, state, and local laws and regulations, including, but not limited to M.G.L. c. 30, §§ 61 through 62H and the applicable regulations thereunder, and in compliance with all previously issued notices of Determination of Need and the terms and conditions attached therein .

F3.a Please list all previously issued Notices of Determination of Need

Add/Del Rows	Project Number	Date Approved	Type of Notification	Facility Name
 	not applicable			

Factor 4: Financial Feasibility and Reasonableness of Expenditures and Costs

Applicant has provided (as an attachment) a certification, by an independent certified public accountant (CPA) as to the availability of sufficient funds for capital and ongoing operating costs necessary to support the Proposed Project without negative impacts or consequences to the Applicant's existing Patient Panel.

F4.a.i **Capital Costs Chart:**
For each Functional Area document the square footage and costs for New Construction and/or Renovations.

		Present Square Footage		Square Footage Involved in Project				Resulting Square Footage		Total Cost		Cost/Square Footage	
				New Construction		Renovation							
Add/Del Rows	Functional Areas	Net	Gross	Net	Gross	Net	Gross	Net	Gross	New Construction	Renovation	New Construction	Renovation
<div>+ -</div>	Study/Interaction Space			0		0		0		\$0.00	\$0.00	\$0.00	\$0.00
<div>+ -</div>	Support Facilities			173		60		233		\$292,208.79	\$42,108.95	\$1,689.07	\$701.82
<div>+ -</div>	Clinic Facilities			12,246		17,499		29,745		\$20,654,481.00	\$12,154,748.00	\$1,686.63	\$694.60
<div>+ -</div>	Offices			32		723		755		\$53,972.19	\$507,412.83	\$1,686.63	\$701.82
<div>+ -</div>	Classrooms			0		0		0		\$0.00	\$0.00	\$0.00	\$0.00
<div>+ -</div>	Laboratories (Class-Labs)			0		0		0		\$0.00	\$0.00	\$0.00	\$0.00
<div>+ -</div>	Circulation & Service			1,266		1,485		2,751		\$1,551,010.00	\$1,820,750.00	\$1,225.13	\$1,226.09
<div>+ -</div>	Lounge, Food Service, & Support Spaces			0		0		0		\$0.00	\$0.00	\$0.00	\$0.00
<div>+ -</div>													
<div>+ -</div>													
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	Total: (calculated)			13,717		19,767		33,484		\$22,551,671.98	\$14,525,019.78	\$6,287.46	\$3,324.33

F4.a.ii For each Category of Expenditure document New Construction and/or Renovation Costs.

	Category of Expenditure	New Construction	Renovation	Total (calculated)
Land Costs				
	Land Acquisition Cost	\$0.	\$0.	\$0.
	Site Survey and Soil Investigation	\$0.	\$0.	\$0.
	Other Non-Depreciable Land Development	\$0.	\$0.	\$0.
	Total Land Costs	\$0.	\$0.	\$0.
Construction Contract (including bonding cost)				
	Depreciable Land Development Cost	\$0.	\$0.	\$0.
	Building Acquisition Cost	\$0.	\$0.	\$0.
	Construction Contract (including bonding cost)	\$0.	\$0.	\$0.
	Fixed Equipment Not in Contract	\$0.	\$0.	\$0.
	Architectural Cost (Including fee, Printing, supervision etc.) and Engineering Cost	\$0.	\$0.	\$0.
	Pre-filing Planning and Development Costs	\$0.	\$0.	\$0.
	Post-filing Planning and Development Costs	\$0.	\$0.	\$0.
Add/Del Rows	Other (specify)			
<input type="button" value="+"/> <input type="button" value="-"/>	Total Project Costs	\$22551672.	\$14525020.	\$37076692.
	Net Interest Expensed During Construction	\$0.	\$0.	\$0.
	Major Movable Equipment	\$0.	\$0.	\$0.
	Total Construction Costs	\$22551672.	\$14525020.	\$37076692.
Financing Costs:				
	Cost of Securing Financing (legal, administrative, feasibility studies, mortgage insurance, printing, etc	\$0.	\$0.	\$0.
	Bond Discount	\$0.	\$0.	\$0.
Add/Del Rows	Other (specify)			
<input type="button" value="+"/> <input type="button" value="-"/>				
	Total Financing Costs	\$0.	\$0.	\$0.
	Estimated Total Capital Expenditure	\$22551672.	\$14525020.	\$37076692.

Factor 5: Relative Merit

F5.a.i Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

Proposal:

The architects provided the School with an initial assessment of the space required to continue providing the current services and programs offered by the School, as well as options to significantly expand the clinical and teaching areas. The first plan, allowing continuation of the existing programs and services, was referred to as the "right sized" projection. While the School considered other options to significantly increase its available square footage, in 2011 it chose the "right sized" approach, and that is the basis for the Project.

Eight site opportunities were initially identified for consideration in the master planning process:

- Renovation and expansion at the existing GSDM facility located at 100 East Newton
- Demolition of 100 East Newton and construction of a new facility in its place
- Renovation of an existing building within the Boston University Medical Campus
- New construction on an alternate site within the Boston University Medical Campus (4 parcels reviewed)
- Purchase and renovation of a property near the Boston University Medical Campus

The option selected is renovation and expansion at the existing facility, based on the availability property along Albany Street to the east of 100 East Newton, the synergy with existing neighbors in the BUMC, the benefits to the School and its patients from continuing to operate in the current visible and familiar location, and was the most cost-effective, and could be undertaken without closing either educational or patient care facilities. After several planning studies, each including conceptual cost models, it was determined that the most prudent and cost-effective use of University funds (to meet the strategic goals of the School) would be to moderately expand and renovate a portion of the current facility housing the School's Pre-doc Treatment Center.

The Project is funded from University funds, and not from clinical revenue. There are no increases planned in the clinical care fee schedule to contribute to the construction.

- The School anticipates continuing to set its fee schedule below the 50th percentile state-wide. The School does this to attract patients to its clinics, to ensure a broad range of patients to support the clinical program. Many of the Pre-doc Treatment Center patients were attracted by the low fee schedule, and found it a satisfactory trade-off for the additional time required of a patient at each visit.
 - Studies have shown that general dental services reduce the overall costs of healthcare for patients who receive such care.
- The School does not anticipate the cost of providing care to increase as a result of the Project; to the extent it does, it likely will be attributable to the educational aspects of the clinic. For example, the operatories are larger than one would find in a private clinic to allow multiple trainees, faculty, specialists and other health care providers to collaborate and coordinate care.

Quality:

This option was chosen to facilitate a higher quality of care through the Group Practice Model and facilitation of collaborative, interdisciplinary practice.

Efficiency:

Improved efficiency of clinical care was a major consideration in selecting this option. The existing facility incorporates numerous inefficiencies:

- Operatories (patient treatment rooms) are small and cramped, on average 90 sq. ft. The nature of the Pre-doc Treatment Center requires faculty and one or more trainees to examine the patient, counsel the patient and discuss care in a room that does not easily accommodate this practice.
- Clinic space and educational space are intermixed. Patients, staff and faculty all enter through the same lobby, mix in the same hallways, and use the same elevators, which has the potential to impede patient privacy and is inconvenient to patients, students, faculty and staff.
- The two public elevators serving all 7 floors of the building have, for quite a few years been insufficient to transport patients, faculty, staff and students.
- The poor design of the current facility impedes full implementation of the Group Practice model of care, due to tight space constraints.
- The Clinic lacks dedicated clinical collaboration and conference space, and it has fallen behind current communications equipment, impeding interdisciplinary collaboration.
- Radiology, emergency and endodontic services needed by patients in the Pre-doc Treatment Center are separate from the main Pre-doc Treatment Center space, introducing inefficiencies and barriers to comprehensive care as patients have to navigate their way

between floors to receive their general dentistry services.

- The 1st floor services are inefficient because they are limited in capacity. The Pre-Doc Endodontic area has only 4 chairs, which means that only 4 root canals could be scheduled at the same time, even when patient need requires more. Five radiology chairs on the 1st floor serve the entire Pre-doc Treatment Center, and 4 emergency chairs accommodate patients who appear with dental emergencies.
- The specificity of chair design limits the services that can be provided, and require patients to move from floor to floor for general dentistry services. For example, when the 4 chairs equipped for endodontic procedures are not in use, they cannot be used for general dentistry because faculty on the 5th or 6th floors cannot supervise the care on the 1st floor.
- As the facility's mechanical systems aged, it has become increasingly difficult to control the climate, resulting in uncomfortable conditions for patients and providers.

These have been remedied by the Project's design:

- Clinic space will be separate from educational space. Patients will enter through a new entrance on Albany Street, with new elevators for clinic use. The entrance at 100 E. Newton will remain to serve staff and faculty. This separation of spaces will enhance patient privacy and make the clinic experience more efficient for patients, students, faculty and staff.
- Radiology, emergency and endodontic services will be moved from the 1st floor to the Pre-doc Treatment Center. This will eliminate the inconvenience and inefficiency of commencing treatment in the Pre-doc Treatment Center, then escorting the patient to the 1st floor for radiology, and back to the Pre-doc Treatment Center for the remaining services. Similarly, patients needing endodontic or emergency services will be able to have those services provided within the Pre-doc Treatment Center.
- General dentistry will be centered on the 4th, 5th, and 6th floors; the 1st floor services (Endodontics, Radiology and Emergency) will be moved to those floors so that patients and student providers have a more efficient experience.
- All General Dentistry patient care will be co-located, to the extent possible, to allow patients to receive all of their general dentistry care in a single space, rather than travelling to the first floor for radiology or endodontics.
- The facility's updated mechanical systems will provide efficient, environmentally responsible heating and air conditioning.
- Architecturally, the facility is welcoming to all who enter it. The Pre-doc Treatment Center has been configured to accommodate a patient-centered approach to patient care. The contiguous design allows patients to receive all of their care within a well-defined and specific area (rather than traveling to the 1st floor).

Capital Expense:

After several planning studies, each including conceptual cost models, it was determined that the most prudent and cost-effective use of University funds (to meet the strategic goals of the School) would be to moderately expand and renovate a portion of the current facility housing the University's dental school. Throughout the design process, the Project team has focused repeatedly on minimizing costs and scope where appropriate without sacrificing quality or the goals of the renovation from an educational and patient care perspective.

Operating Costs:

To be determined, but will not have negative impact on Patient Panel.

List alternative options for the Proposed Project:

Alternative Proposal:

Eight site opportunities were initially identified for consideration in the master planning process:

- Renovation and expansion at the existing GSDM facility located at 100 East Newton
- Demolition of 100 East Newton and construction of a new facility in its place
- Renovation of an existing building within the Boston University Medical Campus
- New construction on an alternate site within the Boston University Medical Campus (4 parcels reviewed)
- Purchase and renovation of a property near the Boston University Medical Campus

Alternative Quality:

Because of the manner in which the School approached planning, the goals that could not be compromised were quality of education and quality of clinical care. These would have to be achieved by whatever alternative was selected. Thus, quality was not a distinguishing factor, as it was assumed the end result would facilitate quality education and quality care.

Alternative Efficiency:

Efficiency is achieved through renovation and expansion through new construction. As with quality, each of the alternatives would have improved efficiency.

Alternative Capital Expense:

As noted earlier, from a capital expense perspective, the proposed Project is the most cost-effective option for addressing the goals of the renovation from an educational and patient care perspective.

Alternative Operating Costs:

The most salient difference between the alternatives was cost needed to achieve the quality and efficiency goals set in the planning process. In addition, it was important to the School to remain within the Boston University-BMC medical campus area, and to operate both the educational and clinical programs during the construction process. These factors overwhelmingly favored renovation and modest expansion of the existing facility.

Add additional Alternative Project

Delete this Alternative Project

F5.a.ii Describe the process of analysis and the conclusion that the Proposed Project, on balance, is superior to alternative and substitute methods for meeting the existing Patient Panel needs as those have been identified by the Applicant pursuant to 105 CMR 100.210(A)(1). When conducting this evaluation and articulating the relative merit determination, Applicant shall take into account, at a minimum, the quality, efficiency, and capital and operating costs of the Proposed Project relative to potential alternatives or substitutes, including alternative evidence-based strategies and public health interventions.

With the changing landscape of dental education, GSDM has proposed an expansion and renovation to its facility. This expansion and renovation will meet current educational standards for educating dental students and also in turn benefit our patients.

Access to health care and changing demographics are driving a new vision of the health care workforce. Dental curricula has changed, in a manner, to develop a new type of dentist, one that provides opportunities early in the educational experiences of dental students to engage allied colleagues and other health care professionals. This is now a professional standard. Enhancing the public's access to oral health care and the connection of oral health to general health form a nexus that links oral health care providers to colleagues in other health professions. Health care professionals educated to deliver patient-centered care as members of an interdisciplinary team is now the desired outcome for educational programs. Patient care by all team members will emphasize evidence-based practice, quality improvement approaches, the application of technology, emerging information, and outcomes assessment. Dental education programs both seek and take advantage of opportunities that educate dental school graduates prepared to assume new roles in safeguarding, promoting, and caring for the health care needs of the public.

In 2009, GSDM developed a strategic plan that outlined a vision to make the school a premier institution in the country, promoting excellence in dental education, research, oral health care, and community service to improve overall health of the global population. The plan identified a dramatically improved facility as a critical driver of success. School and University leaders have spent the ensuing eight years engaging in thoughtful planning and dialogue with alumni, faculty, students, administrators, and the community. After careful exploration of numerous possibilities, an expansion and selected renovation of the School's current facility emerged as the best option (Project).

By almost every measure, the current facility constrains what the GSDM community can undertake, and so the proposed expansion and renovation seeks to, essentially, "right size" the School's space.

The Project provides flexible, contemporary dental operatories for clinical training. The new operatories can accommodate a broad range of procedures, and as many as three learners with an instructor. The Project plan also emphasizes providing appropriate support space for the introduction of new pedagogies, emerging technologies and creating integrated learning experiences for GSDM students.

The need to modify the educational approach was developed through GSDM's Applied Strategic Planning process. A component of this process was to assess future needs through communities of interest. The communities that were represented were Education, Clinical, Community and Research. Along with the communities of interest each committee member had their own shadow team. The function of shadow teams was to provide feedback from individuals both inside and outside of the dental school. As goals and objectives were developed the information was shared with the shadow teams and incorporated into the plan.

GSDM's motivation behind this project is to improve the quality of healthcare education. With this expansion and renovation patients will be able to receive oral health care, that is harmonized with physicians, nurses, medical assistants, physical therapists, nutritionists, and speech pathologists to name a few. The intended outcome from this educational improvement will be better patient care.

Factor 6: Community Based Health Initiatives

F6 Does your existing CHNA/CHIP meet the minimum standards outlined in the Community Engagement Standards for Community health Planning Guideline?

☐ Yes ☒ No

Not applicable

Documentation Check List

The Check List below will assist you in keeping track of additional documentation needed for your application. Once you have completed this Application Form the additional documents needed for your application will be on this list. E-mail the documents as an attachment to: DPH.DON@state.ma.us

- ☒ Copy of Notice of Intent
- ☒ Affidavit of Truthfulness Form
- ☒ Scanned copy of Application Fee Check
- ☒ Affiliated Parties Table Question 1.9
- ☒ Change in Service Tables Questions 2.2 and 2.3
- ☐ Certification from an independent Certified Public Accountant
- ☐ Notification of Material Change
- ☒ Articles of Organization / Trust Agreement
- ☐ Current IRS Form, 990 Schedule H CHNA/CHIP and/or Current CHNA/CHIP submitted to Massachusetts AGO's Office
- ☐ Community Engagement Stakeholder Assessment form
- ☐ Community Engagement-Self Assessment form

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Determination of Need

Application Number: GSDM-17040515-RE

Use this number on all communications regarding this application.

AFFILIATED PARTIES FORM



Massachusetts Department of Public Health
Determination of Need
Affiliated Parties

Version: DRAFT
3-15-17

DRAFT

Application Date: 07/31/2017

Application Number: GSDM-17040515-RE

Applicant Information

Applicant Name: Henry M. Goldman School of Dental Medicine

Contact Person: Jeffrey W. Hutter, DMD, MEd

Title: Dean, Henry M. Goldman School of Dental Medicine

Phone: 6176384780

Ext:

E-mail: jhutter@bu.edu

Affiliated Parties

1.9 Affiliated Parties: List all officers, members of the board of directors, trustees, stockholders, partners, and other Persons who have an equity or otherwise controlling interest in the application.												
Add/ Del Rows	Name (Last)	Name (First)	Mailing Address	City	State	Affiliation	Position with affiliated entity (or with Applicant)	Stock, shares, or partnership	Percent Equity (numbers only)	Convictions or violations	List other health care facilities affiliated with	Business relationship with Applicant
<div>+ -</div>	Hutter	Jeffrey W.	100 East Newton Street, Suite 317	Boston	MA	Dean, Chair of Executive Committee	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Guarente	John	100 East Newton Street, Suite 428	Boston	MA	Associate Dean, Clinical Affairs	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Bendayan	Alexander	100 East Newton Street, Suite 217	Boston	MA	Assistant Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Calabrese	Joseph	100 East Newton Street, Suite 305	Boston	MA	Assistant Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Errante	Margaret	100 East Newton Street, Suite 308	Boston	MA	Assistant Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Henshaw	Michelle	560 Harrison Avenue, 3rd floor	Boston	MA	Associate Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Holland	Kevin	72 East Concord Street, B-3	Boston	MA	Assistant Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Kukuruzinska	Maria	650 Albany Street, Suite X-343	Boston	MA	Associate Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Leone	Cataldo	72 East Concord Street, Suite B-3	Boston	MA	Associate Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Mehra	Pushkar	100 East Newton Street, Suite 407	Boston	MA	Associate Dean	Member of GSDM Executive Committee			No	None	Yes
<div>+ -</div>	Russell	David	100 East Newton Street, Suite 305	Boston	MA	Assistant Dean	Member of GSDM Executive Committee			No	None	Yes

Add/ Del Rows	Name (Last)	Name (First)	Mailing Address	City	State	Affiliation	Position with affiliated entity (or with Applicant)	Stock, shares, or partnership	Percent Equity (numbers only)	Convictions or violations	List other health care facilities affiliated with	Business relationship with Applicant
<div><div>+</div><div>-</div></div>	Dibart	Serge	100 East Newton Street, Suite 217	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Chogle	Sami	100 East Newton Street, Suite 705	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Garcia	Raul	560 Harrison Avenue, 3rd floor	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Kong	Celeste	100 East Newton Street, Suite 612	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Levin	David	72 East Concord Street, Evans-400	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Nathanson	Dan	72 East Concord Street, R-520	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Will Kuo	Leslie	100 East Newton Street, Suite 104	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Zavras	Athansios	100 East Newton Street, Suite 706	Boston	MA	Department Chair	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	McDonough	Timothy	100 East Newton Street, Suite 317	Boston	MA	Executive Director	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Pani	Pinelopi	100 East Newton Street, Suite 528	Boston	MA	Faculty member	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>	Myers	Alexa	100 East Newton Street, Suite 528	Boston	MA	Staff member	Member of GSDM Executive Committee			No	None	Yes
<div><div>+</div><div>-</div></div>					MA							
<div><div>+</div><div>-</div></div>					MA							

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Determination of Need

Affiliated PartiesHenry M. Goldman School of Dental Medicine

07/31/2017 1:49 pm

Page 2 of 2

CHANGE IN SERVICE FORM



Massachusetts Department of Public Health
Determination of Need
Change in Service

Version: DRAFT
3-15-17

DRAFT

Application Date: 07/31/2017

Application Number: GSDM-17040515-RE

Applicant Information

Applicant Name: Henry M. Goldman School of Dental Medicine

Contact Person: Jeffrey W. Hutter, DMD, MEd

Title: Dean, Henry M. Goldman School of Dental Medicine

Phone: 6176387480

Ext:

E-mail: jhutter@bu.edu

Facility: Complete the tables below for each facility listed in the Application Form

Facility Name: Henry M. Goldman School of Dental Medicine

CMS Number: not applicable

Facility type: Dental Clinic

Change in Service

2.2 Complete the chart below with existing and planned service changes. Add additional services with in each grouping if applicable.

Add/Del Rows		Licensed Beds	Operating Beds	Change in Number of Beds +/-		Number of Beds After Project Completion (calculate)		Patient Days (Current/ Actual)	Projected Patient Days	Occupancy rate for Operating Beds (Current/Actual)		Average Length of Stay	Number of Discharges
		Existing	Existing	Licensed	Operating	Licensed	Operating			Current Beds	Projected		
	Acute												
	Medical/Surgical									0%	0%		
	Obstetrics (Maternity)									0%	0%		
	Pediatrics									0%	0%		
	Neonatal Intensive Care									0%	0%		
	ICU/CCU/SICU									0%	0%		
<div>+ -</div>										0%	0%		
	Total Acute									0%	0%		
	Acute Rehabilitation									0%	0%		
<div>+ -</div>										0%	0%		
	Total Rehabilitation									0%	0%		
	Acute Psychiatric												
	Adult									0%	0%		
	Adolescent									0%	0%		

Add/Del Rows		Licensed Beds	Operating Beds	Change in Number of Beds +/-		Number of Beds After Project Completion (calculate)		Patient Days (Current/ Actual)	Projected Patient Days	Occupancy rate for Operating Beds (Current/Actual)		Average Length of Stay	Number of Discharges
		Existing	Existing	Licensed	Operating	Licensed	Operating			Current Beds	Projected		
	Pediatric									0%	0%		
	Geriatric									0%	0%		
<div>+ -</div>										0%	0%		
	Total Acute Psychiatric									0%	0%		
	Chronic Disease									0%	0%		
<div>+ -</div>										0%	0%		
	Total Chronic Disease									0%	0%		
	Substance Abuse												
	detoxification									0%	0%		
	short-term intensive									0%	0%		
<div>+ -</div>										0%	0%		
	Total Substance Abuse									0%	0%		
	Skilled Nursing Facility												
	Level II									0%	0%		
	Level III									0%	0%		
	Level IV									0%	0%		
<div>+ -</div>										0%	0%		
	Total Skilled Nursing									0%	0%		

2.3 Complete the chart below If there are changes other than those listed in table above.

Add/Del Rows	List other services if Changing e.g. OR, MRI, etc	Existing Number of Units	Change in Number +/-	Proposed Number of Units	Existing Volume	Proposed Volume
<div>+ -</div>	Dental Chairs	169	6	175		
<div>+ -</div>	CBCT	5	1	6		

Add additional Facility

Delete this Facility

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AFFIDAVIT OF TRUTHFULNESS FORM



Massachusetts Department of Public Health

Determination of Need

Affidavit of Truthfulness and Compliance

with Law and Disclosure Form 100.405(B)

Version: DRAFT
3-22-17c

DRAFT

Instructions: Complete Information below. When complete check the box "This document is ready to print:". This will date stamp and lock the form. Print Form. Each person must sign and date the form. When all signatures have been collected, scan the document and e-mail to: **dph.don@state.ma.us** Include all attachments as requested.

Application Number: GSDM-17040515-RE

Original Application Date: 07/31/2017

Applicant Name: Henry M. Goldman School of Dental Medicine

Applicant's Business Type: ☒ Corporation ☐ Limited Partnership ☐ Partnership ☐ Trust

Is the Applicant the sole member or sole shareholder of the Health Facility(ies) that are the subject of this Application? ☐ Yes ☒ No

Describe the role /relationship: the operator of the Henry M. Goldman School of Dental Medicine

This document is ready to print: ☒

Date/time Stamp: 07/28/2017 1:40 pm

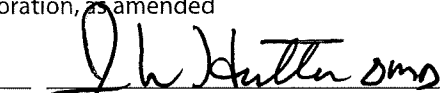
The undersigned certifies under the pains and penalties of perjury:

1. The Applicant is the operator of the Henry M. Goldman School of Dental Medicine;
2. I have read 105 CMR 100.000, the Massachusetts Determination of Need Regulation;
3. I understand and agree to the expected and appropriate conduct of the Applicant pursuant to 105 CMR 100.800;
4. I have read this application for Determination of Need including all exhibits and attachments, and certify that all of the information contained herein is accurate and true;
5. have submitted the correct Filing Fee and understand it is nonrefundable pursuant to 105 CMR 100.405(B);
6. I have submitted the required copies of this application to the Determination of Need Program, and, as applicable, to all Parties of Record and other parties as required pursuant to 105 CMR 100.405(B);
7. I have caused, as required, notices of intent to be published and duplicate copies to be submitted to all Parties of Record, and all carriers or third-party administrators, public and commercial, for the payment of health care services with which the Applicant contracts, and with Medicare and Medicaid, as required by 105 CMR 100.405(C), et seq.;
8. I have caused proper notification and submissions to the Secretary of Environmental Affairs pursuant to 105 CMR 100.405(E) and 301 CMR 11.00;
9. If subject to M.G.L. c. 6D, § 13 and 958 CMR 7.00, I have submitted such Notice of Material Change to the HPC - in accordance with 105 CMR 100.405(G);
10. Pursuant to 105 CMR 100.210(A)(3), I certify that both the Applicant and the Proposed Project are in material and substantial compliance and good standing with relevant federal, state, and local laws and regulations, as well as with all previously issued Notices of Determination of Need and the terms and Conditions attached therein;
11. I have read and understand the limitations on solicitation of funding from the general public prior to receiving a Notice of Determination of Need as established in 105 CMR 100.415;
12. I understand that, if Approved, the Applicant, as Holder of the DoN, shall become obligated to all Standard Conditions pursuant to 105 CMR 100.310, as well as any applicable Other Conditions as outlined within 105 CMR 100.000 or that otherwise become a part of the Final Action pursuant to 105 CMR 100.360;
13. Pursuant to 105 CMR 100.705(A), I certify that the Applicant has Sufficient Interest in the Site or facility; and
14. Pursuant to 105 CMR 100.705(A), I certify that the Proposed Project is authorized under applicable zoning by-laws or ordinances, whether or not a special permit is required; or,
 - a. If the Proposed Project is not authorized under applicable zoning by-laws or ordinances, a variance has been received to permit such Proposed Project; or,
 - b. The Proposed Project is exempt from zoning by-laws or ordinances.

Corporation:

Attach a copy of Articles of Organization/Incorporation, as amended

Jeffrey W. Hutter, Dean of the Henry M.
Goldman School of Dental Medicine



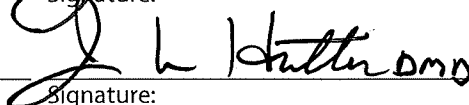
07/28/2017

~~XXXXXX Corporation Name:~~

Signature:

Date

Jeffrey W. Hutter, Chair, Executive Committee of
the Henry M. Goldman School of Dental Medicine



07/28/2017

~~XXXXXX Corporation Name:~~

Signature:

Date

APPLICATION FEE CHECK

000844784



Trustees of Boston University
Boston, Massachusetts 02215-1301

CHECK VOID AFTER 120 DAYS
TWO HANDWRITTEN SIGNATURES
REQUIRED WHEN AMOUNT IS
OVER \$20,000

56-1544
441

DATE
07/28/2017

CHECK NO.
3339103

CHECK AMOUNT
\$74,153.38

*** SEVENTY-FOUR THOUSAND ONE HUNDRED FIFTY-THREE Dollars and 38 Cents ***

PAY TO THE
ORDER OF
Commonwealth of Massachusetts
250 Washington St c/o R Seymour 5th
Boston MA 02108

Authorized Signature

PAYABLE AT
JPMORGAN CHASE BANK, NA

Authorized Signature

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NOTICE OF INTENT

Public Announcement Concerning a Proposed Health Care Project

On or about July 31, 2017, Trustees of Boston University, with a principal place of business at 1 Silber Way, Boston, MA 02215, intends to file an application (Application) with the Massachusetts Department of Public Health to obtain a Determination of Need for the renovation of a licensed dental clinic (Clinic) operated by the Boston University Henry M. Goldman School of Dental Medicine and located at 100 East Newton Street, Boston, MA 02118 and for the acquisition of a cone beam computed tomography machine to be used at the Clinic (Project). The Project includes the renovation of approximately 33,484 square feet of the Clinic used for the provision of outpatient dental services. The estimated capital expenditure for the Project is \$37,076,692. The Project is not anticipated to have any adverse price or service impact for the Clinic's existing patients. Any ten Taxpayers of Massachusetts may register in connection with the intended Application or amendment by no later than August 21, 2017 by contacting the Department of Public Health Determination of Need Program, 250 Washington Street, 6th Floor, Boston, MA 02108.

Public Announcement Concerning a Proposed Health Care Project

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www.bostonherald.com

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MONDAY, JULY 17, 2017 BOSTON HERALD

BOSTON HERALD MONDAY, JULY 17, 2017

BYLAWS OF THE HENRY M.
GOLDMAN SCHOOL OF
DENTAL MEDICINE



Henry M. Goldman School of Dental Medicine

Mission Statement, Brief History and By-Laws

Mission Statement

The Boston University Henry M. Goldman School of Dental Medicine (GSDM) will be the premier academic dental institution promoting excellence in dental education, research, oral health care, and community service to improve the overall health of the global population.

We will provide outstanding service to a diverse group of students, patients, faculty, staff, alumni, and healthcare professionals within our facilities, our community, and the world.

We will shape the future of the profession through scholarship, creating and disseminating new knowledge, developing and using innovative technologies and educational methodologies, and by promoting critical thinking and lifelong learning.

We will do so in an ethical, supportive environment, consistent with our core values of trust, responsibility, respect, fairness, compassion, excellence, service, and effective communication in synergy with the strategic plan of Boston University.

We will support this mission using responsible financial policies and philanthropy.

A Brief History of the Boston University Henry M. Goldman School of Dental Medicine

The Henry M. Goldman School of Dental Medicine has origins dating to 1958, when Boston University School of Medicine established a Department of Stomatology (medical study of the physiology and pathology of the mouth) to provide postdoctoral education in dentistry. At that time, the institution was the only one in the country devoted solely to specialty education in dentistry.

The Boston University School of Graduate Dentistry was founded in 1963 under the leadership of Dean Henry M. Goldman. Originally located in a three-and-a-half story brownstone building on East Concord Street, the school in 1970 moved to the current facility at 100 East Newton Street. The three-story building was constructed in response to the dynamic expansion of teaching activities, enrollment, and research. Building on a foundation of strength in postdoctoral education, in 1972 the school initiated a predoctoral program leading to the Doctor of Dental Medicine degree. In 1973 the school constructed four more floors, bringing the East Newton Street building to its current seven stories.

The late 1970s and the 1980s were times of impressive growth in every area of the school. Affiliations with area dental practices, extramural sites, educational facilities, and myriad training sites across the country allowed students to improve clinical and practice management skills in a variety of practice types. In 1989, the school implemented the APEX (Applied Professional Experience) Program, where preclinical dental students gained experience in the dental practice environment. The early 1990s saw the school expand onto the university's Charles River Campus with the Dental Health Center, which provides care to members of the Boston University community through the school's Dental Health Plan, established in 1989. The Dental Health Plan in the 1990s began to offer coverage to employees of Boston Medical Center.

In 1996 the school had outgrown its designation as a school of graduate dentistry and accordingly was renamed the "Boston University Henry M. Goldman School of Dental Medicine" to better reflect the scope of the school's education, research, patient care, and community missions.

During the late 1990s, the school significantly expanded its research mission with the addition of two new departments, the Department of Health Policy & Health Services Research and the Department of Molecular & Cell Biology. In addition, the school strengthened the capacity to evaluate curriculum, programs, students, and faculty with the addition of the Department of Educational Research and Evaluation.

In 2000, the school concentrated the predoctoral curriculum under the new Department of General Dentistry. Also in 2000 the school opened the Simulation Learning Center, where pre-clinical students practice dentistry on virtual patients in a high-tech setting.

With a faculty of more than 325 educators, clinicians, and researchers and more than 250 staff members, the school offers a full spectrum of pre-doctoral and post-doctoral specialty education programs and a complete range of graduate programs and degrees to more than 700 students.

In 2008, Jeffrey W. Hutter was named Dean of the Boston University Henry M. Goldman School of Dental Medicine. Under his leadership the School has embarked on an Applied Strategic Planning Process which will transform the School into the premier academic dental institution promoting excellence in dental education, research, oral health care, and community service to improve the overall health of the global population.

Academic Departments

Endodontics
General Dentistry
Health Policy & Health Services Research
Molecular & Cell Biology
Oral & Maxillofacial Pathology
Oral & Maxillofacial Surgery
Orthodontics & Dentofacial Orthopedics
Pediatric Dentistry
Periodontology & Oral Biology
Restorative Sciences & Biomaterials

Degrees and Certificates Offered

DMD, CAGS, DSc, DScD, PhD, MS, MSD

Predoctoral Programs

4-Year DMD
Advanced Standing DMD (2-Year)
7-Year combined BA/DMD

Postdoctoral Programs

Advanced Education in General Dentistry
Dental Public Health
Endodontics
Operative Dentistry
Oral & Maxillofacial Surgery
Oral Biology
Orthodontics & Dentofacial Orthopedics
Pediatric Dentistry
Periodontology
Prosthodontics

Overview

The following By-Laws were unanimously approved by the faculty of the Boston University School of Dental Medicine at a meeting held on March 13, 1973. Updated versions were later approved by the Faculty on April 11, 1978; May 28, 1998; September 14, 2005; and October 10, 2005.

Jeffrey W. Hutter, DMD, MEd
Dean and Spencer N. Frankl Professor in Dental Medicine

By-Laws of the Boston University Henry M. Goldman School of Dental Medicine

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Article I Officers of the Administration

SECTION 1 The Dean

In accordance with Boston University's by-laws, Article IV, Section 3, a dean shall be appointed to the Henry M. Goldman School of Dental Medicine by the Corporation upon the recommendation of the president of the university.

The dean shall administer the Henry M. Goldman School of Dental Medicine in keeping with policies of the university and, in cooperation with the medical campus provost, shall coordinate the activities of the Henry M. Goldman School of Dental Medicine with related educational and research activities of the Boston University Medical Center as well as the other health science related schools at Boston University.

The dean shall have the following powers and responsibilities within the Henry M. Goldman School of Dental Medicine:

- (A) He/she shall be chairperson of the Executive Committee of the Faculty. He/she shall appoint the chairpersons of all other standing committees of the faculty. He/she may consult the Executive Committee on academic matters and faculty assignments to the various standing committees of the faculty.
- (B) He/she shall be responsible for the review and evaluation of on-going educational, research and administrative programs; and the development of recommendations for improving existing programs as well as the fostering, coordination, and supervising of new programs through the Henry M. Goldman School of Dental Medicine.
- (C) He/she shall secure from the chairperson, division and other unit directors within the school an estimate of their budgetary needs and develop these into a proposed budget for the school.
- (D) The dean shall approve in advance of their submission all applications for grants or contracts for the support of teaching, training or research sponsored by the school.
- (E) The dean may make recommendations to the medical campus provost for appointment, promotion, suspension or retirement of the associate and assistant deans, chairpersons, and other administrative officers and full-time or part-time members of the faculty.

SECTION 2 Associate and Assistant Deans

- (A) An associate dean shall perform such duties and administrative functions as the dean prescribes, and shall act in the absence of the latter.
- (B) At the request of the dean, an associate dean shall represent the dean as a member of the University Council.

(C) An assistant dean shall perform such duties and administrative functions as the dean prescribes.

Article II The Faculty

SECTION 1 The Faculty

The Faculty shall be constituted as and shall have the duties as listed in **Article IV, Section 4 of the Boston University By-Laws** as follows:

- Appointments of all faculty members with tenure or at the rank of Professor or Associate Professor shall be made by the Corporation upon written recommendation of the President. All other faculty appointments shall be made by the President and reported to the Corporation.
- Each appointment shall state the length of term and special conditions, if any.
- Each faculty shall have the authority to establish rules and regulations concerning the academic requirements of its school or college, with the approval of the dean, provosts, and president.
- Faculty members are expected to attend the regular and special meetings of their college or school and of the university.
- Faculty members shall carry teaching, research, and other duties and for such periods of the year as shall be approved by the chairperson of their department, the dean of their college and the provost.
- Members of the faculty shall be recommended for appointment to appropriate ranks in academic, clinical, or research tracks, or a combination of these. Academic ranks generally are full-time appointments, with the exception that an assistant professor may have a half to full-time appointment. Senior clinical ranks are generally reserved for half-to full-time appointments based largely on teaching responsibilities. Research ranks are generally reserved for individuals engaged in half- to full-time research without other significant duties. The following ranks in these tracks are recognized by the Henry M. Goldman School of Dental Medicine:

A. **Academic**
Professor
Associate Professor
Assistant Professor
Lecturer
Instructor

B. **Clinical**
Clinical Professor
Clinical Associate Professor
Clinical Assistant Professor
Clinical Lecturer
Clinical Instructor
Clinical Associate

C. **Research**
Research Professor

Research Associate Professor
Research Assistant Professor

D. **Adjunct**
Adjunct Professor
Adjunct Associate Professor
Adjunct Assistant Professor
Adjunct Instructor
Adjunct Clinical Professor
Adjunct Clinical Associate Professor
Adjunct Clinical Assistant Professor

E. **Visiting**
Visiting Scholar
Visiting Research Professor
Visiting Associate Research Professor
Visiting Assistant Research Professor

SECTION 2 Policies and Procedures of Faculty Appointments and Promotions

A. Medical Campus Policy

The appointments of all full-time faculty shall be governed by the **Medical Campus Policy for Appointment and Continuance of Appointments for Full-time Faculty**, as approved by the Board of Trustees, effective July 1, 1999. The policy may be referenced at:

<http://www.bu.edu/handbook/appointments-and-promotions/appointment-med-campus/>

B. Henry M. Goldman School of Dental Medicine Policy

It is expected that all faculty will contribute to fulfilling the mission of the school through effective teaching, research and advising as well as through public service and competent participation in the work of the school and/or university.

Academic Faculty

Appointment to the academic track will be limited to those individuals who fulfill the following general criteria.

1. Are employed by the university on a half-to full-time basis.
2. Have *primary* responsibility for the organization, preparation, implementation and evaluation of major course(s) or programs, which may include research programs, within a department of the school.
3. Are responsible for scholarly activities commensurate with rank.
4. Are members or chairperson of major standing committees of the school or university or provide equivalent service to the school.

Academic ranks generally are full-time appointments, with the exception that an assistant professor may have a half-time appointment. Senior clinical ranks are generally reserved for half-to full-time appointments based largely on teaching responsibilities. Research ranks are generally reserved for individuals engaged in half- to full-time research without other significant duties. Voting members of the faculty must hold academic rank of instructor or higher.

Each department will not be limited to the number of full-time academic faculty members. Should an academic faculty member fail to continually fulfill the above qualifying criteria, it is expected that the department chairperson will initiate the procedure required for changing the faculty member's position to the clinical or research faculty or take other appropriate action.

Criteria for Appointment or Promotion to Specific Ranks

The usual criteria for appointment or promotion to **Assistant Professor** are:

1. Possession of the DMD, MD, PhD, DSc, or other equivalent degrees applicable to his or her disciplines.
2. Demonstrated evidence of scholarly work and teaching ability.
3. Evidence of high standards of performance.
4. Successful completion of an approved graduate training program.

The usual criteria for appointment or promotion to **Associate Professor** are:

1. At least three years or its equivalent at the assistant professor level.
2. Sufficient publications or creative work of high quality to indicate progress toward a significant scholarly career.

3. Effective teaching and advising of graduate and/or undergraduate students.
4. Competent work in one or more of the following: departmental administration, school or university committees, community service, and professional organizations.
5. Service to regional or national professional organizations

The usual criteria for appointment or promotion to **Professor** are:

1. Three years or its equivalent at the level of associate professor.
2. Creative work and publications of quality sufficient to make the faculty member a *widely recognized scholar in his or her field*.
3. Effective teaching and advising, usually including responsibility for designing and implementing a major teaching area within the department.
4. Competent service in departmental administration such that he or she may assume the duties of the department chairperson in his or her absence.
5. Service to regional or national professional organizations

Specialty board certification will be viewed positively in the candidate's favor for both junior and senior faculty positions.

Implementation of Henry M. Goldman School of Dental Medicine Policies on Appointment and Promotion

To implement the Henry M. Goldman School of Dental Medicine policies on appointment and promotion, it is recommended that departments adopt the following procedures:

1. The chairperson of the department, in conjunction with the faculty member under consideration, should assume responsibility for a) preparing for presentation to the school's Faculty Appointments and Promotions Committee a synopsis of the progress and achievements of each individual whose status is under consideration, including effectiveness in teaching, research, and writing and services to the school and community, and (b) gathering and submitting relevant supportive documentation. If significant for the effective discharge of responsibilities to the school, information concerning personal conduct, performance, or demeanor may also be included.
2. A decrease in time commitment to the school, depending upon rank, may require a change in status. Changes in status will be acted upon by the Faculty Appointment and Promotions Committee. It is the Chairperson's responsibility to review time commitments for each faculty member on a yearly basis.

Qualifications for Faculty Appointment and Promotion

Overview of Criteria for Faculty Appointment and Promotions

In accordance with Boston University policy, recommendations for re-appointment and promotion in rank or increases in salary shall be based on merit and institutional needs and interests.

"Merit" shall be determined by considering relevant criteria including the following: (1) teaching effectiveness; (2) scholarly and professional achievements; (3) research, as evidenced by both published and unpublished works; (4) success in generating external funding to support research or other programs; (5) direction of graduate studies; (6) advisory and counseling service programs and administrative work of the university (other than teaching and research); (9) professional activities in the community; (10) attributes of integrity, industry, objectivity, leadership, and cooperation. These criteria are not listed in order of importance, nor are they to be rigidly applied.

Institutional needs and goals involve consideration of such factors as enrollment projections for the school, department or program; academic needs of the program; availability of resources to support the program or position—financial as well as physical; other institutional and programmatic considerations not directly related to the merit of the individual under consideration for continuance of the appointment.

Specific Guidelines

It is the intention of the Faculty Appointments and Promotions Committee to work closely with the department chairpersons and the Faculty Development Committee to provide clear guidelines for promotion. It is anticipated that these guidelines will provide a basis for faculty evaluation and provide direction for faculty development activities. Promotion will recognize faculty development by promotion to a higher rank, or in some cases, by transfer to the academic track.

Promotion will generally not be based on "length of service" guidelines. However, it is expected that in most cases an individual will not be promoted to a higher rank in less than three years from achieving the present rank. A candidate must demonstrate excellence in at least one of three areas to be considered for promotion, and involvement in all three areas to be considered for promotion in the academic track, as described below.

- 1. Scholarly Activities** - Scholarly activities will be evaluated based on publication record, extramural support, presentations at regional, national, and international conferences or meetings, editorial board membership of professional or scientific journals or equivalent activities and specialty board certification. Publication is considered an essential component of scholarly activities since it represents a tangible accomplishment that promotes the school's reputation.
- 2. Teaching** - Teaching will be evaluated based on development of new teaching approaches, course directorships, and responsibility for specific areas of patient care or clinical teaching, mentoring and continuing dental education. It is implicitly understood that an excellent teacher functions as an outstanding role model and mentor for students.
- 3. Service** - Service will be evaluated based on administrative and committee assignments, participation as an officer or committee chair in professional societies, membership in advisory boards or grant review committees, and participation in community-based activities offered by the school.

Promotion will be considered separately for academic, clinical and research tracks. The academic rank is reserved for individuals who actively participate in scholarly activities, although the area of excellence may be in teaching or service. Individuals being considered for promotion to senior positions in the clinical or research tracks will usually have half- to full-time appointments and demonstrate excellence in one of the three major areas.

Professor

Candidates for professor will have previously held the rank of associate professor in one of the three tracks. All individuals being considered for professor with full academic privileges must submit papers published in rank in refereed journals, present evidence of long-term participation in teaching programs and administrative affairs, be a full-time faculty member, and provide evidence for having contributed significantly to student development. Specialty board certification is considered an important scholarly achievement and will be viewed positively. If the above are deficient, an individual should be considered for an alternative track. If an individual is being promoted on the basis of research activities, he or she

must have a long term record of extramural funding, submit several publications in rank in refereed journals, and have letters of recommendation indicating national prominence in his or her area of research. Individuals being considered on the basis of their teaching or service record must present strong evidence of excellence. Excellence in teaching can be provided by letters of recommendation indicating prominence as an educator, an impressive record as an invited speaker on educational issues, course directorships, the implementation of innovative teaching approaches, significant mentoring relationships with several students, sponsorship of student thesis projects, or significant participation in presenting continuing education courses. Service to the community, school, or university will be evaluated on the basis of participating as an officer in regional or national organizations, demonstrating ongoing leadership in community-based school activities, the development of innovative clinical services, or improvement of existing services, participation in school or university committees.

Clinical Professor

Candidates for Clinical Professor will have previously held the rank of Associate Professor in one of the three tracks and have a half-time to full-time appointment. An individual must demonstrate both a substantial contribution to the school and excellence in the areas of teaching or service. Evaluation will not be made on the basis of scholarly activities.

Research Professor

A Research Professor will devote the majority of his or her effort to research activities. He or she is expected to have made important contributions to research activities within the respective Department over an extended period of time, to have national prominence in an area of research concentration, and have a half-time to full-time appointment. Independent extramural funding will be viewed positively in assessing the applicant's qualifications.

Associate Professor

Candidates for the academic rank of Associate Professor will have previously held the rank of Assistant Professor in one of the three tracks. All individuals being considered for Associate Professor must submit papers published in rank in refereed journals. He or she must also present evidence of active participation in teaching and service and have a full-time appointment. Specialty board certification will be considered positively in support of the applicant. If the above are deficient, the individual should be considered for an alternative track. If an individual is to be promoted on the basis of research activities, he or she must have a significant level of extramural funding, must submit several papers published in rank in refereed journals and have letters of recommendation indicating recognition in his or her area of research. Candidates seeking promotion to Associate Professor based on teaching or service must demonstrate excellence in these areas. Excellence in teaching can be provided by strong letters of recommendation, invitations as an invited speaker based on educational issues, course directorships, the implementation of innovative teaching approaches, significant mentoring relationships with students and significant participation in presenting continuing education courses. Evidence of service to the community, school or university may be provided by a leadership role in community-based school activities, participation as an officer in regional or national organizations, participation in school or university committees, membership in study sections or advisory groups, and the development of innovative clinical services or improvement of existing services. In general, promotion to Associate Professor on a teaching or service basis without evidence of scholarly activities will be discouraged.

Clinical Associate Professor

Candidates for Associate Clinical Professor will have previously held the rank of Assistant Professor in one of the three tracks. Candidates will demonstrate excellence in either the areas of teaching or service

and have a half-time to full-time appointment.

Research Associate Professor

An Associate Research Professor will devote the majority of his or her effort to research activities. Candidates for Associate Research Professor must have a half to full time appointment and demonstrate excellence in the area of research.

Assistant Professor

Candidates for Assistant Professor are expected to possess a doctoral level degree and demonstrate the potential for excelling in one or more of the three areas listed above. He or she should present evidence of having initiated scholarly activities. If this is lacking, the individual should be considered for an alternative track. Documentation of potential excellence in research, teaching, or service will be based upon letters of recommendation and by a letter from the Department Chair. Assistant Professors must have half to full-time appointments. It is expected that Assistant Professors appointed on research strengths will serve as principal investigators with the explicit understanding that he or she will eventually generate independent extramural support.

Clinical Assistant Professor

Candidates for Assistant Clinical Professor are usually expected to possess a doctoral level degree and demonstrate the potential for excelling in either the areas of teaching or service as described above.

Research Assistant Professor

An Assistant Research Professor will devote the majority of his or her effort to research activities. He or she must have a doctoral level degree, the potential for excelling in research, and a half-time to full-time appointment.

Instructor

A person who is able to assume duties in instructing small groups or sections of students or in giving occasional lectures. An Instructor will usually possess the DMD, MD, PhD, DSc, degree, or equivalent training as applicable within his or her discipline.

Clinical Instructor

A person with the necessary qualifications, academic degrees, and training as an Instructor in the academic rank. These individuals will devote the major portion of time and effort to the practice of their profession.

Lecturer

A person of recognized ability and knowledge in his or her discipline who holds the professorial rank of Assistant Professor level or above in another university and whose duties at Boston University are limited to special lectures.

Clinical Lecturer

A person with recognized knowledge, skills, and experience in a clinical specialty or discipline. Such a person must have a background equivalent to one of the Clinical Professorial ranks but may or may not have held such rank at another institution. This appointment is reserved for highly qualified individuals who can significantly enhance the school's clinical programs and the professional education process.

Clinical Associate

A person with the necessary qualifications, academic degrees, and training to act as an Instructor or Clinical Assistant Professor. These individuals will devote the major portion of time and effort to the practice of their profession.

Adjunct Appointments

Adjunct appointments will be made to persons of recognized ability and knowledge in his or her discipline whose primary place of employment is outside Boston University. This appointment is made annually and is reserved for qualified individuals who give service to the school on a part-time basis.

These part-time appointments may be in the following ranks

Adjunct Professor
Adjunct Associate Professor
Adjunct Assistant Professor
Adjunct Clinical Professor
Adjunct Clinical Associate Professor
Adjunct Clinical Assistant Professor
Adjunct Clinical Instructor

Duties usually include the teaching and advising of students but do not include service on departmental committees.

Visiting Appointments

A person of recognized ability who is appointed on a temporary basis of specified duration. These appointments are usually reserved for individuals at other institutions or who possess other professional qualifications. For individuals who are temporarily appointed for the purpose of collaborating on a research project the following titles are appropriate:

Visiting Scholar
Visiting Research Assistant Professor
Visiting Research Associate Professor
Visiting Research Professor

SECTION 3 Procedures Related to Appointments and Promotions

Recommendations concerning appointments and promotions shall first be made in writing by the Chairperson of the Department concerned and submitted to the dean. Recommendations by the dean to the provost of the medical center regarding all academic, clinical or research appointments and promotions may be made after approval by the Standing Committee on Faculty Appointment and Promotions.

The dean, in consultation with the Committee on Faculty Appointments and Promotions, shall review the recommendations for promotion of any individual forwarded to the Dean's Office by a department. This committee shall have the right to gather further documentation concerning the individual's achievements and eligibility for such promotion. The committee shall consider its recommendations in light of the guidelines stated in the Boston University Faculty Handbook.

The dean, upon receipt of such recommendation and after consultation with the school's Faculty Appointments and Promotions Committee and approval of the school's Executive Committee, shall

forward a final report to the Medical Campus Provost and Provost (Associate Professor and Professor, academic track only or emeritus appointments), Boston University accompanied by the necessary supportive material for review and presentation to the Trustees (Associate Professor and Professor, academic track only or emeritus appointments).

SECTION 4 Annual Faculty Self-Evaluation and Development Review

All faculty members shall participate in an annual performance evaluation and have sufficient resources available to them, both in time and financial support, to participate in development activities related to ongoing personal enrichment and professional career enhancement.

The Annual Review will ensure that:

a) a dialogue exists between individuals and their supervisors; b) an evaluation of employee skills and responsibilities is documented for use as a baseline in future professional development; c) performance goals are established and specific performance areas requiring improvement are identified; d) a recommendation and action plan for future growth and development is implemented; e) a base of information from which to develop an annual plan for faculty and staff development opportunities is created; f) a means to recognize, reward and acknowledge dedication and contributions to the school is established.

The Development Program will

- 1) Begin with an assessment of organizational and individual needs for training and enrichment as an outcome of the Annual Review;
- 2) Provide educational or training programs to all employees;
- 3) Provide employees with necessary resources (i.e., release time, financial support) to participate in development related activities;
- 4) Be administered in a respectful and supportive environment that fosters growth in all areas of the school's mission;
- 5) Provide for the enhancement and improvement of individual performance.

SECTION 5 Duties of Department Chairperson, Division or Program Directors

The duties and responsibilities of the chairperson of a department in the Henry M. Goldman School of Dental Medicine are extensive and varied. The department chairperson serves as the direct link between the dean, the Committees of the school, and the teaching and supporting staffs of his/her department. Therefore, his/her duties and responsibilities include his/her knowledge and understanding of the mission of the school, the policies and practices of the school and of the university; effective communication and implementation of policies and practices as they relate to departmental functions; and other responsibilities as determined by the central administration of the university and the school. While the understanding of policy, the execution of policy, and effective communications are essential responsibilities of a department Chairperson, the scope of his/her duties and responsibilities is of far greater depth and magnitude.

The Chairperson of the department is charged with the responsibility of providing the leadership and creative thinking that his/her department requires for the motivation of faculty and students and for the maintenance and improvement of program quality.

The direction of the Chairperson's activities should be consistent with the overall mission, objectives and goals established by the faculty and administration of the school and by the President and Board of Trustees of the university.

According to this premise, the responsibilities of the department Chairperson are enumerated as they relate to the following categories:

- Administration
- Teaching and Evaluation of Learning Programs
- Research
- Faculty Development
- Personnel Development

The outline of categories is not intended to be exhaustive or restrictive or to be indicative of personal encumbrance.

A. Administration

The commitment of Chairpersons of departments to the area of administration is intended to allow adequate time for their participation in contact teaching, program planning and evaluation, and research. The actual time for administration will vary from department to department, but the following categories are considered to be duties for which the Chairpersons of the departments are responsible:

1. Determination of department objectives along with goals and plans for achievement of the school's mission
2. Intradepartmental organization:
 - Assignment of duties and responsibilities to the faculty members and supporting staff personnel
 - Assignments for course responsibility
 - Assignments for committees
3. Budget Annual Review
4. Recommendations:
 - Appointments; promotions; peer review; faculty evaluation; research time; dismissals; leave; travel; alumni and students; learning resources requests and sources of funding
5. Interdepartmental relations:
 - Cooperation and liaison
 - Delineation of responsibility
6. Faculty Committee participation
7. Responsibility for evaluation and use of current instruments, drugs, materials, procedures, equipment, etc.
8. Mediation:
 - Involving disciplinary and non-disciplinary problems;
 - Intra-staff relations

9. Supervision and discipline - including faculty, staff, and students in concert with clinic regulations and handbook policies
10. Equipment - review of equipment maintenance; reporting for repair, replacement, etc.
11. Conservation of supplies, materials, and energy, and avoidance of all unnecessary waste

B. Teaching and Evaluation of Learning Programs: Didactic, Laboratory, & Clinical Programs

1. Responsibility for the determination of the aims and objectives of the overall teaching program in the department
 - a. Scope and special problems related to predoctoral students
 - b. Scope and special problems related to postdoctoral students;
2. Responsibility for syllabi, courses, and curricula in the department
3. Program development and responsibility for implementation of such programs
 - a. Predoctoral
 - b. Postdoctoral
 - c. Honors
 - d. Remedial
 - e. Electives
 - f. Extramural
4. Evaluation and advisement of teachers and teaching.
 - a. Course presentation
 - b. Assistance in courses
 - c. Advisement and evaluation in textbook selection, manuals, visual aids, and other teaching materials
5. Evaluation of learning - student achievement and performance of graduates
 - a. Grade reports, graded exercises, mock boards
 - b. National Board Examination scores
 - c. State and Regional Boards (Licensure and Clinical Competency)
6. Counseling and advisory program - for clinical and preclinical student progress
7. Orientation programs: development of a manual that includes objectives, guidelines for departmental policies, procedures, and interdepartmental relations as they relate to faculty and students
8. Knowledge of new and/or other programs and concepts

C. Research

The Chairperson has direct responsibility for development of the research program in accordance with the overall mission of the school. This includes, but is not limited to, the following:

1. Active participation in research, advising and encouraging others
2. Responsibility for allowing time for research and creative thinking
3. Knowledge of grants available, application procedures, protocols, progress reports, and manuscripts
4. Knowledge of current research and publications related to dentistry in general and of research related to the activities of the department
5. Compliance with requirements for human research and assurance of informed understanding and consent
6. Review of research reports emanating from the department
7. Review and recommendation for approval of research projects being conducted or anticipated for implementation in the department

D.

Faculty Development

The Chairperson has direct responsibility for development of faculty in accordance with the overall objectives of the department and the school. This includes, but is not limited to, the following:

1. Faculty orientation and in-service training program.
2. Release time for special development, i.e. to develop or learn new techniques, procedures for research, and other creative activities
3. Recommendations for attendance at courses, seminars, professional meetings, etc., that will enhance professional development
4. Recruitment of new faculty
5. Retention of productive faculty
6. Departmental retreats - for working out problems, planning new teaching strategies, evaluation of programs, courses, etc.
7. Peer review - annual review of faculty
8. Special motivational efforts and recognition (rewards) for excellence on the part of the faculty (Annual Teaching Award)

E.

Human Resource Development

The departmental functions rely on a delicate balance between the academic and service aspects of the overall dental program. The supporting staff is essential to the functioning of a department in most of its parameters and most certainly affects the program efficiency. Chairpersons are responsible for personnel management in accordance with the policies and regulations of the medical center and the university.

The Chairperson is directly responsible for human resource development:

1. Recruitment of support staff through the Human Resources Office of the Boston University Medical Center
2. Recommendation for appointment
3. Annual assessment
4. Motivation of staff
5. Morale and discipline
6. In-service staff development
7. Career mobility - allowance of time to attend lectures, courses, meetings, etc. that will enhance personnel's value to the program and in accordance with personal interests and goals

SECTION 6 General Faculty and Staff Meetings

The Faculty of the Henry M. Goldman School of Dental Medicine shall meet at least twice during the academic year in order to introduce new faculty and staff members, to announce new programs, policies or any other pertinent information.

SECTION 7 Faculty Forum

On December 8, 2008 the Faculty Forum By-Laws were approved by the faculty.(see attachment)

The By Laws of the Faculty Forum state that all paid faculty (other than member of the executive committee- Dean, Associate Deans, & Department Chairs) are members of the Faculty Forum. Faculty participate in policy-making by serving on School, Medical Campus, and University committees. As members of the Faculty Forum, faculty is represented on the GSDM Executive Committee by a Faculty Forum Representative. GSDM faculty are represented on the University wide Faculty Council by elected representatives, as well.

Article III Standing Committees of the Faculty

Appointment to the several Standing Committees of the Faculty and Administration described below shall be the responsibility of the dean, in accordance with Article I, Section 1, of these By-Laws. A quorum shall constitute the presence at a meeting of a majority of the members of a committee.

SECTION 1 Executive Committee

The Executive Committee shall be composed of the dean, who shall be chairperson, associate and assistant deans, and chairpersons. The director of administration and associate director of administration may serve on the committee without voting privileges.

The committee shall meet at the call of the dean to monitor and manage a subset of school goals and objectives. The committee will provide direction for the strategic planning efforts of the school, consider and recommend new policies and programs, including matters which are to be presented to the faculty for consideration and vote at a general faculty meeting, give guidance to committees and/or individuals, and act as liaison to external and professional groups.

SECTION 2 Applied Strategic Planning Committee

There shall be an Applied Strategic Leadership Planning Committee comprised of a chairperson and GSDM faculty and staff appointed by the dean to monitor and manage school goals and objectives compiled from existing GSDM standing committees.

SECTION 3 Core Accreditation Committee

There shall be a Core Accreditation Committee comprised of a chairperson and GSDM faculty and staff appointed by the dean to oversee the administration of the Accreditation Site Visit including development of the Self-Study Manual.

SECTION 4 Faculty Appointments and Promotions Committee

The Committee on Faculty Appointments and Promotions shall be composed of at least four appointed members in addition to the Dean, or his alternate, who shall serve as chairperson. Recommendations concerning faculty appointments and promotions shall first be made in writing by the department or division chairperson concerned and submitted to the dean. The committee shall then study the recommendations, qualifications, and supporting data and make its own recommendations to the dean for final approval.

SECTION 5 Faculty and Staff Development Task Force

The Henry M. Goldman School of Dental Medicine shall have a Faculty and Staff Development Task Force which shall be made up of at least 7 faculty members. The director of administration and one designated faculty member will co-chair the task force. This committee shall meet at the call of the

chairpersons to assure the on-going implementation of the faculty and staff annual review and development process.

SECTION 6 Clinic Finance Committee

There shall be a Clinic Finance Committee made up of a chairperson and GSDM clinical faculty and staff appointed by the Dean to monitor and manage a subset of school goals and objectives. The committee will review clinical goals, discuss problems, develop solutions and consider policy changes pertaining to the school's clinical mission and finances.

SECTION 7 Quality Assurance Committee

There shall be a Quality Assurance Committee comprised of a chairperson and GSDM faculty and staff appointed by the dean to monitor and manage a subset of school goals and objectives and to regularly assess quality indicators of patient treatment, measure these relative to standards described in the school's clinical guidelines, recognize and quantify particular or general deficiencies in this regard and to recommend corrective action.

SECTION 8 Infection Control Committee

There shall be an Infection Control and Safety Committee comprised of a Chairperson and members drawn from GSDM faculty and staff and student representatives appointed by the dean. The committee will oversee the administration of infectious disease control practices in DMD clinical areas.

SECTION 9 Research Committee

There shall be a Research Committee comprised of a chairperson who shall be the Associate Dean for Research and GSDM research faculty, staff, and one student representative appointed by the dean. The committee will monitor and manage a subset of school goals and objectives and is charged to shape the future of dental medicine and dental education through research, maintain excellence in and support growth of faculty research, and increase the opportunities for predoctoral students to participate in research.

SECTION 10 Predoctoral Research Committee

There shall be a Predoctoral Research Committee for the First and Second Year DMD, AS I, Third and Fourth Year DMD, and AS II students. The chairperson shall be the Associate Dean for Research and members shall be drawn from GSDM research faculty. The committee is charged to oversee and implement all activities pertaining to the Predoctoral Research Program.

SECTION 11 Admissions Committee

The Henry M. Goldman School of Dental Medicine shall have an Admissions Committee. The Admissions Committee shall be made up of at least five faculty members. The chairperson shall be the assistant dean of Admissions and the other members shall consist of at least two individuals whose primary teaching interests are related to basic or preclinical sciences and at least two individuals whose primary interests shall be related to the clinical sciences. This committee shall meet at the call of the chairperson. The committee will monitor and manage a subset of school goals and objectives. The procedures for admission shall follow the guidelines set forth by the Council on Dental Education of the American Dental Association.

SECTION 12 Financial Aid Committee

This committee shall be composed of six members appointed by the dean as well as the executive director of the Boston University Medical Campus Office of Student Financial Management, who shall be

chairperson. This committee develops student aid policy for GSDM and adjudicates student financial aid appeals.

SECTION 13 Predoctoral Promotions Committees

There shall be Predoctoral Promotions Committees for the First and Second Year DMD, AS I, Third and Fourth Year DMD, and AS II programs. The selection of the committees and their chairpersons shall be made by the dean. The committees are charged to evaluate student academic performance and relate individual performance to the guidelines for promotion. When necessary, the committees will act as appeals committees for student academic issues.

SECTION 14 Predoctoral Clinic Committee

There shall be a Predoctoral Clinic Committee comprised of a chairperson and members drawn from GSDM clinical faculty, and one student, appointed by the dean. The committee will identify issues which have or in the future could impact the successful operation of the predoctoral clinics and offer suggestions to the administration for appropriate actions.

SECTION 15 Advanced Education Committee

There shall be an Advanced Education Committee to deal with the overall postdoctoral curriculum planning of the school. This committee shall consist of a chairperson appointed by the dean and members representing the postdoctoral educational programs of the school.

This committee shall meet frequently during the academic year at the call of the chairperson to monitor and manage a subset of school goals and objectives. The committee shall have the following charge: to oversee and implement all matters pertaining to the postdoctoral program with a specific emphasis on programming which crosses departmental lines, ongoing self-study, postdoctoral candidate recruitment and oversight of postdoctoral promotions.

SECTION 16 Postdoctoral Clinic Committee

There shall be a Postdoctoral Clinic Committee comprised of a chairperson and members drawn from GSDM clinical faculty and staff appointed by the dean. The committee will oversee and implement all matters pertaining to GSDM postdoctoral clinics with specific emphasis on clinical functions which cross department lines and oversight of quality clinical performance.

SECTION 17 Instrument Committee

There shall be an Instrument Committee comprised of chairpersons and members drawn from GSDM faculty and staff appointed by the dean. The committee will determine and document dental instruments and equipment needed for the preclinical lab courses. The choices are determined by the needs of each concerned department and influenced by the needs/desires of the predoctoral students.

Article IV Changes in the By-Laws

The By-Laws may be altered or amended at any meeting of the Faculty by an affirmative vote of two-thirds of the faculty members present, provided notice of such proposed amendment is stated in the call for the meeting at which action thereon is to be taken.

Article V Addenda to the By-Laws

SECTION 1 Policies and Procedures Regarding the Evaluation of Academic Performance and Status

For policies and procedures regarding non-academic disciplinary actions, refer to Section 2.

At the beginning of each academic term, each entering and returning student shall receive from department chairs or program directors a description of the program of study and performance criteria necessary for successful completion of all curricular and clinical components for each offered program. The duration of the program and the time sequence in which each of the various curricular components are to be accomplished shall be included. Course directors for each program of study will also provide students with in depth guidelines for academic performance within each course syllabus.

Each program description shall include a statement of standards and expectations in regard to guidelines for academic performance, professional conduct and behavior. Professional conduct and behavior, including standards for personal hygiene shall also be specified, especially as they apply to patient care activities.

Consequences of failure by a student to: complete stated promotions guidelines in the clinic; classroom or laboratory; and/or meet required standards of professional performance in any facet of the program, may lead to academic sanctions that can include probation, suspension or dismissal.

The program description shall also indicate any other unique conditions under which the instructional staff reserves the right to exclude a student from a particular classroom, laboratory or clinical activity. Any such exclusion(s) shall not necessarily constitute suspension or dismissal from a program of study. The procedures toward suspension or dismissal are indicated below.

Academic Probation

The purpose of placing a student on Academic Probation is to provide an unambiguous warning that his/her academic achievement is not meeting the standards presented within the Promotions Guidelines of his/her academic program.

Policy Regarding Academic Probation

When academic probation is recommended, the student shall be notified of this important change in academic status, and, the notification shall contain the reasons for this action and what must be accomplished within a specified time frame in order to be removed from academic probation.

A student cannot be promoted nor graduated from a program if he/she is on academic probation. A student may be maintained on academic probation until the deficiency/ies for which he/she was originally placed on academic probation have been remedied.

Academic Suspension

The purpose of academic suspension is to remove from a program a student who has failed to heed the warning of being placed on academic probation by not remedying those deficiencies that required this action.

Policy Regarding Academic Suspension

In general, such action can be initiated at any time after 90 days from first probation. However, this time period may be shortened or eliminated by the Predoctoral Promotions Committee or the Advanced Education Committee.

Academic suspension may be temporary or maintained for an indefinite period. The student must be informed in writing of any change in academic status from "Probationary" to "Suspension". The reasons for this important change in academic status and its duration (temporary or indefinite) shall be given. If the suspension is temporary, the student shall be informed of what must be done to be removed from this status.

Dismissal

An action for dismissal may be initiated only after the faculty agrees that a student's academic performance or lack of performance (e.g., unauthorized absences) justifies dismissal.

Policy Regarding Dismissal

In general, such action can be initiated at any time after 90 days from first probation. However, this time period may be shortened or eliminated by the Predoctoral Promotions Committee or the Advanced Education Committee. The student and all members of the appropriate Predoctoral Promotions Committee, in the case of a DMD candidate, or the student and all members of the Advanced Education Committee, in the case of a postdoctoral candidate, shall be notified, stating the reasons for the recommendation of dismissal.

Leave of Absence

A student in **academic good standing** requesting a **leave of absence** must state the reasons and the duration of the leave of absence. The request must be in writing and shall first be approved by the Associate Dean for Academic Affairs and then by the appropriate Predoctoral Promotions Committee, in the case of a DMD candidate or by the appropriate chairperson or program director in the case of a postdoctoral candidate. If the request is approved, return to a program can only be effected through a protocol determined when the leave of absence is affected. If a leave of absence is not granted, withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

A student in **academic difficulty** may request a **leave of absence** from a program. The request must be in writing and shall first be approved by the associate dean for academic affairs and then by the appropriate the Predoctoral Promotions Committee in the case of the DMD candidate. In the case of Post-doctoral residents, requests should be directed to the appropriate chairperson. The dean shall then be notified of the recommendation. If a leave of absence is not granted, withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

A student on academic probation may not be granted a **leave of absence** from any program. Withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

Appeal

A student shall also be informed that he/she has the right to appeal when any recommendation not supporting promotion or graduation or any extended suspension is made. To initiate such an appeal procedure, the student must send a letter to the dean requesting a review of the case, including a summary of reasons for seeking such a review. Appeals to the dean must be submitted within 14 days of the date of notification of academic sanction. The dean must decide if the case merits further review and the decision shall then be communicated to the student and copies of the letter sent to the appropriate department or program director involved. (In the case of a DMD student, the dean shall inform the associate dean for academic affairs and the appropriate committee. In the case of a postdoctoral student, the dean shall inform the associate dean for advanced education and the Advanced Education Committee). Actions to be taken related to the predoctoral program, shall be handled by the appropriate Predoctoral Promotions Committee. Actions to be taken related to a post-doctoral program, shall be handled by the Advanced Education Committee. Decisions or recommendations by these committees shall be reported in writing directly to the dean.

In addition, a student shall have the opportunity to appeal to the Provost of the Medical Campus by sending a letter that requests a review of the actions taken, and must include a summary of reasons that indicate that due process was not established.

SECTION 2 Policies and Procedures Regarding Prohibited Student Behavior or Conduct

Institutional integrity can be maintained only so long as every student believes that his or her competence is being judged fairly and that he or she will not be put at a disadvantage because of the dishonesty or improper conduct of someone else. Penalties imposed should be carefully determined so as to be no more or no less than required to maintain the desired atmosphere. In defining violation of this code the intent is to protect the integrity of the educational process.

Student Expected Behavior

- A. Students must treat patients with the realization that the health and welfare of these patients is paramount, and students must respect the dignity and feelings of their patients in working with them.
- B. Students must interact with the staff, faculty and fellow students in a manner that is consistent with fostering a supportive and respectful environment.
- C. Students must conduct themselves in a mature, courteous, and professional manner in academic classes and seminars, clinics, and laboratories, and in other areas of the Henry M. Goldman School of Dental Medicine and associated teaching facilities.
- D. Diligence is an expected behavior. This means that students are expected to be in class, clinic or laboratory every day and prepared for work.

It is not possible, nor should it be necessary, to describe every type of behavior which is a violation of the Academic Code of Conduct. Conduct that is in derogation or subversion of academic or professional integrity is a violation.

The following is not exhaustive but is intended to give examples of actions that would constitute a violation.

Student Prohibited Behavior

I. Providing unauthorized assistance, including but not limited to:

- Giving, attempting to give, receiving or allowing unauthorized assistance to occur during an examination or exercise.
- Permitting another student to copy or copying from an examination or exercise.

II. Plagiarism including, but not limited to:

- Presenting the work of another as one's own.
- Allowing another student to represent your work as his or her own.

III. Knowingly furnishing false information, forgery, alteration or misuse of:

- Graded examinations, grade lists, or official university records or documents.
- Transcripts, letters of recommendation, degree certificates.
- Examinations or other work after submission.
- Patient records and charts.
- Classroom attendance or student preclinical and clinical records.
- Misrepresentation of a student's credentials or status.
- Patient records, by unauthorized removal of such documents from their locus of instruction or storage, or unauthorized use or dissemination of personal or private information in such documents.
- Prescriptions or controlled substances.

IV. Unprofessional treatment of patients including, but not limited to:

- Treating patients without authorization or supervision by faculty.
- Treating patients in unauthorized clinical settings.
- Accepting personal monetary payment from patients for services.
- Waiving patient payment responsibilities without authorization, or otherwise acting in disregard of patient-related contracting and financial policies of the School of Dental Medicine.
- Failing to comply with clinic policy.
- Failing to maintain accepted protocols regarding infection control and OSHA standards.
- Treating a patient while under the influence of alcohol or drugs.
- Refusal to properly treat any patient for reasons of gender, race, color, creed, national origin, financial status, or disability.
- Patient abandonment.

- Violating patient rights to confidentiality or improperly disclosing confidential patient information.
- Falsifying patient records in any manner, e.g. by changing previous entries, making false entries, or by forging signatures, with or without intent to defraud, injure or deceive another.

V. Theft or destruction of property: including, but not limited to:

- Examinations or papers after submission, including purposefully altering possible poor performance.
- Unauthorized possession of someone else's property, such as laboratory or dental equipment, or the books or papers of another student.
- Unauthorized use of clinic facilities or supplies.
- Unauthorized reproduction, distribution, or sale of class notes, examinations, or other class materials without the express written consent of the author.
- Theft or destruction of examinations or papers after submission, including purposefully altering possible poor performance.
- Altering or destroying another person's work or records, including altering records of any kind (whether hard copy or electronic), removing materials from libraries or offices without consent, or in any way interfering with the work of others so as to impede their academic performance.
- Defacing or vandalizing university facilities or other personal property.

VI. Interference with or disruption of the regular operations and activities of the school, including, but not limited to:

Teaching and research, disciplinary proceedings, service functions, or other authorized activities occurring on the premises of the school or affiliated institutions.

VII. Violation of Boston University's condition of use and policy on computing ethics and/or Boston University Henry M. Goldman School of Dental Medicine's computer ethics policy

VIII. Violation of public law

Defined as when such violation occurs within a program of the school or affects the professional interests or standards of the school, whether or not occurring on campus.

IX. Violation of the university's code of student responsibilities

Violations may be processed by the School Henry M. Goldman School of Dental Medicine or the University's Dean of Students, as appropriate.

X. Failure to comply with the sanctions imposed under the authority of this code or the university's code of student responsibilities

XI. Any conduct in subversion of the academic and professional standards of the Henry M. Goldman School of Dental Medicine.

Academic Conduct Code review board

I. Procedures

A). When an allegation or report of alleged misconduct under the code is made by a faculty member, student, or any other person, in general the allegation or report will be forwarded to the Associate Dean of Academic Affairs for pre doctoral students or the associate dean for advanced education for post-doctoral students. The associate dean who receives the report or allegation will personally or by delegation make such review as he or she deems appropriate. Such review may but is not required to include review of additional documents, interviews with relevant individuals who may include the individual(s) who presented the report or allegation and/or the student(s) identified in the report or allegation. If the associate dean who received the report or allegation believes that the matter warrants formal review under the procedures of the code, he or she shall forward the report or allegations, together with such additional information he or she may have obtained in review of the matter, to the extent he or she determines that such additional information is relevant, to the chairperson of the board.

The Dean or Associate Dean may impose a temporary suspension in any case in which a complaint has been filed. As a rule, a temporary suspension in advance of the determination by the Academic Conduct Review Board will be limited to the matters involving the health, safety or welfare of the student or other students, patients, faculty or staff; the integrity of the educational process; or maintenance of order.

The board shall consist of a chairperson, three faculty members and two students appointed by the dean.

B). The chairperson of the review board shall inform the student (by hand-delivered or certified letter with return receipt, to be sent at least 14 days prior to the hearing) of the following matters:

1. The violations.
2. The date, time, and location of the hearing.
3. A student charged with misconduct has the right to be accompanied by and have the advice of counsel or an advisor who may be a member of the faculty or an individual from outside the university, with the understanding that the advisor may not participate directly in the hearing. The student shall advise the chairperson of the name(s) of this advisor or counsel no later than seven (7) days before the hearing.
4. The fact that he or she shall have the ability to examine all of the documents that have been introduced in support of the violation. Providing copies of such documents will be at the discretion of the chairperson.

C). Hearings

1. Members of the board shall be excused if the case might involve a conflict of interest
2. The dean may appoint pro tempore members to replace regular members who are unable to attend or who have been excused.
3. Determination will be a majority of the voting members present at a hearing.
4. The quorum for hearings shall be four voting members of the board, at least two of whom shall be faculty members.
5. The chairperson shall be counted as a voting member, but shall cast his or her vote only in order to break a tie vote.
6. A hearing shall proceed in the absence of the accused student only if the board is satisfied that proper notice of the hearing was given to the student and that there is no legitimate cause for the absence.
7. The order of the hearing shall be as follows:
 - Presentation of charges by the board chairperson.
 - Presentation and examination of material evidence and witnesses by the board and by the accused student(s). In appropriate circumstances the chairperson may take steps to protect a witness through actions such as sequestering, not divulging a witness's identity, or the taking of testimony prior to a hearing.
 - Statement by the accused student.
 - After excusing the accused student and advisor and witnesses, the Board will be in executive session
 - Formulation of the judgment and assessment of any appropriate penalty, which may include but is not limited to warning, probation, restitution, suspension or expulsion, is by a majority vote of the members present.
8. Because the hearing is not a court hearing, the board is not bound by legal rules of evidence. However, every effort will be made to conduct hearings as fairly and expeditiously as possible.
9. The hearing shall not be public and information gained at the hearing shall be treated as privileged information by all participants. This does not bar disclosing the findings and recommendations of the board to those authorized to receive such information. Inasmuch as this provision is for the protection of the accused, it does not bar him or her from disclosing the proceedings, if he or she wishes.
10. The hearing shall be conducted with proper decorum. The hearing may be recessed by the chairperson if:
 - a. Additional evidence or witnesses are needed
 - b. It is apparent that a fair hearing cannot be held because of disturbances, illness, or similar causes.
11. Minutes of the hearing shall be taken or the hearing shall be tape recorded. The student(s) charged shall be entitled to a copy of the minutes or the recordings at

his/her expense. Matters discussed in Executive Session by the board shall not be deemed to be part of the record; minutes of witness testimony will be made available at the discretion of the chairperson.

D). Recommendations

The complete recommendations, including a statement of the charges, evidence, and judgment, shall be transmitted to the dean as soon as possible.

The dean shall review the report and the appropriateness of the recommended sanctions.

The recommendations will be affirmed, modified, reversed, or referred to the Board with instructions by the dean.

E). The associate dean who received the report or allegation shall notify the student by certified letter of the judgment and penalty imposed and that such findings and sanctions are subject to final review by the provost after all appeals within the school have been exhausted. The letter shall also inform the student of the procedure for appeal.

II. Appeals

A). Within 14 business days of the receipt of the associate dean's letter a student may appeal the judgment and/or the penalty to the dean. Appeals are to be in writing, setting forth the basis of the appeal and whether the student is appealing the judgment, the penalty, or both.

B). The dean will review the appeal to ensure the fairness of the proceeding and the appropriateness of the sanction/conditions imposed. In general, the dean will not substitute his judgment for that of the board if the proceedings were conducted fairly and the sanction/conditions are appropriate based on the offense and the student's record. The dean may affirm, modify, reverse or refer the matter back to the board with instructions.

C). Before making a decision, the dean may conduct his or her own investigation if he or she feels it is warranted.

D). A rehearing normally will be ordered only if new evidence is presented. The procedure at a rehearing will be similar to the format used for the initial hearing.

CPA CERTIFICATION

GSDM has engaged the University's auditor, KPMG, to provide the required CPA certification. The CPA certification will be provided under separate cover following application submission.