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I welcome you to join me and all the members of the New York State Dental Association in celebrating our Association’s sesquicentennial this year. In 1868, the Dental Society of the State of New York (DSSNY) was created as a corporation by the New York State Legislature. Now, 150 years later, we are still going strong. Our Association, like the profession of dentistry itself, has transformed in a myriad of ways, unforeseen in the mid-19th century.

Happy Birthday, Colleagues!

Robert J. Buhite II, D.D.S.
Chair, NYSDA Sesquicentennial Committee

DENTAL TIMELINE


1728

Horace Wells uses nitrous oxide as anesthetic drug for first time to treat patient. Did not come into general use until 1863.

1844

1846

Dentist William Morton conducts first successful public demonstration of use of ether anesthesia for surgery.

1855

Cohesive gold foil is discovered by Robert Arthur.

1864

Rubber dam introduced by Sanford Barnum.

1867

Antiseptic era inaugurated by Joseph Lister.
The law that created DSSNY also gave the organization, and its constituent components, the authority to grant dental applicants certificates to practice dentistry in New York State. NYSDA no longer has that authority; rather, it advocates on behalf of all dentists to improve the profession, protect dentists and patients, and maintain a commitment to the ethical practice of dentistry. NYSDA represents some 13,000 dentists who practice within the state. It comprises 13 components, whose districts range from the St. Lawrence River in the north; to the eastern reaches of Long Island; Manhattan and Staten Island to the south; and Lake Erie to the West.

While each component has its own unique character, and does its part to satisfy the needs and concerns of its members, the components work collectively with NYSDA to advocate on behalf of all members at the state level. They are represented as well on the national level through their representatives to the American Dental Association. As the ADA Second Trustee District, NYSDA conveys its members’ concerns to the ADA and participates in various councils and committees, where decisions and recommendations for improving our profession are made.

**Commanding Respect**

We have a rich history of dental leadership in New York State, at every level and in every component. Seventeen dentists from New York State have ascended to the office of ADA president—three within the last 20 years. Our members have also represented state colleagues from leadership positions within the American Dental Political Action Committee, transforming that organization in efficacy and stature.

Within New York State, an organizational meeting in 1969 led to the formation of the Empire Dental Political Action Committee (EDPAC). The value of this arms-length committee cannot be overstated. EDPAC is very active and has earned the respect of New York State legislators. Last February, NYSDA joined with EDPAC, the Council on Governmental Affairs and dental students from the schools in New York State to host an effective “Day on the Hill.” Participants, who also included NYSDA’s trustees, met
with their local governmental representatives in Albany to discuss issues important to the profession. It was, by all accounts, a huge success. We plan to do it again this year, in February, with the expectation that even more dentists will be heading to Albany to represent you.

Advocacy is among the greatest benefits organized dentistry provides its members. Legislative victories achieved as a result of relationships built through EDPAC and representation at the table where decisions affecting dentistry are made help to protect our profession.

NYS DA members have another great tool available to them when it comes to resolving patient/doctor disputes. It is peer review, a dynamic, thoroughly tested form of arbitration that allows dentist and patient to come to mutually acceptable resolutions with the recommendation and oversight of members of local peer review committees. If hearings and examinations are necessary, the dentist’s treatment is evaluated by a committee of colleagues from his or her home component, not strangers or lawyers. These hearings are conducted in accordance with the best interests of all parties involved. It’s a process that has been developed and honed over many years, with revisions made on a regular basis. Members of the peer review committees are among the most active within NYS DA.

From Past to Future
This issue of The New York State Dental Journal is meant to document NYSDA’s history and to shed light on our ambitious, vital future. In the coming year, we will reflect on NYSDA’s role in carrying out the “Progress and Leadership of Oral Health.” Your continued membership in this Association allows us to represent you and to keep ahead of the challenges and roadblocks that might affect your profession in the future. Your current and future leaders, President Laurence Busino, representing the Third District, and President-Elect Brendan Dowd, representing the Eighth District, will continue to guide our organization. The NYSDA House of Delegates and its Board of Trustees will also fulfill their duty to make decisions that help you, our members, and ensure the longevity and efficacy of NYSDA.

In closing, I wish to thank the NYSDA Board of Trustees, NYSDA staff, our Executive Director, Mark Feldman, and, most importantly, the other members of the Sesquicentennial Committee for their assistance in preparing for this celebration by gathering archival material from each of their components and helping to compile it for inclusion in this publication, and for dissemination to the components in a PowerPoint presentation that will be available for viewing at local meetings.

Enjoy and celebrate! Be excited to see what we can do over the next 150 years as an organization and as a profession with your continued participation and engagement.
Exit Interview

What a Long Strange Trip

Nearing retirement, author waxes nostalgic and offers up his experience as guidance for new dentists.

Wayne W. Maibaum, M.A., D.M.D.

Well, that was fast. As I enter the retirement phase of my career in dentistry, I find it necessary to look back at how I got here and glean from my experience pearls that I can pass on to the next generation of dental professionals. My journey was not exceptional, but it was unusual and varied, so I believe I have something to contribute before riding off into the sunset. In addition, I hope to give voice to the sentiments of others reaching the same milestone.

I attended Syracuse University in the late 1960s and was on campus during the student demonstrations taking place there and across the country, protesting America’s involvement in the Vietnam War. I was a pre-med student but, searching to find broader meaning in life, majored in philosophy. In May of 1970, following the killing of four students at Kent Stat University in Ohio by members of the Ohio National Guard, Syracuse ended the semester early. We were given the option of accepting our current course grades, finishing our courses at a later date, or taking a pass/fail. I was in the middle of my second semester of organic chemistry, running a grade of C/C-. Knowing the importance of a good grade in organic chemistry in gaining ac-
ceptance to medical school, rather than having a C on my transcript, I opted for a P. This decision might have begun my career in dentistry.

Upon graduating cum laude in 1971, I applied to medical school. Competition for admission was fierce. I was granted several interviews but, ultimately, did not get accepted by the limited number of schools to which I applied. I was shocked and devastated. I did not have a plan B. This led to a series of odd jobs, including lifeguard, taxi driver, photo technician, medical technician and computer operator. And because I was no longer a student, I was now eligible for the military draft. I was in the first draft lottery and drew number 127. The year I was eligible, the draft board called those with numbers up to 125.

By 1974, I had friends who went to dental school and were very happy with their choice. This now seemed like a viable path to a career in a health profession, especially since I was older and, upon graduating, could go into practice without requiring an internship or residency. I applied and gained acceptance to the New York University College of Dentistry. At the time, my parents were divorced and living out of state. I was on my own with little emotional and financial support. I attempted to combine studying with working to meet my living and educational expenses. As I look back now, it is obvious, I was not ready to manage these overlapping responsibilities. This resulted in my withdrawing from dental school in the second semester without prejudice. I did, however, get enough exposure to the field of dentistry that I vowed to return to finish my studies when I was better prepared.

Second Time Takes

Over the next few years, I negotiated the real world trying to find my way back to dental school. I worked as a math teacher, pharmacy technician and research technologist and enrolled as a graduate student in biology at Hunter College. For five years I worked seven days per week and took classes at night. Finally, in 1980, I was accepted as an entering freshman at the University of Pennsylvania School of Dental Medicine. I was almost 30 years old, but Penn Dental appreciated my unconventional background and commitment to returning to school. The day I received the letter of acceptance remains one of the happiest days of my life.

I was thrilled to be back in school, on a beautiful campus in West Philadelphia. I actually took the comprehensive exams to complete my graduate work at Hunter College during orientation week at Penn, shuttling back and forth several times on Amtrak between Philadelphia and New York. In 1981, I was awarded the Master’s degree. I believe I was the first student in my program to fulfill the foreign language requirement with a computer language.

My years in dental school at the University of Pennsylvania were wonderful, and I was thankful every day for the renewed opportunity. I received a full, no strings attached, EFN (Exceptional Financial Need) scholarship my first year from the National Health Service Corps. This gave me priority to subsequently join the NHSC as a regular recruit in which educational and living expenses were paid in return for a commitment to serve in a health manpower shortage area after graduation. As a result, I received two additional years of financial benefits for a two-year service obligation. I secured student loans to pay for the remaining year of dental school.
Upon graduating, in 1984, I began my dental career in the NHSC, practicing in a community health center in the west Bronx. One year later, I was director of the dental department. At the same time, I moonlighted in a private practice in Westchester, NY. I finished my commitment to the NHSC in 1986 then concentrated my skills in the private sector. While serving in the NHSC and thereafter, I volunteered as a clinical instructor at the Columbia University School of Dental and Oral Surgery (today, College of Dental Medicine). By 1990, I was an assistant professor and director of the Oral Diagnosis Clinic, and I continued to work in private practice.

Over the years, I have been active in the Ninth District Dental Association, component of the New York State Dental Association. I served as chairman of the Ethics Committee and continue as a member of the Ethics and Peer Review committees. I have been active in the Academy of General Dentistry throughout my career and received fellowship in the organization in 2013. I continue to be a manuscript reviewer for the Academy journal, General Dentistry.

I believe it is important to participate in organized dentistry. It provides a mechanism for networking with other dentists and for supporting common causes that benefit the entire profession. It also prevents isolation. Since no two practitioners have the same experience, I have long professed that any dentist can learn from contact with a colleague.

Throughout my dental career, I have written and published articles, abstracts and letters on a variety of editorial and clinical topics in dentistry. I feel that my circuitous journey gives me an opportunity to look at issues from a multidisciplinary perspective. As a teacher, I appreciate the chance to share my observations with others.

No Regrets
As for the more personal experiences of my years in dentistry, first and foremost, I would like to assert that my decision to go into the dental profession was a good one. It is not an easy career. It is fraught with pressures, frustrations, disappointments and doubts. Sure, I have my gripes. However, in the end, it is all worth it. It is noble work that has a positive impact on the patients we treat and who we enable to live with improved oral health. It is respected by society and bestows prestige upon its practitioners. It provides dentists the opportunity to earn a comfortable living, with many options for applying their training. It is a career that promotes personal, as well as professional growth.

Dental training is rigorous. It is no small feat to transform a dental novice into a competent doctor able to perform procedures on patients with a high degree of consistency and success. Dental school has a profound influence on developing the character and priorities of students, which they carry with them throughout their careers. For instance, I cannot forget a student meeting with the dean of Penn Dental as we were about to embark on treating live patients. There were complaints about the aging equipment in the clinics. To his credit, the dean responded that he was more concerned with allocating funds for faculty than furniture. This is just one example of how values are shaped by our experiences in formative years. I am sure we all have stories to tell. Personally, I had a positive dental school experience. Unfortunately, the majority of colleagues I have encountered over the years cannot say the same—note to educators....

It is important to find good mentors. It is easy for new dentists to cross paths with more experienced practitioners or consultants whose goals, for a variety of reasons, differ from the ideals learned in school. If the new dentist develops a strong sense of self and philosophy of care, it is possible to align with like-minded mentors who will promote positive growth. However, even in an environment of conflicting values, I believe that a practitioner who stays true to his or her self will sleep better at night, gain the respect of patients and colleagues, and be financially successful.

Money is important in life, but it is not the only measure of success. If making money is one’s primary goal, I believe there are a lot easier ways than going to dental school and attempting a career in dentistry. As dentists, we are lucky to have the chance to be rewarded every day for a job well done. After all, attached to every tooth is a person. In this respect, I had the good fortune to treat the teeth of people of diverse racial, religious, ethnic and socioeconomic backgrounds. This enabled me to develop a more comprehensive and compassionate view of society and underscored the importance of providing the best possible care to all patients regardless of circumstances. We also have the chance to give back through volunteerism and pro bono services, which is rewarding as well. The true measure of success is the effect we have on others.

Well, there it is. We all have our individual journeys in dentistry and our own stories to tell. It is hard for me to believe I am nearing the end of mine. I hope I have made a difference. I know that I am thankful for the opportunity. I wish the new generation of dentists the best in what appears to be a bright future for the profession. Most importantly, I hope they feel the same as I do at the end of their trip. Thanks for listening.

Wayne Maibaum is in the private practice of dentistry in Warwick, NY. Queries about his article can be sent to him at WMaibaum@aol.com.
As many are aware, healthcare in the United States is a complicated and often vexing issue. There are numerous forms of healthcare insurance, with different degrees of coverage. The country has a mix of government-sponsored programs, including Medicare, Medicaid and Medicaid Healthcare Plus, and private insurances. There is also a small percentage of the population that still does not have health coverage. The latest form of government insurance, the Affordable Healthcare Act, was instituted in 2010 to eventually cover the remaining U.S. citizens.

Oral healthcare insurance coverage is also very complicated and varies significantly from state to state. Many private companies offer dental insurance as an added benefit to their employees. Other state residents receive coverage through Medicaid. Many states offer Medicaid and Medicaid Healthcare Plus to children. Some states have adult dental Medicaid coverage, and others offer emergent dental care for Medicaid patients. The remaining percentage of people pay out-of-pocket. According to the American Dental Association Health Policy Institute, cost is a significant reason why some people do not go to the dentist for continuous care—in some cases, it’s what keeps people from going to the dentist at all. There are many other reasons why people do not go to the dentist, including fear, perceived lack of reason to go, geographic distance from a dentist and limited knowledge of dental care.

Access to oral healthcare is and has been a difficult issue for our country and our profession. The literature contains conflicting research concerning the extent of the problem. To be sure, many solutions have been explored in the search for an answer to the problem, but there is no universally agreed upon method for facilitating continuous dental care. The situation is more extreme in some states, especially those that only have coverage for emergent care through Medicaid. New York State has had a better track record than many other states, but it too struggles in certain geographic areas—access is more limited in rural areas than in urban areas, although urban areas have pockets of difficulty unique to them. It is imperative that the New York State Dental Association and dentists participate in the discussion and proposed decisions for improving access to dental care.

Proposed solutions to improving access to care have met with varying degrees of success. Federal, state and local governments, as well as organized dentistry and private practitioners, have all been involved in trying to solve the problem. Many Federally Qualified Health Centers (FQHCs) and Article 28 facilities are located in shortage areas. Loan forgiveness initiatives have helped attract recently graduated dentists to areas needing dentists. Programs such as Give Kids A Smile, Donated Dental Services, school exam and sealant programs, free dental clinics and Mission of Mercy events have all had the same goal of increasing access to oral healthcare.

The Volunteer Dental Demonstration Project (VDDP) was initiated to tackle the access-to-care issue from a different perspective. The goal of the project is to judge whether a day of free dental care and oral healthcare education could be the impetus for patients to find a dental home. In the spring of 2015, NYSDA received a grant of $250,000 (Year 1) from New York State Team of volunteers at the ready to provide restorative and preventative services to at-need patients who showed up for Volunteer Dental Demonstration Project in May at Hudson River Healthcare, Riverhead, Long Island.

Brendan P. Dowd, D.D.S.
through Sen. Cathy Young, a Western New York Republican, and the Cuomo administration to hold several of these dental demonstration projects. The grant ended on March 31, 2016. Its purpose was to provide free dental care to low-income, uninsured adults and children from diverse populations, including veterans who require essential dental care, at designated Federally Qualified Health Centers (FQHCs) in rural areas. A year later, Article 28 facilities were added to the description.

VDDP included an educational component on maintaining continual oral health that included a discussion of financial considerations with each patient or his or her guardian. A final report was required, but it was decided to follow up with each facility that had an event at 6 months, 12 months and 18 months to record how many patients were still receiving continuous care in that facility or in a private office in the vicinity. Financing for the project was renewed a year later for another $250,000 (Year 2), but it was reduced to $100,000 in Year 3, which continues through March 31, 2018.

Federally Qualified Health Centers (FQHC) and Article 28 facilities have a sliding fee scale for people without dental insurance at certain income levels. The facilities require proof of yearly earnings to calculate what fees are to be charged. They also accept dental Medicaid and Child Healthcare Plus. There are 600 FQHCs and approximately 3,500 Article 28 facilities located throughout New York State. Technically, an FQHC is an Article 28 in New York State, but there are also New York State Article 28 facilities that are not FQHCs.

There have been 12 demonstration projects held at nine different locations since inception of the program. It began with the author approaching the dental director of each facility and inquiring if he or she was interested in participating in the program. After initial discussions, the dental coordinator, Cyndy Bellinger, and I would meet with the dental director, the CEO and the CFO of the health center to discuss the feasibility of hosting an event. In the second year, our project Oral Health Workforce Director Betsy Bray joined the team to direct the project. Discussions included dates and times of the events, recruitment of volunteers and requirements for seeing patients in a FQHC or Article 28 facility for the day.

The grant itself has paid for advertising to attract new patients. Anyone who signed up could not be a patient of record in the dental department or have private dental insurance. The facilities used many different forms of advertising, including short
local radio spots, bingo hall announcements, flyers circulated in the immediate area and ads in the local newspaper. When people called about the event, they were asked about their health history and what their specific oral issue was and then given an appointment. They were also told they were not patients of the clinic yet, but could become one after receiving free treatment that day.

Breakfast and lunch were provided for all the volunteers and staff who participated in the event. Facility fees, as well as dental supplies, were covered under the grant money made available to each of the clinics. A paid social worker talked to the patients at the appointment and counseled them on the importance of a dental home and navigated any insurance inquiries. They also helped make follow-up appointments when the patient agreed to it. The dental director participated in each of the events to oversee the facility staff and greet all the prospective patients. A separate computer list was maintained for patients participating in the program, to keep track of their continuous care thereafter.

The participating volunteer dentists and hygienists were given instructions on what to expect before the event and were asked to perform treatment they were comfortable giving in their office. The care consisted of exams, X-rays (Panorex, periapical and bitewing radiographs), direct work (resin, glass ionomer and amalgam restorations), extractions and prophylaxis. At some of the events, same day denture repairs were offered. The dentists and hygienists usually worked one-hour appointments, with changes made at their discretion. If follow-up care was needed for something performed that day, it was provided by the facility dentists.

A data base for volunteer dentistry is kept by the New York State Dental Foundation, and each volunteer received a certificate for participating in the project. Our follow-up surveys with participating dentists have shown it to be an incredibly rewarding and enjoyable experience. The patients receiving care were extremely thankful to the providers for the free dental work. Many of them had not been seen by a dentist for a decade or more and were deeply appreciative of the care they received. I can’t express enough how much these events give back in immeasurable amounts to the volunteers.

**Results**

Figure 1 provides the facility name, the date and location of the event, the number of patients treated that day and an estimated amount of production in private practice fees for the area. It also includes the number of volunteer dentists and hygienists who participated in the event. Our follow-up communication with the healthcare centers show a return rate of 35% to 40% of the patients who were treated during the events.

**Discussion**

Many people in the United States do not seek routine dental care or any dental care for a number of reasons. Although there are many contributing and complicated factors, the biggest concern is cost of treatment. The private practice model that has been around for centuries and became more established in the late 1800s has been the mainstay of oral healthcare delivery in the
United States. It has become clear in the last few decades that a certain percentage of the population cannot afford continuous dental care in a private office and will need to be taken care of in other modalities of care. Hospital dentistry, Federally Qualified Health Centers and Article 28 facilities are going to have to continue to help fill that gap.

The Volunteer Dental Demonstration Project is envisioned as the next step beyond the Mission of Mercy (MOM) and Remote Area Medical (RAM) events, with the added dimension of making appointments for continuous care the day of the event. Our project takes the next step to evaluate the success of offering free treatment for a day, educating patients about the importance of a dental home, offering care at a more affordable rate for people of limited means and following up later to evaluate the results at different intervals.

Although this is a very limited sample, our results show you can have some success convincing people to seek continuous dental care, while offering them initial services at no charge. If you are interested in volunteering, I encourage you to contact Laura Leon at NYSDA (lbleon@nysdental.org) or our Oral Health Workforce Director Betsy Bray (bbray@nysdental.org), or get in touch with me directly (drrndowd@gmail.com). I am more than happy to help you get involved in our project. It is truly a rewarding experience and a great feeling giving back to your community by sharing your skills with less fortunate people in our state. Events for the spring in Central New York are being planned.

In summary, access to care has become a true conundrum in the United States. Dentistry is no stranger to this issue. The few tragic cases of untreated dental abscesses that have led to serious health consequences have been well documented. The death of 12-year-old Deamonte Driver in Baltimore five years ago is an example of a tragedy directly related to the inability to access care. As members of the dental profession, we should not let this happen again. Dentistry needs to be a leader in making sure as many people as possible in this country receive continuous dental care in a place they can call their dental home.

Brendan Dowd is NYSDA President-Elect. He is clinical assistant professor for restorative dentistry and senior group director at the University of Buffalo School of Dental Medicine. He can be reached at drndowd@gmail.com.
Fat Transplant to Correct Soft Tissue Facial Deformity Post Sinus Augmentation

A Case Report

Anis Tebyanian, D.M.D., M.D.; Scott M. Blyer, D.D.S., M.D.

ABSTRACT

Facial deformity due to buccal fat pad loss is a rare but significant complication of dentoalveolar surgery, such as sinus augmentation. We present a case that was referred for correction of facial soft tissue asymmetry in the left submalar region of unknown etiology. The patient, however, states that the soft tissue depression happened following a sinus augmentation procedure that was done by another surgeon. She denied having any trauma or other dental/facial-related procedure to that area. This asymmetry happened possibly secondary to loss of a section of the buccal fat pad. Whether this was related to the sinus lift procedure could not be ascertained by our investigation. To treat this asymmetry, purified abdominal fat graft was used in multiple small volume injections. The three-year follow-up showed no relapse of the soft tissue facial defect. Fat grafting to correct facial deformity is a safe and reliable treatment with few complications that can replace more invasive surgical procedures.

Buccal fat pad (BFP) is an encapsulated, well-vascularized fatty tissue that consists of a body and four processes. The body has three distinct lobes—antero, intermediate and posterior—which are located behind the zygomatic arch. There are four processes that extend from the body to buccal space, deep infra-orbital space, pterygomandibular space, and infra-temporal fossa. Buccal fat pad functions as a deep and superficial facial space filler, a gliding path for adjacent muscle movement and a cushion to surrounding neurovascular structures during facial and masticatory muscles extension and contractions.

Dentoalveolar surgeries, such as upper 3rd molar extraction or sinus augmentation for dental implants, can cause unwanted exposure or release of BFP. The buccal extension of the BFP is the most superficial segment and contains roughly one-third of the BFP volume. This is the main part of BFP, which may become exposed unintentionally during dentoalveolar surgeries, or on purpose for facial recontouring by reducing buccal fullness.

Over the past several decades, there has been a number of studies that have shown the use of BFT to correct oral and facial deformities by means of extension pertaining to a part of BFP as a pedicle flap to close a defect, or removal of specific lobe(s)/extension of BFP to recontour the face. This signifies the importance of BFP as facial filler to maintain facial contour and the devastating consequence of its loss on facial appearance.

Fat grafting or fat transplant is the removal of excess fat from a donor site with the intention of re-implanting the fat graft in
the defect area. It can be used as filler around the lips, nasolabial fold, periorbital area, cheek and chin. It has been shown to successfully correct cosmetic deformity due to trauma, acne, facial hemiatrophy, lipoatrophy, etc.7,8

Autogenous fat transplant was first documented in 1893 by Neuber, who used it to correct facial deformity due to tuberculosis, and then in 1911 by Bruning, who used fat transplant to correct facial asymmetry post-rhinoplasty.9,10 In 1985, Fournier introduced a new harvest technique to the existing liposuction method by aspiration of fat with low-pressure syringe. He called it “LipoSculpture” and showed that the viability and integrity of adipose tissue is much better preserved with this technique.11

It was not until the 1990s that Coleman added centrifugation to the previous fat liposuction technique, a new fat transfer technique that he described in a series of publications and trademarked as “LipoStructure” for the successful harvest, transport and transplantation of fatty tissue. Coleman centrifuged the harvested fat tissue and injected a specific volume of purified fat, as needed for the defect, in a small volume “parcel of fat” in repeated injections. This technique helps to place the desired volume of fat in a condensed small volume, while keeping the “fat parcels” as separate as possible from each other to provide maximal space between each injected fat tissue. This will help the recipient site to re-vascularize the fat tissue by optimal exposure of graft to blood flow and, hence, survival and regeneration of the transplanted tissue.12,13

In 1994, Carpaneta and Ribeiro showed that smaller injected fat volume, less than 3 mm, had the most survival rate, which confirmed the results of Coleman regarding his fat transfer technique.14,15 Today, literature shows surgeons using the same main principles as set forth by Coleman, but different steps and procedures have been introduced with successful outcomes and are being used worldwide depending on the surgeon’s experience and comfort level.19,20

**Case Report**

A 42-year-old woman with no past medical history presented complaining that her face had sunken in after her sinus lift procedure nine months earlier in preparation for dental implants in her left posterior maxilla by another surgeon. She reported being grossly symmetric prior to the sinus augmentation. Upon presentation, the patient was grossly asymmetric, with a volume deficit in the submalar area on the left side without any functional deficit (Figure 1). Intraorally, the patient had three dental implants in the left molar area post sinus lift.

**Procedure**

The patient was marked and placed in the supine position. 200 cc of tumescent fluid was infiltrated in the lower abdomen (500 cc 0.9% NaCl, 0.5 cc 1:1000 epi, 20 cc 2% lidocaine) and allowed to sit for 30 minutes (Figure 2).

A 2.4 mm Tulip was used with a 60 cc syringe at 20 psi pressure to harvest 100 cc of aspirate. The aspirate was transferred into
20 cc syringes and centrifuged for 45 seconds at 3,000 rpm. The top fatty layer was saved; the fluid on the bottom was discarded. A small oil layer was removed and discarded from the top of the supernatant.

The procedure continued with sterile transfer of the fat to a 20 cc syringe. A 19-gauge needle was used to create two points of entry around the left buccal fat pad (Figure 3). One was made along the lateral portion of the zygomatic arch, another in the nasolabial fold. Approximately 15 cc of fat was injected in multiple layers in a fan-like pattern. A portion was injected along the periosteum, another in the muscular layer and a small portion in a most superficial pattern. The left malar area was then massaged to assure even distribution. The defect was slightly overfilled in comparison to the opposite side to balance the initial fat reabsorption (Figure 3).

One Week Post-op
Postoperatively, the patient remained without any complications from the surgery. Her three-year follow-up appointment showed a successful outcome without any visible prolapse (Figure 4).

Discussion
Autologous fat tissue has distinctive characteristics, which makes it the material of choice for correcting facial defects. Adipose tissue is readily available, easy to harvest, without rejection failure, non-allergenic and inexpensive.

Several histological studies have proven fat graft viability post transplantation. It has been shown that inflammatory cells infiltrate around the graft on the first day. By the fourth day, small vessels surround and penetrate the fat tissue. A small volume (3 mm) of injected fat graft facilitates the angiogenesis process. Over the next several months, the inflammatory cells (lymphocytes, histiocytes, etc) shrink in number, and pre-adipocytes and new adipocytes will pre-dominate the graft pad. It has been demonstrated histologically that over time, viable adipocytes, fibroblasts, fibrous tissue co-exist at the graft site. This indicates that the clinical results of fat grafting are the interplay between fat tissue survival and regeneration, along with host response fibrosis.16,17

There are a number of anecdotal studies regarding the longevity of fat graft. Some have shown long-term maximal resorption, while some have shown minimal resorption with great long-term results.17 Horl et al. showed there is a 49% loss in the first three months, up to a 55% loss at six months and then minimal loss between 6 and 12 months post fat graft.18 This is the reason for slight overcorrection by many surgeons to overcome this initial fat tissue loss. Current consensus seems to be 20% to 30% volume overcorrection is needed to counter the initial loss while preventing the risk of overcorrection, which is more complicated to reverse.19,20

Fat grafting is a meticulous, multi-step process. The proper way to perform each step is the subject of debate. For example, there is no consensus on the speed or length of fat centrifugation. In the
Colman technique, centrifugation is at 3000 RPM for three minutes, while other studies have shown that the viability of fat cells decreases at the high speed of 3000 RPM. Current recommendations are centrifugation at 1000 RPM for two minutes or 1300 RPM for five minutes. However, later on, two separate studies by Rohrich et al. and Ullman et al. showed no significant statistical difference in fat transplant outcome harvested from any available donor sites, including the abdomen, outer thigh, knee, buttock, flank and breast. Today, donor sites are selected by the amount of fat availability, patient preference and surgeon comfort.

Complications from fat graft are rare and mostly mild in nature, but they can be significant and cause devastating morbidity. The most common reported complication is overcorrection, especially in the infraorbital area. Other common, non-significant complications include postop edema, bruising, bleeding and tenderness. Some of the more significant complications reported are formation of small fat cyst, fat hypertrophy, fat necrosis and infection, but these complications are rare.

Conclusion

Fat grafting to correct facial deformity is a safe and reliable treatment with few complications. A review of the literature shows great outcomes with fat grafting to treat facial deformities. The transplanted fat undergoes revascularization and regeneration, which becomes integrated into the defect area. Fat grafting gives a natural shape or contour to the area, which transitions smoothly to adjacent structures. In the case reported here, we had successful results with complete patient satisfaction three years post-facial fat grafting.

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Reducing Oral Health Risks in South Asian Immigrant Children

A Pilot Study


ABSTRACT

South Asian immigrants are among the fastest growing immigrant groups in the United States. Children in low income South Asian families are at high risk for early childhood caries, a common disease with implications for child development and health in adult life. Culturally sensitive, user friendly intervention models are needed to engage Asian immigrant families regarding oral health risk. We conducted a pilot/feasibility study of SAPNA (South Asian Parents and Navigators Action) for Child Oral Health, a home visit-based intervention designed to reduce childhood caries risk in low income families in New York City. Sixty-one South Asian families were recruited from pediatric practices and randomized into intervention and control groups. Seventy-five percent of participants were retained in the study; 100% of intervention participants received the full dose of the intervention. Though the study was not designed to detect group differences, a broad pattern of such differences was found, with positive changes in feeding, oral hygiene and preventive dental care greater in the intervention group. Findings suggest that the SAPNA model is acceptable, feasible and potentially efficacious.

Early childhood caries (ECC) is the most prevalent chronic disease of childhood, affecting 23% of 2 to 5 year olds. Poor and immigrant children bear a disproportionate burden of disease.1,2 Left untreated, caries can lead to pain,3 infection4 and missed school time.5 Early caries experience impacts adult oral health.6,7 The development of ECC is closely linked to feeding practices, oral hygiene and early preventive dental care. Feeding practices that increase caries risk include drinking from bottles beyond the advised weaning age of 12 to 15 months,8-10 adding solids and sweeteners to bottles,11 nighttime feeding and sweetened beverages/snacks.12,13 Oral hygiene behaviors in the first year of life, e.g., toothbrushing, also affect the development of ECC.14

Regarding preventive dental care, the American academies of Pediatrics (AAP) and of Pediatric Dentistry (AAPD) recommend establishing a dental home for young children around the time the first tooth erupts and making a first visit to the dentist before
12 months of age. Yet, just 1% of U.S. children visit a dentist by one year of age. Lack of health insurance is one barrier, but even children with Medicaid or CHIP have low rates of dental visits utilization. And despite frequent pediatric well-child visits from birth to age 2, oral health counseling and dental visit referrals from pediatric health care providers remain low.

South Asians are among the fastest growing immigrant groups in the United States. South Asian (SA) immigrant communities are at high risk for ECC, even controlling for socioeconomic status. Cariogenic feeding practices—delayed weaning and frequent consumption of sweets and sweet drinks—are common in SA communities. Young children consume diets heavy in milk, sweets and pureed starches. SA mothers tend to be anxious about child feeding and often sweeten milk to encourage greater consumption. In one study, 75% of 15-month olds were still using a bottle, and 30% regularly drank sweetened milk.

Preventive oral health behaviors are undervalued in SA communities. Families may seek dental care only when there is pain or visible decay; baby teeth may be seen as dispensable. Our prior qualitative study revealed that despite knowledge of cariogenic feeding behaviors, mothers felt disempowered to change these behaviors, viewed oral hygiene as unnecessary for their 6- to 18-month-old infants, and did not believe that care of primary teeth would impact the health of their children’s permanent teeth. Furthermore, in traditional SA societies, young mothers occupy a low status within the family. Senior family members often control decision-making, thus reducing mothers’ ability to change cariogenic feeding and hygiene practices.

To address ECC risk factors in this high-risk group, we developed a home visit intervention, conducted by community health workers (CHWs). SAPNA (South Asian Parents and Navigators Action) for Child Oral Health targeted three key oral health prevention behaviors: feeding practices; oral hygiene; and dental care utilization.

The first visit provided education and helped mothers set goals for change. A second visit engaged senior family members to support mothers’ behavioral change plans. The goals of this pilot study were to: 1. obtain baseline data on cariogenic feeding practices of low-income SA families in the US; and 2. pilot the acceptability and feasibility of the intervention.

Methods

Setting and Participants
Sixty-one participants were recruited from two pediatric practices in SAPHIRE (South Asian Practice Partnership for Health Improvement and Research), a practice-based research network in the Bronx, New York City. CHWs approached mothers in the waiting room to explain the study and to screen for eligibility. Eligibility criteria included: a) mother is a Bangladeshi immigrant;
b) mother speaks English or Bengali; c) child’s age is 6 to 18 months. After obtaining informed consent, CHWs conducted the baseline (T1) interview and then randomized participants at an approximately 2:1 ratio to intervention (n=38) or control (n=21) groups. The study was approved by the Albert Einstein College of Medicine Institutional Review Board.

Controls were scheduled to receive a pediatrician-delivered enhanced usual care (EUC) condition consisting of: a) a pamphlet about oral health for young children, tailored for this study, based on one developed by the National Institute for Dental and Cranial Research; b) a brief five-minute oral health counseling module; and c) a referral list of available local dentists. The referral list was created based on preliminary pilot work. A researcher with our team posed as the parent of a young child and called providers near the study practices to request an appointment. To be included on the list, the dentist/dental practice had to accept the public and private insurance plans most used by the pediatric clinic patients, be willing to see a 12-month-old child and be able to offer a visit within two weeks.

In addition to the EUC, the intervention group was scheduled to receive the experimental intervention, delivered by CHWs. This consisted of home visits (n=2), follow-up phone calls (n=3) and navigational support toward making an oral health visit within the 12-month project period. Intervention activities were based on a motivational interviewing model. One home visit was conducted with the mother-child dyad; the second included the husband or another family elder.

**Home Visit Intervention**

The following components were included in the initial visit with the mother.

**Step 1.** Elicit the mother’s knowledge, attitude and practices regarding child oral health.

**Step 2.** Provide education as requested by the mother, using a culturally appropriate flipchart and other materials developed for the study.

**Step 3.** Set goals for change. Mothers were asked to set goals for: 1) bottle-feeding; 2) oral hygiene; and 3) making a dental health visit with a provider on the pre-screened provider referral list.

**Step 4.** Develop a written action plan, with goal worksheets, by target area. Potential barriers to achieving goals (e.g., child refuses unsweetened milk bottle; family objects to change) and strategies (enlist family member to distract child; gradually reduce sweetener) were discussed.
**Family home visit.** The family visit followed the same format as the initial visit. In addition, the CHW engaged family members (e.g., husband, mother-in-law) in support of maternal decision-making. Goals were to assess barriers to behavior change from the perspective of family elders and gain their “buy in” for the mother’s oral health prevention goals.

**Follow-up telephone support.** The CHW followed up with the mother at three, six and nine months from the initial home visit. At each call, she asked about the family’s goals for change, gauged progress and assisted with troubleshooting. Additional phone support and follow-up was provided as needed.

**Patient navigation support.** Depending on readiness, the CHW offered navigation support in making the dentist visit. Support was available in making the appointment, accompanying the mother to the visit and providing translation if needed.

**Strategies to Increase Fidelity**

**Control condition.** Physicians participated in a training visit with the third author (KM). Study staff collected completed physician counseling checklists on a regular basis to determine whether the counseling session was provided.

**Intervention condition.** CHWs completed six days of training in oral health, empowerment theory, counseling skills and motivational interviewing (MI). To promote fidelity, a SA clinical supervisor held weekly supervisory meetings and conducted periodic observations of CHW visits in the home. Detailed data on home visits were collected and reviewed at these meetings.

**Data Collection and Analysis**

Data were obtained at baseline (T1) and at the 12-month follow-up (T2). CHWs conducted the baseline interview at the primary care practice. Research assistants, blinded to treatment group, obtained follow-up data during the final home visit.

**Measures**

A demographics questionnaire was administered at baseline. Bottle-feeding and dietary data were obtained via a food-feeding questionnaire (FFQ), adapted for a SA study population from a national study. The FFQ queried mothers about how many times in the past seven days their child was fed a variety of foods and beverages, including sugar-sweetened beverages (SSBs). In addition, the measure was adapted to assess the frequency of bottle feeding and bottle additives. Oral hygiene was assessed using a questionnaire adapted from a measure widely used by the Centers for Disease Control, which includes items on toothbrushing, use of toothpaste and bottle feeding at nap or bedtime. Dental care utilization was assessed by asking whether the child had completed a visit to an oral health provider during the study period.

Demographics are described by mean (SD) or nominal data. Chi-square and t-test statistics were used to analyze treatment group differences for categorical and continuous variables, respectively. Descriptive statistics are presented for continuous and dichotomous outcomes. Feeding and oral health practices are shown as continuous variables (mean [SD]) by treatment group at baseline and follow-up. Though the pilot study was not powered to detect group differences, we analyzed treatment group differences in continuous variables related to feeding and oral health (e.g., frequency of sweet intake) practices by Wilcoxon rank-sum test at both time-points. For dichotomized feeding and oral health variables (any/none), we employed a generalized estimating equation (GEE) logistic regression that included time-point, treatment group and their interaction term to assess the intervention effects. The odds ratios and 95% confidence intervals (OR, 95% CI) comparing 12-month follow-up versus baseline for each treatment group are reported.

**Results**

The study enrolled 61 dyads, of whom 39 were assigned to the intervention group. At the 12-month follow-up, 85% were retained—31 from the intervention group and 21 from the control group. Most mothers were housewives, and about half were comfortable speaking English. About half had less than 12 years of education. The average length of residence in the U.S. was 5.6 years.

We assessed implementation of the EUC condition (both groups) and the intervention. For the EUC, physicians were requested to complete a checklist after each visit with a participant, indicating delivery of the counseling session, dental referral and pamphlet. However, fewer than half of these visits were associated with a completed checklist, suggesting that the EUC was not delivered consistently. By contrast, 100% of the intervention group received the full-dose of intervention (two visits + three phone calls).

Baseline data indicates high rates of bottle use, consumption of sweetened beverages and low rates of toothbrushing. Only 14 children reported having a dental visit at baseline. There were no significant differences in bottle, dietary or oral health practices between groups, except for the dental visit.

At the 12-month follow-up, the intervention group consumed significantly fewer total and nap/nighttime bottles compared to controls. They also consumed fewer bottles with additives, sugar-sweetened beverages (SSB) and sweets, though these differences were not significant. While toothbrush and toothpaste use remained comparable between groups, the intervention group was more likely to have seen a dentist at follow-up.

We also compared the odds of any improved feeding and oral hygiene practices at follow-up vs. baseline between two treatment groups. Overall, the intervention group improved its cariogenic risk behavior profile more than controls (except for any nighttime bottle use), though differences were not statistically significant. For example, the odds of bottle use among controls increased by 2.5-fold (150%) from baseline to follow-up, but decreased by 36% in the intervention group. Changes in the odds of adding solids/
sweeteners to bottles (0.36 vs. 0.75) and consuming SSBs (5.66 vs. 10.45) differed sharply across the two groups. While both groups markedly increased their initiation of toothbrush and toothpaste use, the increase of odds for having done so at follow-up compared to baseline was far greater in the intervention group.

Conclusion
Cariogenic feeding practices and poor oral hygiene are the primary contributors to ECC, the most common disease of early childhood. Despite known links between early-life feeding practices and ECC, fewer than 1 in 20 studies have involved interventions or extended follow-up. We conducted a pilot study of a home visit intervention, designed to improve the cariogenic risk profile of a high-risk SA immigrant population. Baseline data for feeding and oral health behaviors affirm the need for interventions to promote guideline concordant behavior. The high follow-up rate at 12 months (75%) and intervention dose received (100%) affirm our team’s ability to implement the study and families’ receptivity to it. Though the study was not powered to detect treatment group differences, the intervention was associated with marked improvement in cariogenic risk behaviors. Unfortunately, our brief physician intervention, designed to be administered by pediatricians during the office visit, was poorly implemented. This reflects other research suggesting low rates of oral health counseling and referral in primary practices, and underscores the barriers to changing physician behaviors in busy, real world practices.

Our findings align with results from other home visit interventions for ECC, all conducted outside of the U.S., several of which have shown benefits. Overall, successful interventions are characterized by a more intensive schedule of home visits than that provided in our intervention; one home intervention with fewer visits was less effective. Overall, as noted by the 2014 Early Childhood Caries Conference, “...there remains a surprising paucity of high-quality evidence to support the effectiveness of any specific clinical, behavioral, or community-based interventions targeting children younger than 6 years old.”

This pilot study has several strengths. CHW home visits represent a user-friendly and cost-effective delivery approach. Interventions that are bilingual and culturally sensitive are most effective in immigrant Asian communities in the U.S. Our incorporation of family decision-makers respected participants’ traditions, and likely reinforced the intervention’s impact. Weaknesses include the limited scope of this pilot study and poor implementation of an enhanced usual care physician intervention.
Results from this pilot study have led to development of a scaled-up home visiting intervention. Supported by a grant from the National Institutes of Minority Health and Health Disparities, CHALO! (“Child Health Action to Lower Obesity and Oral Health Risk”—from a Bengali word meaning “Let’s get going!”) is recruiting 360 South Asian families into a randomized controlled trial of a home visiting intervention for mothers of children 6 to 18 months of age. The larger project will involve an adapted 24-hour computer-based dietary recall instrument, weight and length measurement, and oral health assessments using an intraoral camera measurement strategy.

Support for this study was provided by the National Institute of Dental and Craniofacial Research, Grant #R34DE022282. Queries about this article can be sent to Dr. Karasz at Alison.Karasz@einstein.yu.edu.

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Smear Layer
Theoretical Consideration and Practical Approach


A B S T R A C T
A main goal of root canal therapy is to remove as much bacteria and debris as possible prior to obturation. The residual smear layer that forms during this procedure and whether it should be removed or maintained is a topic of discussion. The method for its effective removal and the timing of its removal are also frequently debated. After conducting a review of the literature, it was determined that the smear layer should be maintained in vital cases, but removed in non-vital teeth, using sodium hypochlorite as a primary irrigant, followed by EDTA (ethylenediaminetetraacetic acid) prior to obturation for successful endodontic treatment.

During biomechanical preparation of a root canal, a layer of residual organic and inorganic tissue forms on the canal walls. This layer is termed the “smear layer.” It includes two distinct zones. The surface layer consists of organic debris and remnants of hydroxyapatite crystals, with a thickness of 1 to 2 microns. The inner inorganic layer comprises mainly hydroxyapatite crystals, which enter the dentinal tubules, and are otherwise known as “smear plugs,” with a thickness of up to 40 microns. The effect of the smear layer on endodontic treatment has been the focus of many studies.

Some studies have supported removal of the smear layer to improve the cleaning and sealing of canals. Other arguments specify that it prevents the penetration of sealer and thermoplasticized gutta-percha into dentinal tubules, lateral canals and canal ramifications. Furthermore, the presence of the smear layer can reduce the sealing ability of commonly used sealers. Studies by Orstavik and Haapasalo have suggested that the smear layer prevents irrigation solution from affecting the bacteria residing inside dentinal tubules and, thus, inhibits effective disinfection of the canals.

It has been recommended that the smear layer be removed prior to obturation of the canal in order to facilitate sealer penetration into lateral canals and ramifications, a practice that was later discouraged. During the instrumentation and irrigation of the canal, the bacteria are safely harbored inside the tubules, protected by the smear layer. Thus, the approach to remove the smear layer just before obturation seems futile, since no more cleaning and shaping are performed. After the smear layer is removed, the bacteria inside the dentinal tubules are subsequently exposed and free to colonize the obturated canal. Therefore, it is possible that the step at which the smear layer is removed during the biochemical preparation of the canal affects the success of root canal therapy.
While the point at which the smear layer is removed is significant, the method for its complete removal is critical as well. Since the smear layer is composed of two separate components—one organic and the other inorganic—two separate active substances are required to completely remove the smear layer. One substance will dissolve the organic component (pulpal remains, bacteria, collagen, etc.), and the other will dissolve the inorganic part (hydroxyapatite crystals). Weak acids are mostly used to dissolve the inorganic component. The most common acids are EDTA (ethylenediaminetetraacetic acid) and citric acid. But other acids were also proposed, such as maleic, sulfuric, etidronic acids and apple vinegar. Current knowledge suggests that EDTA is the most effective in removing the smear layer, has the least destructive effect upon the dentinal wall, but is more cytotoxic than citric acid. Although, it must be noted that the only research performed in vivo showed the opposite results. In order to remove the remaining organic component, sodium hypochlorite (NaOCl) is currently the only clinically available and effective irrigant. The sequence of the use of the weak acid and NaOCl and whether the sequence of use is clinically significant are of interest as well. Yet, most research to date has not shown complete removal of the smear layer. Therefore, other materials and methods were proposed.

Substances such as ammonium bromide have been advocated to aid smear layer removal by reducing the surface tension of EDTA and facilitating its deeper penetration into the canal. Bis-dequalinium-acetate (BDA), a dequalinium compound, and an oxine derivative have been shown to remove the smear layer throughout the canal, even in the apical third. In an effort to produce an irrigant capable of both removing the smear layer and disinfecting the root canal system, Torabinejad developed a new irrigating solution containing a mixture of a tetracycline isomer, an acid and a detergent (MTAD) after NaOCl.

An evolution of MTAD is Qmix, a potent disinfecting final irrigation after NaOCl, aimed at facilitating smear layer removal. Qmix is a mixture of Bis-guanidine, chelating agent, and detergent. Physical methods of removing the smear layer include ultrasonically and sonically activated irrigation.
direct lasers,35 PIPS (photon-induced photoacoustic streaming),36,37 canal brush and endodontic files,35 but none of these physical methods resulted in complete removal of the smear layer.

In spite of strong efforts to completely remove the smear layer, there are studies that advocate its preservation. Pashley proved that the existence of a smear layer reduces the permeability of dentine.36 In fact, one decade later, two independent groups of researchers came to the conclusion that the presence of the smear layer inhibits the penetration of bacteria into the dentinal tubules from the main canal.37,38 Ultimately, this investigation faces the clinical dilemma of whether to remove or not remove the smear layer and the most effective method for its removal.

Methods
A review of the literature was accomplished. Recent and foundational papers were examined and compared. Cases were divided into two groups for this investigation: vital and infected cases.

Conclusion and Discussion
The diagnosis of the tooth is the primary consideration for whether the smear layer is to be removed for a successful outcome of the root canal therapy. If the treatment was performed on a vital tooth, in which no bacteria were present in the main canal or in the dentinal tubules, there is no risk of the smear layer harboring bacteria and protecting them in the dentinal tubules.39 Moreover, if the canal is later infected due to inadequate coronal seal and microleakage, the smear layer can actually prevent the colonization of the dentinal tubules with bacteria.40,41,42 However, the presentation of an infected, non-vital tooth differs. Here, the smear layer is infected with microorganisms and effectively blocks irrigation solutions and intracanal medications from reaching and eliminating the bacteria deep in the dentinal tubules.51 Thus, it may be beneficial to remove the smear layer in non-vital cases but preserve it in vital cases.

After conducting this review, it appears that a logical approach for the treatment of a non-vital tooth is to remove the smear layer after shaping of the canal is complete, but before the final irrigation and activation steps or intra-canal medication (if the procedure is not completed in one appointment). The sequence and materials to be used for removal include EDTA, NaOCl, then EDTA for one minute each. In the literature, recommendations for irrigation time are between 30 seconds and 10 minutes.43 In 2005, Texiera compared irrigation times of one, three and five minutes.44 In 2005, Texiera compared irrigation times of one, three and five minutes. A significant difference between the times was examined. No clinical significant difference was revealed, thus, the recommended time of irrigation for each substance is at least one minute.44

Removal of both components of the smear layer in non-vital cases is required—both the superficial layer, which consists mainly of organic components, and the inner layer, which comprises inorganic smear plugs composed of mostly hydroxyapatite crystals. The outer layer is removed first by the primary irrigant (NaOCl); thereafter, the sequence of EDTA-NaOCl-EDTA is used to remove the inner layer and eliminate bacteria and debris. This sequence was proven more efficient by Paul Abbot in removing the entire smear layer than the sequence NaOCl – EDTA – NaOCl.45 Though these irrigants are the most commonly used combination of substances for smear layer removal, they are not perfect.46 Hence, the motivation for continued research is ever present.

Queries about this article can be sent to Dr. Lvovsky at lvovsky.alex@gmail.com.

REFERENCES
The Columbia University College of Dental Medicine (CDM) is celebrating its 100th anniversary this year. The College was founded in 1916-1917 by the father of modern dental education, William Gies, Ph.D., on the principle that dentistry is the oral health specialty of medicine. The school remains guided by this core belief.

CDM draws on its position within Columbia University Medical Center and affiliation with NewYork-Presbyterian Hospital to address oral health within a systemic context: D.D.S. students complete preclinical education alongside medical students. Postdoctoral and hospital-based residency programs, as well as other specialty programs, draw on such partnerships. CDM researchers collaborate with colleagues across the medical center and larger university. Additionally, dual-degree and global outreach programs cultivate leaders who see dental medicine from a broader perspective.

CDM is also transforming its facilities through a state-of-the-art, 15,000-square-foot clinic that opened in 2017. This center offers an operatory environment to support preclinical simulation learning and patient care. Simultaneously, it passively collects data to inform teaching, strengthen care and support research. This facility also enhances the college’s resources serving Upper Manhattan.

Another example of such resources is the Community Dent-Care program, which provides dental care to children in public schools and Head Start programs. In recent years, CDM has been awarded two American Dental Association William Gies Foundation awards, two Higher Education Excellence in Diversity awards for its leadership efforts in diversity and inclusion, as well as awards from the American and International associations for Dental Research, among others.

Founded in 1865, New York University College of Dentistry (NYU Dentistry) is the third oldest and the most comprehensive oral healthcare center in the U.S., educating more than eight percent of the nation’s dentists. NYU Dentistry has a significant global reach, with a highly diverse student body. The College’s mission is to partner with students in achieving academic excellence, providing the best oral healthcare, and engaging in research, scholarship and creative endeavors to improve the health of the highly diverse populations in New York City and around the world.

QS World University Rankings, which assess universities in four areas—research, teaching, employability and internationalization—currently ranks NYU Dentistry third in North America and third worldwide for dentistry among five-star-ranked dental schools.
One of 66 dental schools nationwide, the Stony Brook School of Dental Medicine has as its primary mission to educate caring and skilled dentists who are well prepared to enter their chosen profession. The School also serves the profession with its continuing education programs and promotes the mission of Stony Brook University and Stony Brook Medicine through collaborative efforts in teaching, research and service.
Touro College of Dental Medicine
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In 2016, Touro College of Dental Medicine became the first dental school to open in New York State in nearly 50 years and the newest member of Touro’s growing family of outstanding health-care education providers. With an academic environment that is rigorous, engaging and vibrant, TouroCDM is preparing the next generation for rewarding careers in dentistry.

Students at TouroCDM are led by esteemed faculty and administrators with unparalleled experience in dental education, clinical research and patient care. Students begin their training at TouroCDM’s state-of-the-art, 112-seat simulation lab, and continue with TouroCDM’s new Dental Clinical Center. The Center features a pediatric dental clinic, an oral and maxillofacial surgery clinic, and multiple student workrooms. TouroCDM students, under the supervision of experienced faculty, receive hands-on training, while providing comprehensive oral healthcare to adults and children, including those who might not otherwise receive necessary dental care.

As a division of New York Medical College, TouroCDM offers students opportunities in groundbreaking clinical research and full access to NYMC’s comprehensive medical library.

Located in central Westchester County in the former IBM building in Valhalla, the campus features spacious lecture halls, an expansive student lounge with scenic views, a fitness center and library. Students are welcome to amenities at NYMC, including the campus bookstore and kosher dining hall.

University at Buffalo School of Dental Medicine

With a rich history—and a promising future—the University at Buffalo School of Dental Medicine plays a critical role in advancing oral health in the Buffalo-Niagara region and around the world.

Established in 1892, the School of Dental Medicine continues to educate general practitioners, specialists and biomedical scientists in the art and science of oral health through seven departments offering 13 comprehensive accredited programs.

This year, UB dental is celebrating its 125th-year anniversary and an historic $25 million investment in its future by renovating its clinics within Squire Hall to meet the needs of dentistry for decades to come. This upgrade fuels UB’s mission of leading innovation in oral health education, patient care, research and service to improve quality of life.

As a proud member of the prestigious Association of American Universities (AAU), the University at Buffalo is committed to discovery, both basic and applied research, development and scholarship, particularly related to oral health and disease. Efforts are facilitated through their collaborations within UB, especially among the four other schools (nursing, pharmacy and pharmaceutical sciences, medicine and biomedical sciences, and public health and health-related professions) that comprise the Academic Health Center. This rich environment offers students and faculty an extraordinary opportunity to partner in multidisciplinary research, scholarship and creative activity.

UB Dental has currently enrolled 408 D.D.S. students and 120 Advanced Education students. Its faculty and staff number 527, including volunteers.