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- Encouraging dental schools to develop historical collections on dentistry, and to offer adequate instruction in dental history.
- Developing a broader understanding of the facts of dental history among the leaders in dentistry in order to aid them in their attempts in solving important problems in dental education and practice.
- Stimulating more thorough and comprehensive research in dental history, thereby extending the boundaries of dental knowledge, giving substantial support to growing professional culture.
- Creating an authoritative body to which important questions relating to dental history could be referred for factual verification.

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Introduction

When one thinks of dental instruments today, one mainly conjures up images of aesthetic and preventive dentistry: whitening lasers, bright blue curing lights, and sterilized packs of scalers, explorers, and mirrors. Thanks to the myriad advances in dentistry during the 20th century, today’s instruments have a sleek, modern appearance, reflecting their purpose. The focus of dentistry was much different in the 19th century. Although today’s instruments share many traits with those of the previous two centuries, instruments of the 1800s were designed for more routine use in surgery. Tooth keys, forceps, lancets, and cautery instruments were the basis of most dentists’ armamentaria throughout the 17th & 18th centuries. Less prevalent, but still present in some antique collections, were scalers, cavity excavators, drill bits, and pluggers for filling materials.

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University School of Dentistry (LSUSD) provides a glimpse into the world of the 19th century dentist. Most of the items were donated in the 1970’s by two part-time faculty members, Dr. F. Harold Wirth and Dr. P. Sidney Neuwirth, avid collectors of antique dental artifacts who generously shared their treasures with the Louisiana dental community.

With the 1839 founding of the American Journal of Dental Science, the world’s first dental journal, and the establishment in 1840 of the Baltimore College of Dental Surgery, the first dental school, dentistry began to develop from a trade into a profession. During this period, dental textbooks described more complex operative procedures requiring more varied and specialized hand instruments. Early dental manufacturers such as Samuel S. White and Claudius Ash standardized the design and production of dental instruments which dentists had previously made themselves or purchased from surgical instrument manufacturers.

One also should not overlook the significance of the Civil War in the development of dental instruments and the dispersion of dental knowledge. According to Dammann, there is considerable evidence that “...reaction to the injuries and conditions during the Civil War propelled dentistry from its infancy in the 1850’s and 1860’s to the profession that we know today. Dentists were allowed to try new treatments, share ideas with colleagues, and expound on the theory that teeth were essential to the total health of an individual.”

The instruments in the LSUSD collection, with handles carved from both common and rare early materials such as bone, wood, ivory, ebony, cameo, shell and pearl, provide a striking contrast to the all-steel instruments of the 20th century. An understanding of their evolution and function substantially increases appreciation of these instruments, whose function can be categorized as oral surgery, prophylaxis, restoration, and general use.

### Description of Instruments

#### Tooth or Extraction Keys:

The earliest instruments used for the extraction of teeth were forceps, pelicans, screws, elevators and tooth keys. By the second half of the 18th century, the tooth key was the favored instrument for extraction. The simple design of the tooth key consisted of a handle, usually made from wood, bone, or ivory, set at a 90-degree angle to the operative end. At the end of the key was a bolster with a hinged curved tip, or claw, which fit around the crown of the tooth. The key was then twisted and, with a snapping motion, the crown was extracted. Different variations and improvements in the design, such as single and double bends, were introduced throughout the 18th and 19th centuries. Despite the high incidence of tooth or jaw bone breakage, the tooth key remained a standard extraction instrument for 150 years and was still in use in the early 20th century. The LSUSD collection includes an early 19th century tooth key with an ivory hourglass handle, and a key from the Civil War era with a simple wooden handle. [Fig.1]

#### Forceps:

By the early 1700’s, the extraction forceps evolved from a rudimentary pincher—often attached to a key—to an instrument that not only correctly fit into the clinician’s hand, but also fit the appropriate crown and neck of the individual tooth, thereby minimizing trauma to adjacent tissues. A collection of “anatomical” forceps was developed by Cyrus Fay and John Tomes from 1826 through 1841. S.S. White began manufacturing forceps based on the Fay and Tomes design in the late 1860’s and showcased the collection in the 1876 catalogue. The forceps in the LSUSD collection, similar to the S.S. White no.13 upper incisor forceps, was manufactured by I.L. Lyons & Co., a firm operating in New Orleans during the last quarter of the nineteenth century. [Fig. 2]
Figure 1. Tooth keys.

Figure 2. I.L. Lyons & Co. forceps.
Figure 3. Bistoury and tenotome knife.
Figure 4. Large spring lancet and case.

Figure 5. Small Snowden spring lancet.
Figure 6. Small spring lancet in case.

Figure 7. Ivory-handled scaler.
Figure 8. Folding toothpick.

Figure 9. Hoe excavator.
Figure 10. Dual plugger with burnisher.

Figure 11. Bur, with four-sided shank and large currogated head
Figure 12. Cheek and tongue retractor.

Figure 13. Detail of pearl rosette cheek retractor.
Lancets:

The lancet, one of the oldest dental instruments, was a ubiquitous instrument for phlebotomy in the kit of both the physician and dentist. Dentists also used the lancet to treat abscesses, aid in tooth extraction, and incise children’s gums to enable tooth eruption. The S.S. White catalogue offered two folding lancets, as well as five fixed-blade gum lancets with handles of ivory, ebony, steel, or pearl. The pearl lancet handles were available in decorative patterns such as a star, shell, dolphin or fish motif. In the 1930’s, more specialized periodontal knives and oral surgery scalpels replaced the lancet, which had been a staple of the dental armamentarium since the early Roman era.

The LSUSD collection includes a combined bistoury and tenotome knife, a 3 & 1/4-inch spring lancet, and two 2-inch brass spring lancets. A bistoury, useful for removing soft oral tumors, is a long narrow knife with either a straight or curved blade. The LSUSD bistoury has a single curved blade while the blade of the double-edged tenotome, or gum lancet, is straight. Chapin Harris recommended the two different lancets for separating the gums from the neck of the tooth prior to extraction. The S.S. White catalogue included a drawing of this combination shell-handled instrument. The violin-shaped spring, or automatic, lancet was hand-operated with a trigger; the blade snapped into the tissue with the release of the spring. The larger brass spring lancet and one of the 2-inch lancets in the LSUSD library collection have their own fitted leather cases. The manufacturer’s imprint, “Snowden, Phila.” appears on the smaller instrument.

Scalers:

Scalers have been used since the 11th century, when the Arabian physician Albucasis illustrated a set of 14 scalers and recommended their use in removing dental calculus. Though widely used in the Middle Ages, scalers did not reappear in the literature until the 18th century. Laymen often purchased personal scaling sets in small elegant pocket kits, which had interchangeable heads that screwed onto a common handle. The more functional sets of scalers manufactured for dentists usually consisted of fixed handles with variously shaped and angled heads, designed for the area of the dentition on which they were to be used. In lengthy descriptions of calculus and tartar removal, 19th century dental writers such as James Snell advised dentists to use a large variety of scalers. Snell coined the term, “scaling,” because “in some cases, the tartar will fly off in scales with the slightest pressure.” The LSUSD collection includes two ivory-handled instruments manufactured by Chevalier which match Snell’s description of a scaler for the anterior surface of incisors. The diamond-shaped head, slightly turned up at the point, rises to an edge in the back.

Toothpicks:

There is evidence that the toothpick has been in use for 1.8 million years. Neanderthal, Peking man, and early Homo sapiens skulls all show signs of teeth being picked with an instrument. Throughout the ages, the materials for toothpicks have ranged from bird claws, bones, ivory, metal, quills, straw, tortoise shell, and walrus whiskers to many types of wood, including, ironically, sugar cane. Toothpicks were often decorative and made from precious metals, usually to signify one’s social rank. Their use has been debated throughout history, with just as many proponents advocating their efficacy in dental health as critics denouncing their suspected cause of tooth and gum injury. The toothpick in the LSU collection, a foldable double-sided wooden pick, is similar in design to a pocket knife.

Excavators:

Descriptions of dental excavators, instruments for removing carious tooth structure, first appeared in print in the 16th century. Though 18th and 19th-century dental publications illustrated various excavators, recommending them for removal of softened tooth structure prior to placing the appropriate filling. In The System of Dental Surgery,
published in 1859, John Tomes wrote that the clinician could experiment with different shapes, sizes, and angles of excavators, but he urged the dentist to always use the best metal for the cutting end and to keep it sharp. D.H. Goodwillie divided excavators into three classes: chisels, hatchets, and hoes. The excavator in the LSUSD collection, manufactured by Chevalier, has a curved, three-pronged metal cutting end, with a thick wood octagonal handle tapering toward the head. This instrument fits Goodwillie’s description of a hatchet with three cutting edges.

**Pluggers:**

Dentists use pluggers to help place and condense filling materials into teeth. Cornelius Celsius, a first-century Roman, may have placed the first filling to prevent a severely decayed tooth from breaking during an extraction. The earliest filling materials were lead or lint and the first pluggers were probably the practitioner’s finger and a straight wooden or metal instrument. As dental materials for fillings evolved, so did pluggers. Early 19th century plugging instruments had stronger and larger handles than other dental instruments, due to the belief that the cavity preparation filling materials had to be condensed very forcefully.

The S.S. White catalogue contained 27 pages of pluggers, with sets ranging from 12 to 144 instruments. Sets were often named for the dentists who created them, such as “Dr. B. J. Bing’s Set of Soft Gold or Tape Pluggers.” Many of these pluggers were designed for gold foil, which is rarely placed today; modern pluggers serve to condense the more contemporary amalgam and composite. The pearl-handled dual plugger and burnisher in the LSUSD collection, manufactured by Chevalier, dates from the mid-19th century.

**Burs:**

Jonathan Taft’s *A Practical Treatise on Operative Dentistry*, published in 1859, contains an early mention of the dental bur for caries removal. Taft describes the various shapes and sizes of burs which dentists and dental students were forced to make themselves or request from an instrument maker. Taft recommends 17 bur sizes, ranging in diameter from 1/32nd of an inch for forming the smallest preparation, up to 1/5th of an inch for carving retaining points in the largest cavity preparations. The bur in the LSUSD collection, measuring 3 & 1/4 inches in length, has a four-sided shank and a large corrugated cutting head.

**Cheek/Tongue Retractors:**

Cheek and tongue retractors have been used throughout the history of dentistry to displace the soft tissues, and provide not only a clearer field of vision but also a barrier against caustic materials and heated instruments. Retractors come in a variety of shapes, sizes, and materials. The LSUSD collection includes two retractors: one pearl “fancy pattern with two rosettes,” described on page 223 of the S.S. White catalogue, and a more utilitarian spoon-like copper instrument that appears to be handmade.

**Conclusion**

The collection of antique dental instruments in the Louisiana State University School of Dentistry Library, although a small sample of the types, materials, and shapes of instruments available to dentists in the 19th century, conveys a sense of the dental procedures performed during that era. These instruments, beautifully carved and delicately manufactured, were also functional and adaptable to the many needs of the dentist in the early days of the profession. In today’s world of infection control, modern design, and instant online ordering, one can still look to this collection of instruments and appreciate their humble beginnings.

**Acknowledgments**

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References


All clinicians, whether internists, dentists, or surgeons, understand the complexity of therapeutic decision making. We struggle to apply our knowledge of pathophysiology and clinical trials to the specific condition of each individual patient. Although we try our best, our decisions are not always the right ones. The history of therapeutics reveals countless examples of treatments that were once popular, but have now been set aside, such as tonsillectomy, hormone replacement therapy, or antibiotic prophylaxis to prevent infective endocarditis. As a historian, I try to understand why therapeutic practices change over time. In a simpler world, treatment decisions would follow the dictates of evidence-based medicine. In practice, however, the actual determinants of therapeutic change are far more complex. Deciphering these puzzles requires careful historical work, ideally informed by what can be learned from deep archival collections. But these, unfortunately, are becoming few and far between.

I am currently studying the history of myocardial revascularization for patients with coronary artery disease (CAD). This disease has dominated mortality in the United States since the early twentieth century. When revascularization techniques became available, they quickly transformed the therapeutic landscape. Coronary artery bypass grafting (CABG), introduced in the late 1960s, peaked at over 600,000 operations in 1997. Angioplasty (or percutaneous intervention,
PCI), introduced in 1977, spread even more quickly, surpassing 1,000,000 procedures per year in 1999. This history poses a simple question: how can we account for the dramatic rise of CABG and PCI? Many explanations have been offered, but none is fully satisfying.

Both procedures certainly provide dramatic relief of angina -- this has never been in doubt. However, doctors have long known that angina is immensely susceptible to placebo effects, including sham surgery (Podolsky, 2007). Furthermore, many have questioned whether relief of angina alone justifies the risk and cost of revascularization. Skeptics demanded that cardiac surgeons and cardiologists submit the techniques to randomized clinical trials (RCTs), the most rigorous way of determining whether CABG or PCI could prevent myocardial infarctions and improve survival (Jones, 2000).

Here the history gets interesting. First, despite these demands, both techniques continued to spread rapidly before these trials were published (1977 for CABG, 1992 for PCI). Second, when these trials showed little or no survival benefit beyond what could be achieved with medical management, the momentum of each technique continued unchecked. Third, despite the results of these trials, many doctors and patients continued to believe that a mortality benefit does exist (Whittle, 2007). One study, for instance, found that patients expected that PCI would extend their life expectancy by ten years (Kee, 1997). This trajectory led critics to suggest that financial conflicts of interest shaped clinical decision making. While these surely played a role, only the most cynical skeptics would argue that clinicians fraudulently provided treatments that they knew to be ineffective. A more nuanced inquiry is more puzzling: why did doctors and patients believe that treatments would work despite readily available evidence that suggested otherwise?

One possible explanation is the physiological rationale shared by both CABG and PCI. The traditional model of coronary artery disease is elegant and simple. Blood vessels, like pipes, accumulate debris over the years: atherosclerosis produces cholesterol plaques that occlude coronary arteries and limit blood flow to the myocardium. When oxygen demand exceeds supply, the muscle becomes ischemic and the patient experiences angina. PCI and CABG provide a seemingly perfect solution to this problem, either by compressing the plaque to reduce the stenosis or by bypassing the plaque altogether. But there is a problem here: cardiologists no longer believe that progressive growth of atherosclerotic plaques causes heart attacks. Instead, heart attacks happen when small, non-occluding plaques rupture and release their contents into the lumen, triggering a coronary thrombosis (Fuster, 1992a; Fuster, 1992b). Since a typical patient with CAD might have scores of potentially vulnerable plaques, and since most of these are too small to be seen on angiography, they cannot be managed with revascularization. Instead, stabilization of the plaques through risk factor modification (smoking cessation, lipid lowering, etc.), likely provides the best, but still very imperfect, solution (Libby, 1995; Falk, 1995; Grady, 2008). This plaque rupture hypothesis undermines the physiological rationale of revascularization.

It turns out that this plaque rupture hypothesis is not a new idea. First described in the 1930s (Leary, 1935), it was well documented by pathologists in the 1960s (Chapman, 1965; Constantinides, 1966; Friedman and van den Bovenkamp, 1966). Definitive evidence of the clinical relevance of plaque rupture came in the 1980s, when a series of angiographic studies convinced cardiologists that plaque rupture provided a unifying explanation for unstable angina, myocardial infarction, and sudden death (Davies, 1984; Davies, 1985; Gorlin, 1986; Fuster, 1988). This creates a vexing puzzle for historians.

**CAD**: Coronary artery disease

**CABG**: Coronary artery bypass grafting

**PCI**: Percutaneous intervention, also known as angioplasty
Patients and doctors became wildly enthusiastic about CABG and PCI in the 1970s and 1980s, even as empirical methods provided only limited evidence of benefit, and disease models of CAD changed in such a way that no one should have expected that CABG or PCI would prevent infarction or reduce mortality.

To understand how this happened, I need to get inside the heads of internists, cardiologists, and cardiac surgeons and figure out what they actually knew about disease models, evidence-based medicine, and much else in the 1970s and 1980s. Did internists in the community know what the latest studies had shown about the efficacy of PCI? Did cardiac surgeons follow the literature on the pathogenesis of myocardial infarctions closely enough to realize that the disease models changed between the 1960s and 1980s? Published sources, whether journal articles and medical textbooks, only reveal the thinking of academic researchers. What did non-elite internists and cardiologists, who were making most of the referrals, and non-academic surgeons, who were performing most of the surgeries, actually know?

What I really need is a good archive. I should be able to find collections of course syllabi or lecture notes from medical schools to learn what students were taught. I would love to find similar materials from CME courses, to see what was taught to practitioners, but I doubt that these survive. I could use patient records to infer what was thought from what was done, but HIPAA (The Health Insurance Portability and Accountability Act, passed in 1996) has made these increasingly unavailable to historians. Journals, diaries, and letters would be best of all. But while these sorts of sources survive in rich detail from doctors in the nineteenth and early twentieth century, they become increasingly scarce in the late twentieth century. Fewer and fewer clinicians either write such things down, or keep them when they do. With more and more communication taking place through telephones and email, the thoughts of clinicians -- and everyone else -- become increasingly ephemeral. This is a major challenge for historians. Unless I find the right sources, I might not be able to provide a convincing account of what drove therapeutic decision making about cardiac revascularization in the late twentieth century. Countless other questions will be equally unanswerable. This undermines our ability to understand the history of therapeutic practice which, in turn, impoverishes our insight into current practice and health policy. Clinicians and professional societies need to think carefully about documenting their history and take steps to create broader and deeper archives. Only with these will we be able to appreciate fully the lessons of history.
References


This winter, when Dr. David Chernin asked several historians of medicine to deliver presentations at the May 2008 meeting of the American Academy of the History of Dentistry, I was immersed in research on the relatively young specialty of Family Medicine. One story from that research shows the importance of archival preservation and historical interpretation, and illustrates the importance of historical archives for the preservation of professional values and identity.

In 1976, citizens of Worcester, Massachusetts reading the morning Telegram or the Evening Gazette would have seen some unusual news. The interns* and residents (or house staff) of the municipally-owned Worcester City Hospital, all of them affiliated with the University of Massachusetts Medical School, documented shockingly deteriorated conditions at the hospital. Now, they were threatening to go out on strike. City Hospital’s senior medical staff responded immediately, ascribing the residents’ calls for better equipment and more reasonable working hours to self-interest and greed. The house staff, however, could count on some highly visible support. “Main South,” one of the city’s poorest districts, was the source of most of the hospital’s patients. Many in the neighborhood were Puerto Ricans who had moved to the city only in the past decade to look for work. They depended on City Hospital and supported the residents.¹ When the house staff’s demands became public knowledge, patients from the neighborhood founded the Committee for Organizing the Puerto Rican Community, and promptly called a public meeting.

With newspaper reporters in attendance, the house staff and local citizens aired their

*The term medical “resident” refers to those medical school graduates who have chosen to pursue postgraduate education in a medical specialty; physicians in the first year of such postgraduate work often are referred to as “interns.” Collectively, interns and residents are informally called “house staff” from the nineteenth-century custom by which they were housed in or adjacent to the hospital.
grievances and fears, making sure that City Hall heard from voices other than the hospital’s senior physicians. Soon another citizens’ group was formed to lobby for the house staff’s demands: the Community Coalition for a Better City Hospital. The residents, meanwhile, formed a union. The campaign to reform City Hospital lasted two years.

Interns and residents from several specialties played an important role in the struggles at City Hospital. Still, with a few exceptions, the protest leaders were largely drawn from a new specialty: Family Medicine. When the hospital administration retaliated against the perceived “troublemakers,” Family Medicine residents received the brunt of their displeasure, when their contracts were not renewed for the following year. How did such a young specialty—founded in 1969 and only established at UMass Medical School in 1974, two years before the protest—come to play such an active and highly public role in the politics of urban health care in Worcester? What could account for these doctors’ precocious esprit de corps and community activism? In my research, I have tried to answer these questions by describing the mission of Family Medicine in the 1960s and 1970s, as well as its role in central Massachusetts. Drawing upon the distinctive contributions of individual recollections and the documentary record to construct a coherent narrative, one will see the role of archival preservation in reinvigorating professional and community values.

The field of Family Medicine officially came into existence only in 1969, an era of perceived primary care physician shortages and pressures to increase their numbers while ensuring that they be more than just the traditional “GP.” Given the field’s explicit ambitions to become an academic specialty, Family Medicine required some theoretical underpinning for its explicitly holistic, anti-reductionist, and family-centered frame of mind. As Dr. Dan Doyle, a member of the second graduating class of the UMass residency told us,

…there was an ideology of Family Medicine that had to do with knowing the whole patient. The buzz word ‘biopsychosocial’ hadn’t come around, but really that’s what it was...the importance of the family, caring for families together, so while the ideology of Family Medicine wasn’t politically progressive, [it] was very congruent with that perspective of caring for the underserved and recognizing the importance of the culture of the patient and also trying to minimize the social distance between the doctor and the patient.

Moreover, the very act of trying to understand the patient as a person and his or her illness as a function of personhood, requires, in one early leader’s words, “a therapeutic relationship between patient and doctor that is not only concerned with taking the patient’s history, but which allows both to meet as real persons.” Family physicians were not the only ones who tried to accomplish this, but they were the only ones to make it the centerpiece of their theory of practice.

Such a philosophy of medicine fit well with the egalitarian counter-cultural moment in American society with which the discipline’s early years coincided. Many of the first generation of family practitioners (roughly those entering the field from the mid-1960s through the 1970s) shared a philosophy of social activism and a pronounced commitment to the provision of health care to all segments of society. In the words of Dr. Dennis Dimitri, currently the Vice Chair for Clinical Affairs for the Department of Family Medicine and Community Health at the University of Massachusetts Medical School, and a 1982 graduate of the program,

[The] very fact that you were doing family medicine instead of some other more narrow specialized pursuit or an academic pursuit...[was] an indication of a different level of social responsibility... I don't want to overstate what we were doing, but I really feel strongly that it was very much more a kind of a social statement and calling to go into family medicine back in the 1970s than it might be today.

The efforts to launch Family Medicine as a residency-based specialty thus coincided with an upsurge of political and social activism throughout American society and in many other Western nations. In the United States, the Civil Rights, anti-Viet Nam War, and feminist movements insistently placed social inequality on the national political agenda. Physicians calling for a renewed covenant with the underserved through the mechanism of...
primary care now found ample support from those outside the profession, and growing consensus from within it. The effort to meld the best of general practice with the best of modern health care was a goal that energized the founders of the new specialty. Many of the first classes of Family Medicine residents felt similarly to what Dr. Lucy Candib, who joined the UMass residency in 1974 after several years of feminist activism while in medical school at Harvard, recalled as her motivation to join the program: “I had decided family medicine would let me develop the medicine side and keep the activist side.”

Ironically, therefore, while many leaders of the specialty were fighting to legitimize Family Medicine as an academic medical discipline, the first generation of residents—the very group who nearly went out on strike at Worcester City Hospital—was invested in questions of social justice out in the community.

These questions of emphasis in professional values and practice characteristics persist in Family Medicine to this day. But they became apparent in the events of the 1970s only after my colleagues and I consulted three distinct kinds of sources: oral histories of the events of the mid-1970s; uncatalogued records from the Office of the Chair of Family Medicine and Community Health, and original documents held by a former Worcester labor organizer who worked with the residents, Gene Pettit. Mr. Pettit now lives in Maine which is where my colleague, Dr. Heather-Lyn Haley, found him and his documents and received his generous permission to digitize them for the UMass Medical Archives. These yellowing and brittle documents tracked the residents’ activities and patient care...
goals, supplying a crucial complement to the oral history recordings.

By preserving such fragile and geographically scattered documents, we preserve an important, professionally defining moment in a field of medicine that is currently facing a similar crisis: the competing need for both academicians and primary care physicians to solve our current health care crisis of access and cost. As the process of recruitment to primary care takes on more urgency, it will be important to have preserved and written about this early chapter in the specialty’s identity formation.

References


Introduction: The Uses of History

Active inquiry into the history of medicine and dentistry can serve various functions for the professions. Such inquiry can serve as a source of professional unity and a grounding for maintaining or restoring professionalism itself, even as it delves into the timeless relationship between patient and healer. On the other hand, such inquiry can serve as a destabilizing process, challenging the current structures and assumptions of the professions by uncovering their contingent histories and assumptions. I would argue that this latter function is perhaps the more important of the two, permitting the history of medicine and dentistry to play an important role in the critical evaluation of today’s conceptions of health.

Case Study: Pneumonia as a Public Health Concern

By the end of World War II, as penicillin became widely available for the treatment of pneumonia, perhaps nothing better embodied the domain of the autonomous physician, armed with a “wonder drug” in the conquest of disease. In fact, when Squibb introduced the first commercial pneumococcal polysaccharide vaccine in the mid-1940s, it would be forced to withdraw the vaccine from the market within several years, owing to poor sales.1 Yet by the end of the twentieth century, amidst the emergence of increasing pneumococcal antibiotic resistance, pneumonia had begun to be reconceptualized as a public health concern, mandating increased attention to vaccination efforts, antibiotic resistance patterns, and individual prescribing habits.2 What could today’s health system learn from the history of pneumonia in this country, regarding the boundaries between private practice and public health?

In 1892, Sir William Osler wrote of pneumonia, “It is a self-limited disease, and has its course uninfluenced in any way by medicine.”3 Yet one year prior, in Berlin, the brothers Georg and Felix Klemperer attempted the first treatment of pneumonia with antiserum. Caught up in the advances of applied humoral immunology, which had followed the countering of diphtheria and tetanus toxins with antitoxin, they derived their serum through the inoculation of rabbits with pneumococci (which had been identified as the chief causal agent of pneumonia by the end of the 1880s); and over the ensuing twenty years, such...
treatment would become still more sophisticated through the sub-classification of pneumococci into serological subtypes. By 1913, at the Hospital of the Rockefeller Institute in New York, Rufus Cole and his colleagues, such as Oswald Avery, were successfully treating the most prevalent “type” of pneumococcal pneumonia with type-specific horse serum, lowering the mortality rate from 25% to 7.5%. By 1930, type-specific antipneumococcal serotherapy had been proved efficacious on the wards of Boston City Hospital, Bellevue, and Harlem Hospital.

Nevertheless, a conundrum emerged: the treatment appeared to work best when administered in the first days of the illness, but patients often arrived in large urban hospitals only when already gravely ill. Moreover, the treatment was laborious and expensive: it involved the obtaining and incubation of a sputum sample, the “typing” of the sample to determine the serological subtype of the pneumococcus, and the testing of the patient for anaphylactic reactions. In response to such a quandary, the Massachusetts Department of Public Health initiated a “Pneumonia Study and Service” in 1931, in which antiserum was generated and “typing” centers and serum depot stations were set up across the state. If a clinician called upon a pneumonia patient, he could obtain a sputum sample in the home, send it by courier to a local center for typing, have serum sent back, and administer the serum in the patient’s home or at a local hospital. By 1935, nearly a thousand patients had been treated in 98 towns, with an 11.1% mortality rate obtained when the patient was treated within the first four days of illness.

In the wake of the Massachusetts “experiment,” and in the aftermath of increased New Deal funding for public health activities, the Federal government funded in nearly two thirds of the nation’s states what would come to be termed “pneumonia control programs.” In the process, the United States Public Health Service reevaluated pneumonia as an “emergency,” a status which mandated the cooperation of individual practitioners and state public health departments. Pneumonia’s redesignation as a “public health” concern derived from such contingent elements as the severity of the disease, the logistics and expense of the treatment, and the emerging recognition in the 1930s of health itself as a fundamental right. Nevertheless, its this reconception had not been inevitable, but rather required the will of numerous individuals and organizations to engender the transformation.

By World War II, however, pneumonia would soon practically vanish as a public health concern. The more affordable and easily administered sulfa drugs - first available for streptococcal infections by the mid-1930s, and for pneumonia by 1939 - had already begun to displace antipneumococcal antiserum at the peak of the pneumonia control programs’ operations. With the advent of United States involvement in World War II, the pneumonia control programs themselves collapsed, as physicians were called off to war. Pneumonia increasingly reverted to a private disease, treated without oversight, with such magic bullets as sulfa drugs, penicillin, and by the late 1940s and early 1950s, the first generation of “broad-spectrum” antibiotics. It would take nearly a half-century for the nation’s public health leaders - in the setting of ongoing pneumonia mortality and increasing antibiotic resistance - to again conceive of pneumonia as a public health concern. Yet the history of pneumonia in this country has revealed not only that such categories are contingent and malleable, but that these designations must be vigorously maintained. Analogous in the history of dentistry—from those concerning fluoridation, to problems of access to care—are not hard to envision.

**Conclusion: The Uses of Archives**

In researching and writing the history...
of pneumonia before antibiotics, I was critically dependent upon the holdings of the Countway Medical Library and other libraries and archives. Initially stimulated by a series of monographs on pneumonia, published from the 1930s and 1940s, I relied most upon the Countway’s journal collections to permit me to visualize the year-by-year unfolding of the interrelated configuration and treatment of pneumonia. Such published findings were augmented by private correspondence held in archives from numerous institutions. In state medical journals from the 1920s and 1930s, one often finds direct transcriptions of discussions from local and state medical society meetings. The Countway’s holdings of the Maxwell Finland papers permitted a month-by-month ground-level view of the transformation from the serotherapeutic to the chemotherapeutic (i.e., sulfa drug) and antibiotic treatment of pneumonia in the critical period of the late 1930s and early 1940s. Finland, perhaps the most influential infectious disease physician in America of the 20th century, left over 50 cubic feet of material from his more than five decades at Boston City Hospital; an on-line finding aid to his holdings can be viewed at http://nrs.harvard.edu/urn-3:HMS.Count:med00048

That libraries and archives provide the substrate for such historical activities goes without saying; yet their creation and maintenance requires numerous decisions: from which materials to collect, where to invest in preservation and “processing” (it can take considerable effort to render a manuscript collection safe, organized, and usable by researchers), to what level of accessibility to provide to researchers for particular materials or collections. Ultimately, however, such efforts at preserving records and rendering them visible to researchers are grounded in the belief that it is clearly worth the investment. They are crucial to the enabling of novel historical scholarship, and such scholarship itself has an important role to play in shedding light not only on medicine and dentistry’s pasts, but upon their present and future directions as well.

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**Bremner Award for Undergraduate Dental Students**

A certificate, $500 cash prize and up to $300 travel and related expenses will be awarded to the winning unpublished essay on:

1) A subject relevant to the history of dentistry
2) The result of an original research effort related to dental history
3) A composition revealing an uncommon appreciation and understanding of historical items related to dentistry.

Eligibility: Contest open to all predoctoral students of dentistry in the US and Canada, including undergraduate students preparing for admission to dental school. Purpose is to encourage the student and research of the history of dentistry. Entries must be original essays, not more than 5,000 words, on a subject relevant to dental history.

Selection: A special committee of the Academy will judge all entries received prior to March 1, 2009, for the current year’s award. The winner will be announced prior to June 1, 2009, so that said winner may be in attendance at the annual meeting of the Academy.

Application: Send typed essays (in triplicate), following the Instructions for Authors for the *Journal of the History of Dentistry*, along with a statement of authenticity by the Dean or responsible faculty, by March 1, 2009.

The Award is presented at the annual meeting of the American Academy of the History of Dentistry.

Please submit papers prior to March 1, 2009.

Please direct correspondence to:
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References


Historical Analysis of Zurbarán’s Saint Apollonia

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Francisco de Zurbarán (1598-1644), the Spanish Baroque painter of dramatic religious scenes and powerful portraits, painted a number of female saints, including Apollonia. His full-length portrait of Saint Apollonia, patron saint of those suffering from dental ailments, is in the collection of the Louvre Museum, and reflects the Counter-Reformation ideals of 17th-century Seville.

Francisco de Zurbarán (1598-1644), one of the most respected artists of the Spanish Baroque period, created dramatic and powerful portraits along with religious scenes. Among these are biblical figures such as the evangelists and Saints. While male figures predominate (after paintings of the Virgin Mary), Zurbarán also painted a number of female saints.

In the 17th century, the female saints seen the most often in Spanish art are Mary Magdalene, Margaret, Catherine, Cecilia, Agnes and Clare. So Zurbarán’s choice of Agatha, Lucia (or Lucy) and Apollonia is unique. Two of his better paintings of female saints are Saint Apollonia, patron saint of dentistry, (Fig. 1) and Saint Lucia or Lucy, patron saint of the blind or visually impaired. These pendant paintings produced between 1635 and 1640 reflect the growing interest in the veneration of saints following the Council of Trent (1545-63) on the subject of sacred iconography and the influence of the various Inquisitions which sought to enforce accurate representation of doctrine in religious works of art.

Zurbarán painted his full-length portrait of Saint Apollonia, patron saint of dental ailments, for the high altar of the Monastery of the Merced Descalza. The life of Apollonia is not well documented, though it is known that she lived in Alexandria, Egypt during the reign of Emperor Philip. Only limited details about her martyrdom survive. The earliest account of her life is attributed to Dionysius, Bishop of Alexandria, (247-265), who wrote a few lines describing her martyrdom in a letter to Fabius, Bishop of Antioch (modern Turkey).1 The contents of this letter are known because the letter was referenced by the fourth-century historian Eusebius of Caesarea.

In 249 C.E., Apollonia, who was “of advanced age” according to Dionysius, was martyred during the widespread persecution of Christians. She was among the first to be arrested and tortured but refused to renounce her Christian beliefs.2 As punishment for her unwillingness to embrace pagan idols, Apollonia’s teeth were violently extracted. According to legend, Apollonia was given a final chance to renounce her faith after losing her teeth. Should she refuse, her persecutors would throw her onto a funeral pyre. In a final act of religious conviction and defiance, she hurled herself into the flames. In the Roman Breviary

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recounting her death, “her most pure spirit ascended to heaven [where she received] the everlasting crown of martyrdom.”

Because of the nature of her persecution, Apollonia is considered the protector against dental ailments. In the Middle Ages, Apollonia became the patron saint of those who suffer from toothaches, and later patron of the dental profession. Like Caravaggio’s depictions of female saints, Zurbarán’s Saint Apollonia is both religious and secular. She is portrayed as an idealized and fashionable young woman in rich colored fabric with a beautifully tied silk cape, rather than an old and tortured deaconess, despite being described as “of advanced age.” According to the scholar Jeannine Baticle, this is typical of early seventeenth-century depictions of female saints. It “[derives] chiefly from Italian Renaissance models, transplanted to Spain by the Italian painters recruited by Philip II to decorate the Escorial. Thereafter, Spanish artists often took their ideas from imitators of Rubens, who portrayed saints wearing secular attire borrowed from contemporary fashion…” Like many artists, Zurbarán was also influenced by Caravaggio’s use of color and by his dramatic compositions.

As was considered appropriate, Zurbarán’s saints can be identified by their religious symbols and attributes. Saint Apollonia is crowned by a wreath of flowers, emblematic of her sainthood and a reference in the medieval tradition to her virginity. Her left hand delicately grasps a palm frond of the beatified, a symbol of immortality, while her right hand holds the forceps or pincer used to remove her teeth. The expression on her face is one of calm as she accepts her fate. The saint’s demeanor suggests that she has overcome the pain of her torture with divine grace. The saint as painted by Zurbarán in designed to serve as a comfort and an inspiration to those who suffer.

Francisco de Zurbarán’s choice of subjects—Apollonia and Lucia, patron saints of physical ailments—reflects the Counter-Reformation of seventeenth-century Seville. Paintings of this type would not have been possible one hundred years earlier. As noted by Ryan Donnelly, Martin Luther (1483-1546), leader of the Protestant Reformation, specifically denounced the invocation of Saint Apollonia for help in dental ailments.

With the Counter-Reformation, the veneration of saints became a popular subject in art as seen in the fine painting of Saint Apollonia by Francisco de Zurbarán.

References

1. Excerpts of this letter can be found in Historia Ecclesiae, I:vi:41.


3. Ibid.

4. Ibid., 154.

David Farrar Mitchell, DDS, PhD (1918-1975), was a pioneer in aviation dentistry and a leader in dental education, service and research. In the mid-1940’s, he was the first dental officer assigned to the School of Aviation Medicine (SAM) in San Antonio, Texas, a unique, Army Air Corps organization for research and teaching. From 1942-1946, as a trained dental researcher and oral pathologist, he published works on dental problems afflicting military aviators, especially those associated with high altitude flying. His work greatly influenced ongoing dental treatment of military flyers. He served as faculty chairman of two dental schools: The University of Minnesota (1948-1955) and Indiana University (1955-1975). Of his 33 graduate students in oral pathology/medicine, 28 became department chairs at dental schools throughout the world. He was president of the American Academy of Oral Pathology (1962) and of the American Association for Dental Research (1975). From 1969 to 1975, he was editor of the prestigious Journal of Dental Research. During his professional career, Dr. Mitchell published 120 scientific articles on diverse topics relating to oral diagnosis and oral medicine.
Mitchell’s Dental Heritage

David Farrar Mitchell was born in Arkansas City, Kansas on December 15, 1918.1,2 (Figure 1). His father, Lester David Mitchell (1877-1940), was born in Lane, Kansas, on June 8, 1877, while his mother, Lucille Farrar, was born in Arkansas City, Kansas on September 10, 1889.4-10 Within his immediate and extended family, David was continuously exposed to the field of dentistry. After graduating from Keokuk Dental College in 1901*, Lester Mitchell became a prominent Kansas dentist and an active member of both the Kansas Dental Society and the American Dental Association. (Figure 2) Additionally, he served as president of the Kansas State Dental Association. Lester initially worked with M. B. Vawter, D.D.S. in Arkansas City, Kansas. He was professionally active in that city for nearly 40 years. In 1928, 14 dentists were practicing in Arkansas City, which had a population of approximately 15,000. Although Lester was never affiliated with the Southwestern Society of Orthodontics, he adopted that specialty in 1915.3

Eventually, he extended his practice to Wichita, Kansas, where he saw patients one day a week for ten years. Lester, a prominent congregant of the Trinity Episcopal Church of Arkansas City, was also a Rotarian and a member of the Masonic Lodge. Dr. Lester Mitchell was a kindly man of gentle personality and strong sense of community responsibility.

On December 26, 1940, Dr. Lester Mitchell, age 63, died of pneumonia in a Wichita hospital.9 He was interred in the Riverview mausoleum in Arkansas City, Kansas. In Lester’s obituary, Harry House presented these laudatory comments:9

In the passing of Dr. Lester D. Mitchell, the dental profession has indeed lost a champion. Always envisioning dentistry as a science comparable to none, he truly exemplified the book, “In His Steps,” and applied it to his everyday conduct. Let us hope that his exemplary conduct in the profession will be a guiding light for all of us to follow. He was one of the first doctors in our state who gave of their time and money for the formulating of laws for the betterment of the dental profession and through his wisdom, helped to draft and pass the law for the dental examination of school children. He was a tireless worker who always saw the best in the worst of us, and encouraged those who were without the pale of organized dentistry to join with us for the advancement of the profession.

Lester’s brother, Dr. Edward L. Mitchell (1880-1964), also left a visible family history. Born in Lane, Kansas, he graduated from Keokuk Dental College in 1906. After receiving advanced training at the Angle’s School of Orthodontia New York, he moved to Indianapolis In 1911, where he practiced orthodontia until his retirement in 1959.3,10-13

During his dental career, Dr. Edward Mitchell was noted for his social, civic and professional accomplishments. A member of the Delta Sigma Delta fraternity, he was also elected to the Omicron Kappa Upsilon honorary fraternity.13 Additionally, in 1917, he was one of the three men who selected the site for the Robert W. Long Hospital, Indianapolis. (This edifice became the foundation of the future Indiana University Medical Center). In 1922, he became president of the Indianapolis District Dental Society and in 1936, president of the Indiana State Dental

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*The Keokuk Dental College, a department of the Keokuk Medical College, was organized in 1897, and held its first graduation in 1899. It was merged into the Drake University College of Dentistry at Des Moines, Iowa, in 1908.
Mitchell’s Collegiate Academic Attainments

On June 12, 1942, David Mitchell received his DDS degree from the University of Illinois, and was elected to Omicron Kappa Upsilon fraternity. During 1946 and 1947, Dr. Mitchell was awarded two consecutive fellowships in dentistry from the University of Rochester, New York, where he was a dental instructor. In 1948, he received a National Institutes of Health Senior Research Fellow Award, and a Ph.D. in experimental pathology, both from the University of Rochester. In conjunction with his interest in periodontal disease, he became one of the earliest dental researchers to use the Syrian hamster as his experimental model.

Mitchell Studies Aviation Dentistry: 1942-1946

In his acclaimed review of the first 50 years of the United States Air Force Dental Service, Colonel D. Keith Savage writes:

The origins of aviation dentistry began during the first World War with concerns about removable prosthetic appliances and their potential hazards during flight. Additional questions were raised as to the effect of decreased oxygen levels on gum tissue and a possible increased incidence of periodontal abscesses among aviation personnel. Throughout the 1920s and 1930s, as flying attained higher altitudes, the incidences of tooth complaints [toothaches at altitude] had become more prevalent.

In April 1943, Colonel George R. Kennebeck, DDS, Deputy of the Dental Branch (Office of the Air Surgeon), sent a letter to the Army Air Stations which were conducting altitude training. He requested information concerning the effects of decreased barometric pressure on dental tissues in aviators. In December 1943, a dental questionnaire was sent to the commanders of 200 Army air bases, to assess the possible correlation between dental problems and high altitude flying. This survey focused on dental irregularities occurring after the Air Force’s introduction of the B-29 Flying Superfortress in 1942. Dr. (Captain) Kermit G. Knudtzon (1904-1982) was an early Army Dental Corps researcher in aviation dentistry who studied this problem. He had received his DDS from the University of Illinois in 1927, and stayed on as a faculty member until 1942. In this position, he was one of David Mitchell’s teachers. Later, Dr. Knudtzon was assigned to a new post within the Medical Safety Division, Office of Flying Safety, in San Antonio. There, he studied aviation dentistry. In 1946, after analyzing the data from 185 responding dental surgeons, Knudtzon received the Army Commendation Ribbon for his efforts. He showed that, indeed, toothache problems at altitude were serious complications that needed to be addressed by dentists in the Army Air Corps.

Between 1942 and 1946, Dr. David F. Mitchell served as a reserve officer in the Army Air Force (AAF) at Randolph Field Station Hospital, San Antonio, Texas. (Figure 3) During this four-year period, he advanced in rank from First Lieutenant to Major. In the mid-1940s, Knudtzon became Mitchell’s mentor and close friend. From 1945 to 1946, Mitchell was chief of the Department of Dentistry Research Laboratory, School of Aviation Medicine, Dental Research Lab at the Army Air Force School of Medicine in San Antonio, Texas. In February, 1944, Dr. David Mitchell published an analysis of toothache at altitude. Entitled, “Aerodontalgia,” the monograph addressed further findings from the field.
On May 18, 1945, at Randolph Field, San Antonio, Texas, the Department of Dentistry, Army Air Force School of Aviation Medicine (SAM) was created. The mission of this unique organization was both research and teaching. 27-year-old Captain David F. Mitchell was the first dental officer assigned to the SAM. His initial responsibility was to complete two comprehensive reviews: “Effects of Oxygen Decompression on Saliva” (June 1945), and a “Bibliography of Aviation Dentistry.” (May 1946). In the June-September 1946 issue of Annals of Dentistry, Captain Mitchell’s landmark article was published. It was titled, “A History of Aviation Dentistry: With Emphasis on Development in the AAF During World War II.”

In 1946, Mitchell was honorably discharged from the service.16 Between 1952 and 1956, his mentor Dr. Knudtzon served as National Consultant to the Surgeon General, U.S. Air Force.20 Subsequently, Knudtzon practiced dentistry in Chicago, and later joined the dental school faculty at the University of North Carolina, Chapel Hill.1,23-25 Mitchell was keenly impressed with Knudtzon’s relaxed style of interacting with students, and noted that one dental class had given Knudtzon a teaching award, stating: “He treated each of us like a person and helped us learn how to practically apply our dental knowledge.”

Dr. Mitchell was a member of the dental faculty at the University of Minnesota from 1948 to 1955.1,2,21 There, he was recruited by Dean W. H. Crawford to do research in oral pathology, with an emphasis on periodontal disease. He became licensed to practice in Minnesota on January 13, 1951. On October 15, 1951, he was board certified in Oral Pathology by the American Board of Oral Pathology. On this same date, he was granted fellowship in the American Academy of Oral Pathology. From 1949 to 1955, Mitchell served as an associate professor and chairman of the Division of Oral Histology and Pathology.2,14-18 During this time, he established a doctoral program in experimental pathology with the Department of Pathology. Additionally, he was chairman of the Division of Oral Diagnosis from 1949 to 1954, and chairman of the Division of Periodontics from 1949 to 1951. According to Holland:21 “Mitchell’s three chairmanships at the same time speak well of his abilities and knowledge.” Dr. Mitchell published seven articles while on the faculty at the University of Minnesota.

In 1949-1950, the Division of Oral Surgery began requiring each senior dental student to obtain a biopsy in the oral surgery clinic and read the slide in an oral pathology laboratory, under the supervision of an oral pathologist. In the early 1950s, the oral surgeon, Dr. Henry B. Clark, Jr., along with Dr. David Mitchell, made two educational films: “Principles of Biopsy” and “Preparation of Biopsy Specimens.”21 On June 25, 1954, Mitchell became a fellow of the American Association for the Advancement of Science.

Indiana University School of Dentistry: 1955-1975

In 1955, Dr. Mitchell joined the Indiana University faculty as professor and chairman of Oral Diagnosis/Oral Medicine.17 On June 7, 1959, he received the “Annual Award for Meritorious Teaching” from the Indiana University senior dental class. During his 20 years at Indiana University, he built his department into one of the best in the nation. Graduates of his program became teachers, department chairs and leaders in dental schools throughout the world.2,16-20 In 1962, he served as president of the American Academy of Oral Pathology and in 1975 was president of the American Association for Dental Research.20 From 1969 to 1975, Dr. Mitchell was editor of the *Journal of Dental Research*, after holding the position of associate editor for nine years.2,28-29 Additionally, he had been editor of the Journal of the Indianapolis District Dental Society, president of the Indiana Chapter of the Omicron Kappa Upsilon and Sigmi Xi fraternities.2,15

Dr. Mitchell’s Publication Record

The *Index to Dental Literature* lists 120 scientific publications that Mitchell authored or co-authored during his lifetime. He was the senior
author of the textbook, “Oral Diagnosis/Oral Medicine,” which was published in three editions from 1969 to 1978.31

The topics he investigated and wrote about were diverse. Many were concerned with original research on various aspects of oral disease. Topics included advances in oral diagnosis/oral medicine; alveolar bone regeneration; aviation dentistry; biocompatibility of dental implanted materials and devices; dental and facial pain; dental plaque; focal infection; oral diagnosis/medicine; periodontal disease and dental caries causation in animals and humans; tetracycline and other vital dye markers in bone and teeth; the reaction of dental pulp and periapical tissues to dental materials and pulp capping agents.1

Graduate Student Interaction

Dr. Mitchell earned particular satisfaction from working with graduate students and he maintained interest in their successive accomplishments.17 Of the thirty three who studied under his supervision, twenty eight became department chairmen at dental schools throughout the world.17,32 Your author was a graduate student in Oral Diagnosis/Oral Medicine at the Indiana University School of Dentistry from 1963 to 1965.32 In this capacity, I learned to appreciate Dr. Mitchell’s keen ability to engender motivation among his graduate flock, to work diligently in the program, and to concentrate on scientific writing and dental research. With an air of lightheartedness, Dr. Mitchell traditionally gave each of his students a copy of an anonymous poem, “The Editor’s Creed on Conciseness.” (Later, he arranged for its publication in the Journal of Dental Research). It reads as follows:33

If you’ve got a thought that’s happy,  
Boil it down.  
Make it short and crisp and snappy,  
Boil it down.

When your brain its coin has minted,  
Down the page your pen has sprinted,  
If you want your effort printed,  
Boil it down.

Take out every surplus letter,  
Boil it down.  
Fewer syllables the better,  
Boil it down.

Make your meaning plain, express it,  
So we’ll know, not merely guess it.  
Then, my friend, ere you address it,  
Boil it down.

Skim it well, then skim the skimmings,  
Boil it down.  
Trim it, then retrim the trimmings ,  
Boil it down.

When your sure t’would be a sin  
To cut another sentence in two,  
Send it in, and we’ll begin to  
Boil it down.

A Personal Note

As a scholar and teacher with a quiet and dignified demeanor, Dr. Mitchell seemed to know intuitively what to say, and when to say it. In 1964, as a first year graduate student, I was assigned by Dr. Mitchell to write a paper on a topic relating to my thesis, suitable for publication. My chosen subject was a scientific review of fluorescent dyes that could be used as vital stains and dye markers in bone and teeth. I struggled with this complex topic, which was completely unfamiliar and unrelated to my area of training and expertise. After I had finished this laborious and prolonged effort, I handed it in to Dr. Mitchell in his office and waited for his assessment. In my presence, he read it, smiled, and commented, “Arden, you did a great job. Right now, you know more about this particular topic than anyone in the world! Good piece of work!” After hearing his encouraging words, I left his office walking on a cloud. Two years later, when this same paper was about to be published, Dr. Mitchell agreed to be its junior author.34 As my professor and mentor, he had enabled me to successfully pursue and complete this project in the field of Oral Medicine. I was honored by his affiliation.32
Family Life

On February 6, 1943, David F. Mitchell married Trone Hawkes (1920-1988) a registered nurse at Presbyterian Hospital in Chicago. They had three children; Dana Stephen and Lindsay Trone (fraternal twins, born October 21, 1943) and David Farrar, Jr. (born September 19, 1947).1

His daughter, Lindsay Mitchell Miller, received a RDH Degree from Indiana University in 1965, and a graduate degree in Public Health Dental Hygiene in 1969. She worked as a dental hygienist from 1965 until the mid-1980s.

Postscript

In the early 1970s, Dr. Mitchell, an inveterate smoker, developed emphysema. Although his health began to decline precipitously, his final illness was short and unexpected.17 56-year-old David Farrar Mitchell died at the Indiana University Hospital in Indianapolis on July 17, 1975, and was buried at Crown Hill Cemetery in that city. His wife, Trone, died at age 68 on February 26, 1988, and was buried beside her husband.35

One of Dr. Mitchell’s former graduate students, Dr. George Yamane, captured the essence of his mentor when he wrote the following tribute:19

As a teacher, Dr. Mitchell recognized individual differences among students. This made it necessary to ascertain their special interests and aptitudes as well as their potentialities, in order to give each student the kind of guidance most suitable to him. He learned the individual’s weaknesses and encouraged correction with gentle pressure. With well directed persuasive forces he developed in them the ability to discriminate good from excellence. These qualities, together with the thorough knowledge of his subject, made him a most effective teacher....”Dave” Mitchell had the humility and integrity which always brings dignity to our profession...For those of us who were associated with him as his students and colleagues, his passing meant the loss of a steady, guiding light.

Acknowledgements

The authors sincerely thank those individuals that helped produce this article. Special gratitude is expressed to Lindsay Mitchell Miller for obtaining pertinent family information and photographs throughout the project. Ms. Shirley Shazer provided helpful insights and honest, straightforward accounts relating to the life and times of Dr. Mitchell. The photographic support provided by Thomas C. Meador, Illustrations Department at the Indiana University School of Dentistry, was superb. Indiana University Dental School librarians, Janice E. Cox, Jean Frantz, and Amy Edwards, went out of their way to obtain hard-to-locate references and source material.

References


Technology Transfer:
Kuwait – A Quarter-Century of Progress

Charles B. Millstein, DMD, MPH
Assistant Clinical Professor, Tufts University School of Dental Medicine

The transfer of knowledge, skill, and technology from resource-rich countries to resource-constrained countries is a valuable tool in improving global health. During an important period in dental history, one individual made this type of transfer a reality. John W. Hein was director of the Forsyth Dental Center in Boston when he wrote a short article in 1986 defining technology transfer. For it to be successful, either within a first-world, developed country or in a third-world, developing country, he determined that certain proven procedures should be followed, maintained, and updated. This paper will outline the development of his strategy for technology transfer, as well as its successful application in Kuwait.

Before becoming director of the Forsyth Dental Institute for Children in 1962, John Hein served as dean of the Tufts University School of Dental Medicine from 1959 to 1962. To this post he brought education, experience, and direction. As the first dentist to graduate from Tufts, earn a Ph.D. at the University of Rochester and become dean, he served as director of the Dental Fellows Program, and later as the head of dental research at the Colgate-Palmolive Company.

Dr. Hein’s strategy included a series of sequenced events that he developed during the course of his tenure as director. The first priority was for a proper assessment of the prevalence of dental disease within the target population. Second: simple, existing technologies were most useful because complex equipment was not always needed. Some examples of preventive strategies are chemotherapeutic agents to control periodontal disease, and fluoride application and sealants for eliminating dental caries as they are effective and simple to apply. He found that people who foster and motivate the transfer between donor and recipient play an important role in the success of such programs. A parallel mode of program support should be dentifrice companies, who could advertise their products and inform the recipient population of the value of prevention. A third point
was that technologies should be uncomplicated enough to apply so that they can be transferred into the hands of competent, locally-based individuals. A minimum of necessary training and education is optimal for maximizing resources. Finally, the recipient nation should develop a dental research program relative to its needs, which might be best achieved by forming partnerships with established dental research centers.

Dr. Hein did not believe that creating more dental schools and transferring more hardware was at the core of what best suited the demands of transfer recipients. He found that it was too expensive and often the technologies rapidly became obsolete. In addition, those who were to use them had not always been adequately trained. The following is an extensive case study of success when this innovative type of program is well implemented.¹

25 years ago, what began as a simple, efficient system of transfer has evolved into a comprehensive oral health care program sponsored by the Kuwaiti government for its nation’s children.

In 1962 Dr. Finn Brudevold served as head of a small biomineralization laboratory at Forsyth, where he also functioned as director of clinics. He invited Dr. Alvin Arlen Krakow, a young trained endodontist, to join the clinic’s staff and teach modern root canal therapy to the Forsyth interns. With Hein’s support, Krakow established the Harvard/Forsyth program to train endodontic specialists in 1970. Nearly a decade later, Jawad Behbehani, a young Kuwaiti dentist, began a five-year program in endodontic research that culminated in both a certificate and a doctorate in medical science from the Harvard School of Dental Medicine.²

In 1980 Behbehani arranged a meeting in Kuwait so that John Hein could advise the Minister of Health, Dr. Abdul Raham Al-Alwadi, on creating a system of preventive dental health. During this short visit, Hein presented him with a plan to eliminate dental disease in school children by the year 2000.

With approval from Al-Alwadi, Hein sent a small team of researchers to survey the population and to develop a workable protocol. Dental epidemiologist Dr. Robert Glass, pediatric dentist Dr. Paul DePaola, orthodontist Dr. Pramod Soparkar, and three Kuwaiti dentists spent five weeks in December, 1983, examining the teeth of over 10,000 children. They found a high degree of fluorosis from the desalinated drinking water that was balanced with brackish water for taste. This water had a high content of fluoride. Due to their observations, it was soon eliminated. They also observed a high prevalence of diastema and protrusion among the children. Most notable was the high rate of caries in deciduous teeth and moderate rate in permanent teeth.³

Both De Paola and Soparkar were experienced as co-directors in a National Institute of Dental Research-sponsored study run by Forsyth in the Boston area. Begun in the late seventies, the three-year program focused on preventing decay in newly erupted teeth, and determining the cost-effectiveness of sealants, fluoride tablets and classroom dental health education. Both dentists joined the program director Dr. Leon Dogon, and program co-coordinator Donna Adams, RDH. They gave parents an active role in the experiment by allowing them to apply simple fluoride treatments. Today, Dr. Dogon continues his work on prevention within a far larger constituency as Director of Oral Health Education for Project Hope.⁴
DePaola noted that public water fluoridation combined with sealants was the best combination to avert caries. If there was no treated water available, a daily fluoride tablet would suffice. Like DePaola, Soparkar was an experienced clinical investigator. Both men had been directors of a Billerica, Massachusetts program which, in 1977, evaluated several combinations of preventive measures to reduce caries and gingivitis in young schoolchildren. This study was funded by the Robert Wood Johnson Foundation in conjunction with the American Fund for Dental Health.

The Forsyth group’s experiences enabled them to create a successful pilot program in Kuwait. The country gave them space in its dental center, financial backing, and began to slowly educate their subjects on the need for this treatment. Ten Kuwaiti dentists who had just returned from a two-month skills course given by Forsyth’s staff joined them. Later they set up a model dental clinic next to the Amiri Hospital in Kuwait City. With the expertise of the Forsyth professionals, they initiated an oral health program through all of the primary schools in Jahra province which served 15,000 children in total. Eventually DePaola and Soparkar turned most of the work over to the Kuwaiti dentists, as well as to foreign dentists whom the government had hired.

By the spring of 1987, the Kuwait Model School Dental Health Program was well underway. Drs. DePaola and Soparkar, clinical investigator Dr. Mary Tavares, and dental hygienist Theresa Maher visited Kuwait to evaluate the preventive program after 48 months of operation. Clinical outcomes from the twelve and twenty-four month cohorts showed a profoundly beneficial effect among the treated children compared to those not treated. Sealant application arrested the caries process on occlusal surfaces. Fluoride tablets taken daily added to the success of the project. These findings verified DePaola’s earlier conclusions in the NIDR study that fluoride rinses, topical fluorides, and sealants all worked to complement one another.

The Gulf War of 1991-1992 destroyed Kuwait’s infrastructure, including the program, and it took several years for it to be reestablished. In 1996 a new Forsyth director, Dr. James Mulvihill, visited the country with Dr. Soparkar. They met with the staff of the Kuwait University Health Sciences Center to discuss plans for a proposed College of Dentistry, and to renew the Center’s ongoing dental care and preventive programs. By 2000, two other dental schools in this national program relinquished their input, and the Ministry of Health placed the entire program under Forsyth’s management. Since then, Dr. Behbehani, in addition to being a dean of the newly established dental school, expertly guided the Forsyth/Kuwait program and is a member of the Forsyth Health Foundation. Dr. DePaola has since retired from Forsyth, and Dr. Soparkar remains senior consultant and principal investigator.

The School Oral Health Program is part of the National Oral Health Program. Both are included under the rubric of the Ministry of Health. SOHP comes under the aegis of the Undersecretary for Dental Administration, Dr. Yousef Saleh Al-Duwairi. His training included graduate work in prosthetic dentistry at the Boston University Goldman School of Graduate Dentistry. Dr. Al-Duwairi’s work is complemented by the Superintendent of Oral Health, Dr. Sabiha Al-Mutawa, who also trained in pediatric dentistry at Boston University. Their $10 million in annual funding is made available through the United
Medical Service, a private enterprise which is part of a conglomerate of services in Kuwait. The Forsyth Research Institute contracts with this entity for three years at a time.\textsuperscript{11}

Today Kuwait’s children enjoy excellent preventive care, interceptive orthodontics, pediatric endodontics, and operative dentistry. The nation has a population of 2.8 million, of which one million are native Kuwaitis. There is a national system of health care with access for all children. Simultaneously, dental care is also expanding in the private sector. The prevention model includes oral health education, oral hygiene, instruction, application of topical fluorides, fissure sealants, as well as restorative measures for treating established caries. Kuwait remains one of the few countries in the Gulf region where national oral health surveys are conducted.\textsuperscript{12}

Material sciences have led to advances such as Colgate’s Duraphat, a sodium fluoride solution within a varnish medium. This is placed on young children’s teeth every six months. Soparkar’s group has witnessed a four-fold decrease in caries. New sealants, pioneered at Forsyth two decades ago, have been refined and can eliminate surface caries when applied after the teeth erupt.\textsuperscript{13} Kuwait’s students recently participated in an electric toothbrush trial, using a battery powered Oral-B system (Procter and Gamble). They experienced a 9% decrease in plaque, a complex biofilm, when compared to manual brushing. In addition, supragingival plaque accumulation was measured by the the Soparkar modification of the Quigley-Hein index.\textsuperscript{14} Health care education focuses on eliminating infant decay cycle, a product of nursing bottle syndrome. High school students are taught the importance of diet, nutrition, and oral health care with the hope that they will transfer this knowledge to the next generation.

As part of the National Oral Health Program, that includes the School Oral Health Program, the system employs 150 trained dentists, 300 allied dental personnel, and 30 office staff. It serves 250,000 school children in the six governates, each of which has a center-based polyclinic of 10 to 12 dental chairs. Each school has a dentist and two assistants. The program employs a mobile clinic that circulates among the schools to teach health education, and operates special clinics for disabled children at three special schools. In collaboration with the Kuwaiti College of Dentistry, their students come to the SOHP facilities to learn pediatric dentistry for two or three weeks at a time. The same combined effort leads to published outcome studies as well as results of evidence-based research. Their work is published in western journals. As of 2006, all clinics are computerized and maintains a modern updated website www.smilekw.com.\textsuperscript{15} The success of the Forsyth/Kuwait program is an exemplary model of how science, technology, and political will can combine to advance awareness and increased access to care in underserved areas throughout the world. This model can be used as a foundation for similar programs in the future.
References


Francis P. McCarthy, Pioneer in Oral Medicine

Francis P. McCarthy MD (1883-1970) was a major pioneer in the development of the discipline of Oral Medicine in America. A 1905 graduate of Tufts Medical School, he later became certified in both pathology and dermatology. As a practicing dermatologist Dr. McCarthy’s attention was drawn to diseases of the mouth. In 1925 he introduced a course of lectures in Oral Medicine at Tufts Dental School. This was the first course in Oral Medicine presented at an American dental school. Dr. McCarthy gradually developed a clinic in Oral Medicine, where he would bring in some of his private patients with oral mucous membrane diseases. Students would also bring their patients with oral mucosal diseases to this clinic, where Dr. McCarthy’s considerable background and experience would often be able to interpret complex oral mucosal manifestations. He retired as Professor of Oral Medicine after many years of teaching both predoctoral and postdoctoral students at the Tufts University School of Dental Medicine.

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Dr. Francis McCarthy was one of the major pioneers of Oral Medicine in American Dental Education, as well as in the clinical practice of this specialty. A gifted teacher as well as a superb clinician, he presented the first course in Oral Medicine at an American dental school, the Tufts University School of Dental Medicine, in 1925. This series of lectures was followed up in subsequent years with a clinic in Oral Medicine, where patients with oral mucous membrane disease were discussed with students, and diagnostic criteria, treatment, and management of cases were considered. From these beginnings, the specialty of Oral Medicine was gradually developed. A number of dental schools now have graduate programs in Oral Medicine, with appropriate graduate certificates and graduate degrees.

**Early Years**

Francis McCarthy was born in Boston in 1883, one of seven children. His parents were both immigrants from Ireland and his father worked as a restaurant manager. Francis went to grade school in Boston and attended Boston English High School, graduating in the class of 1900.

**Medical Education and Practice**

Dr. McCarthy entered Tufts Medical School and graduated in 1905 with his MD. He undertook an internship at the House of the Good Samaritan Hospital from 1905-1906. This was followed by a study of pathology under Professor Timothy Leary from 1906-1910 in the Department of Pathology at Tufts Medical School, with a residency and initial appointment to Tufts Medical School. In 1910 he was appointed as a contract physician with the United States Army Corps and served as a pathologist in the Panama Canal Zone during the construction of the canal under Colonel Gorgas. He had wide experience in the epidemiology, prevention and management of tropical diseases, especially yellow fever, dengue and malaria. The effort was to rid the area of as much tropical disease as possible during the construction of the canal. In 1912 he returned to the United States and married Emily Truesdell, whom he had met in Panama.

He became Associate Professor of Pathology and Lecturer of Tropical Medicine at Tufts Medical School. He also assumed positions as Pathologist at St. Elizabeth and Quincy Hospitals. In addition, he conducted a practice of general medicine in a small office in the rear of his home in Milton, Massachusetts.

He became interested in Dermatology and became a visiting physician to the Department of Dermatology at the Boston City Hospital. It was here that he became interested in oral mucosal lesions, and some of his early publications were related to stomatological disorders.

He eventually opened an office for the practice of Dermatology and Syphilology in the late 1920s at the corner of Massachusetts and Commonwealth Avenues. He gradually phased out his commitment to pathology and opened a second office in Quincy, Massachusetts.

Although tremendously busy, he devoted his spare time to his family of two daughters and a son. During the summer months his weekends were spent at a cottage in Middleton, Rhode Island, where he enjoyed fishing and swimming. In his early 50s he took up golf at the insistence of his brother-in-law, who was an avid golfer. He became
a member of the U.S. Seniors Golf Association and played in tournaments at the American Medical Association meetings.

In 1952 his son Philip joined him in the practice of Dermatology and they practiced together until 1968, when at the age of 85 he fractured his hip and was forced to retire. He was still interested in all aspects of medicine until his death in 1970.

Accomplishments in the Oral Medicine Field

His accomplishments were many, but they appear in the papers and books of his many students. Dr. McCarthy published very little on his own. He didn’t like sitting down and writing. The book “Diseases of the Oral Mucosa” published by us (Philip L. McCarthy and Gerald Shklar) was essentially Francis McCarthy’s book, assembled by two of his students, who then became authoritative voices in the field of Oral Medicine—McCarthy as Professor of Oral Medicine at the Tufts University School of Dental Medicine and Shklar as Professor of Oral Pathology at the Harvard School of Dental Medicine. Among the students of Shklar and McCarthy are a number of current Professors of Oral Medicine.

Francis McCarthy published a few papers that have indeed become classics. The “Etiology, Pathology and Treatment of Leukoplakia Buccalis, With a Report of Three Hundred Sixteen Cases” appeared in the Archives of Dermatology in 1936 and offered a classification based on etiology, clinical appearance and malignant potential.

“Pyostomatitis Vegetans” appeared in the Archives of Dermatology in 1949 and related this unique oral condition to ulcerative colitis. This syndrome was subsequently confirmed by others.

Later American pioneers in the field of Oral Medicine include Lester W. Burket and David Weisberger. Both Burket and Weisberger were trained as dentists and both felt the need to pursue the medical aspects of oral disease and the overall health of the patient with oral disease manifestations. The Rockefeller Institute was persuaded to fund a program for dentists to receive medical or PhD degrees in order to advance the background of dentists into medicine and biological/medical research. Both Burket and Weisberger entered Yale Medical School under this program and received their MD degrees in 1936. Lester Burket went on to teach Oral Medicine at the University of Pennsylvania Dental School and in 1946 published the authoritative textbook of Oral Medicine. The book has been extremely successful and is now in its tenth edition. Burket eventually was promoted to professor of Oral Medicine and in 1951 became Dean of the University of Pennsylvania Dental School. David Weisberger returned to the Harvard School of Dental Medicine and became an instructor in Oral Medicine. He was eventually promoted to Professor of Dental Medicine. He was appointed to head the Department of Oral Medicine and Oral Surgery at the Massachusetts General Hospital, replacing the eminent oral pathologist and oral surgeon Kurt Thoma, upon Thoma’s retirement from the Harvard School of Dental Medicine.
Football was brought to America by early British colonists, and was played on village greens and school campuses. The game was initially very similar to soccer, but was soon modified. Because the game was rather rough, it was banned at Yale and Harvard in the middle of the nineteenth century, but this ban did not last long. By 1873 the game’s rules were changed, and the sport, now modified, was embraced by Yale, Princeton, Rutgers and Columbia. Some collegiate games were played before the rule change, however, according to a plaque at Rutgers which reads, “First intercollegiate football Rutgers vs. Princeton 1869-1871”.

By 1876, football was adapted to the code of rugby, a similar sport popular in England. From the Eastern American colleges, interest in football spread further to the Midwest. In time, yet more rule changes were introduced and a professional football league was founded. The National Football League used college rules until 1927, when new changes were adopted. The football helmet was invented by George Barckley of Lafayette College in 1896. While face protection had long been encouraged, face guards did not become mandatory until 1963. A face guard is shown on this stamp, labeled “1869–1969” to commemorate the American Intercollegiate Football centenary. The stamp is one of a set of two, issued in September 1969. (Scott #1382).
This brightly-colored lithographic antique postcard, postmarked June 18, 1906, was sent from Berchtesgaden, Germany to Pozsony, Slovakia (now Bratislava, Czechoslovakia, 30 miles east of Vienna). It measures 3.5 x 5.5 inches. On the back side, the address is written in flourishing script. The return address appears to be only the last name of the sender. No personal message is included. A 1903 five-pfenning Bavarian stamp, embossed with a coat of arms (Scott Standard Postage Stamp Catalogue, #A5 Green), is affixed.

The scene on the front of the card depicts a woeful bulldog in a state of oral misery. This poor creature wears a pink robe and the classic white toothache towel wrapped around her face. This homemade bandage supports her grossly swollen left cheek. Her two front paws lie helplessly on a richly patterned bedspread. Her mournful brown eyes look up beseechingly, as if to say, “Please help me.” Her pitiful expression is exaggerated by her typical bulldog mandibular teeth.

Behind her is a large, luxurious green pillow with gold braided borders. The adjacent nightstand, which is covered with a geometrically designed table scarf, holds a bell alarm clock showing the time as 3:20 a.m. To the left of the clock is an ornate glass chimney kerosene lamp, whose wick has been extinguished. Three medicine bottles and a spoon are stationed on the bedside table, waiting to ease the pain of the suffering patient.
Dog With A Toothache

(front of card)

(reverse of card)
Dental Trade Cards XXVI
by Theodore P. Croll, DDS
& Ben Z. Swanson, Jr., DDS

Dr. Travis’ Dental Parlors

Dr. George E. Travis’s office on Grand Street in Brooklyn was located in an area home to many German-speaking immigrants. He not only offered painless tooth extraction by “Vitalized Air” (what...no forceps needed?), but the office was “ALWAYS OPEN.” Large colorful cards like these typified the Victorian trend of using images of beautiful children and lovely bright flowers to catch the eye and fancy of consumers. We believe Dr. Travis was preceptor trained, because we found no information about his educational credentials in dental directories from 1893-1914. We also know that he advertised extensively with trade cards, because others of varying sizes are known to modern-day collectors.

Dr. Croll is in private practice in pediatric dentistry in Doylestown, PA.  
Dr. Swanson served as President of the American Academy of the History of Dentistry from 1985-1986.
**A Sourcebook of Dental Medicine**

*Being a Documentary History of Dentistry and Stomatology from the Earliest Times to the Middle of the Twentieth Century.*

by Gerald Shklar, DDS, MS & David A. Chernin, DMD, MLS

864 pages, hardcover

The aim of this book is to make available to the profession of Dental Medicine and other interested parties the extensive literature of the past dealing with the diagnosis, description, causes, treatment and prevention of oral diseases. Drs. Shklar and Chernin are presenting the original texts concerning the diagnosis and management of oral diseases ranging from ancient Egypt through the world of the 20th Century.

Many of the basic texts of the past have already been translated into English, French and German from the original Sanskrit, Greek, Latin and Arabic. However, a number of important texts have never before been translated into English. The authors are presenting all these materials to the English-reading professionals in medicine and dental medicine in this 864-page reference book.

Price: $90. Available from: Maro Publications
Maro Pub. Ltd., P.O. Box 145, Waban, MA 02468
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**Limericks With A Smile:**

*Dental, Oral and Facial Limericks of Yesterday and Today*

by Joan A. Christen, BGS, MA & Arden G. Christen, DDS, MSD, MA

The authors have compiled 188 previously-published limericks related to dental, oral and facial themes; plus they offer an additional 384 personally-composed limericks. The humorous verses in this collection are at once bawdy, whimsical, ludicrous and cynical, and though simple in format, they communicate in few words their strong, sometimes paradoxical message. 159 pages with complete index.

Price: $20, postage paid. Available from:
Dr. Arden G. Christen, 7112 Sylvan Ridge Road, Indianapolis, IN 46240-3541 (US check only)

**Intriguing and Eccentric Characters & Stories from the World of Dentistry**

by Arden G. Christen, DDS, MSD, MA & Joan A. Christen, BGS, MS

In this 230-page book, the authors have glimpsed into the lives of 32 dental characters: professionals who range from the noble to the bizarre. Introducing this work is a chapter on one of the most memorable and controversial characters of all time, Dr. Painless Parker (1872-1952). All of these fascinating individuals have left indelible marks on their chosen profession. The stories from this collection may be inspiring or infuriating, ingenious or absurd, credible or questionable—but seldom are they dull.

Price: $20, postage paid. Available from:
Dr. Arden G. Christen, 7112 Sylvan Ridge Road, Indianapolis, IN 46240-3541 (US check only)

**A Little Treatise on the Teeth:**

*The First Authoritative Book on Dentistry (1563)*

by Bartholomæus Eustachius

Edited by David A. Chernin, DMD, MLS & Gerald Shklar, DDS, MS

One of the greatest anatomists of all time, Eustachius’ major studies remained unknown until their eventual Dutch translation and publication in 1714. Eustachius contributed substantially to the development of dental science. His conceptual advances concerning tooth development and function, based on anatomical dissections, were further buttressed by detailed plates of the musculature of the face, floor of the mouth, the neck, the tongue, and the roots and crowns of the teeth. In addition to giving us the first clear description of the dental pulp and root canal, Eustachius also conceived of the periodontal membrane as a gomphosis.

This volume presents the first direct English translation from the original Latin *Libellus De Dentibus,* and maintains the Latin and English texts on facing pages. Eustachius’ observations are an illuminating precursor to 21st-century medical science, and still represent a timely and relevant reference for any practicing dentist.

Price: $60. Available from: Maro Publications
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www.maropub.com
From the Archives: Vol. 1, No.10 & Vol. 2, No. 1

Volume I, No. 10

DECEMBER 1953

BULLETIN OF THE HISTORY OF DENTISTRY

official monthly publication of
American Academy of the History of Dentistry

HOMER BROWN'S HISTORICAL DOCUMENT

Dr. Homer C. Brown, senior past-president of the American Dental Association, who died November 7, at the age of 84, was a member of the A.A.D.A. and author of several articles pertaining to the history of the Association. He had a considerable collection of original documents and other historical material mostly bearing upon his own activities as president and as chairman of the Legislative committee of the Association. This collection should be available and valuable in the preparation of the history of the Association to be published for the centenary celebration of the organization. Doctors Donald Washburn and George B. Denton, who examined the collection in Columbus for the Association in 1951, reported that the material consisted of approximately ten filing cabinet drawers of correspondence, besides typescripts of articles and addresses, programs of dental society meetings, pamphlets and books on dental subjects, choral sheets, newspaper clippings, telegrams, and miscellaneous objects relative to dentistry. This is the kind of collection of historical material that so often is destroyed. Steps are being taken to see that this collection will be preserved. Brig. Gen. Neal L. Harper, retired Assistant Chief of the Dental Division in the Surgeon General's Office, and Assistant Professor at Ohio State University College of Dentistry, was designated by Dr. Brown as custodian of his files and records. General Harper will organize for use the documentary material bearing on the history of the American Dental Association.

INFORMATION WANTED

P/ In the November issue of the Dayton Dental Society Bulletin, Dr. E. B. Kincley, who writes the column on "Dayton Dental History," requests information with regard to a number of Ohio dentists. The editorial office of the Bulletin is 1933 North Main Street, Dayton 5, Ohio.

FOR THE AUTHOR OF A DENTAL HISTORY

P/ At the meeting of the A.A.D.A. in Cleveland, Wayne K. Stoler, of Valparaiso, Indiana, presented a mimeographed sheet of "Considerations for Publication of Dental History." Some copies of this list of matters with which the author or publisher of a dental history should consider in planning publication are available upon request to the author.

P/ August 1 of this year was the one hundredth anniversary of the birth of Willoughby D. Miller, founder of the chemical-bacterial theory of dental caries.
THE HISTORY OF DENTISTRY IN TEXAS

The history committee of the Texas Dental Association, of which Frank H. Shults is chairman, canvassed the membership to ascertain the extent of interest in the purchase of a History of Dentistry in Texas now being prepared. Of a total membership of 2024, only 132 or 6 per cent were willing to purchase a copy at the price of ten dollars.

THE EDITOR'S FIRST YEAR

The present issue, Number 10, concludes Volume I of the Bulletin. Volume II will begin with the January issue, and it is hoped will have twelve monthly numbers.
BULLETIN OF THE HISTORY OF DENTISTRY

official monthly publication of
American Academy of the History of Dentistry

BIOGRAPHY OF BARTHOLOMEW RUSPINI

Bartholomeo Ruspinii, an eighteenth century Italian dentist who received his dental training in France and practiced in England, is the subject of a scholarly article in the December 1953 issue of Dental Magazine and Oral Topics 70:402-422. Besides giving much new information, the article corrects several errors of previous writers on the subject. The author, Dr. J. Monzie Campbell, has recently changed his street address, which now is 70 Great George Street, Glasgow, W. 2.

A.D.A. HISTORICAL DOCUMENTS LOCATED

The call for documents relative to the history of the American Dental Association in the October Bulletin has met with some response. Dr. H. L. Sprau of Louisville, a member of A.A.H.D., has offered the correspondence of Dr. John T. O'Hurke pertaining to his committee work during World War II. Dr. William I. McNeil of Chicago has reported that he has documents relative to Dr. C. W. Johnson in his possession. It is hoped that other persons will come forward with documents.

DENTISTRY AND MEDICINE ON COINS AND MEDALS

Speaking on the history of medicine and dentistry as portrayed on medals and coins, Morris C. Leikind, chief of the historical research division of the Medical Museum, Armed Forces Institute of Pathology, Washington, D.C., addressed the Washington County Dental Society in Hagerstown, Maryland, Dec. 9, 1953. Medals from the collection of the Medical Museum were used to illustrate the lecture.

DRA. MANUELA ANTORTE Y FAREDES

An account of the woman dentist Manuela Antorte y Faredes as "mother of Spanish dentistry" is published in Information Dental 13:395-401 May-June 1953, by Pedro Borja de Guzman. She published a book, Arte del Dentista, in 1673. Among the extravagant claims of the author is the statement that Dra. Antorte's book is the first, properly speaking, published in Spain. He apparently overlooks such works as Martinez's in 1557 and the professional text of Felix Perez Arroyo in 1799 as well as other later books.

AUTHORITY TO EXTRACT TEETH IN PARMA 1818

L. Casotti published in Minerva Stomatologica 2:200-201 July-Aug. 1953 an interesting edict by Maria-Louisa, Archduchess of Austria and Duchess of Parma, dated Feb. 26, 1618, authorizing minor surgeons (ceruisici minori) in the latter duchy to perform certain minor operations including extraction of the teeth.
CORRECTIONS AND ADDITIONS OF A.A.H.D. MEMBERSHIP LIST

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BIOGRAPHY OF EMILE MAGITOT

Mme. Claude Gruber-Magitot has contributed a biographical article on her grandfather, the famous French stomatologist, Emile Magitot (1833-1897) in L'Information Dentaire 35:1480-1487 Nov. 19, 1953.

CHANGES IN DENTAL JOURNALS

The American Dental Association will carry an editorial noting the demise of several old dental journals. Revista Dental de Chile, founded in 1909 and discontinued in 1951, it has been announced, will soon be revived (La Tribuna Odontologica 37:421 Aug. 1953.)

BIOGRAPHY OF A. W. KINGSLEY


DENTISTRY IN THE RENAISSANCE


ROOT CANAL STERILIZATION

"Evolution del control del esterilidad de los conductos radiculares" (Evolution of control of sterility of the root canals) is the title of an article by Carlos R. Gandolfo and Samuel Finkelstein in La Tribuna Odontologica 37:460-468, 501-504.

SAINT APOPOLEONIA

L'Information Dentaire (35:1490-1451 Nov. 12, 1953) discusses the appropriateness of Saint Apollonia's adoption as the dental profession's patron saint. The question was raised by a letter appearing in Medecine et Hygiene (Switzerland).
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