
PHS CHRONICLES

PHS Chronicles presents short articles about significant happenings in the nearly 200-year history of the Public Health Service. The Office of the PHS Historian oversees preparation of the Chronicles. Contributions of less than 1,500 words are welcomed. Contact John Parascandola, PhD, PHS Historian, 17-31 Parklawn Bldg., 5600 Fishers Lane, Rockville, MD 20857, tel. 301-443-5363, FAX 301-443-0358 (E mail jparasca@oash.ssw.dhhs.gov).

Celebrating 75 Years of the Dental Corps: Origins and Early Years of Service

What did it mean to serve in the Commissioned Corps as a dentist 75 years ago? And how have the careers of Public Health Service (PHS) dentists changed since the days of the first commissioned dentist, Dr. Ernest E. Buell?

In the period between the First and Second World Wars, under the leadership of Buell and his successor, Dr. Clinton T. Messner, members of the Dental Corps worked primarily to deliver care to Federal beneficiaries. At the same time, dentists developed new roles for the Corps in research, technical assistance, and the crafting of policy, areas that would grow in importance for PHS and the Dental Corps, in more recent decades.

Origins of the Corps. Although dentists may have worked for PHS before World War I (WWI), there is little in the historical record to document their presence. In the early 1900s, Federal provisions for dental health included Corps organized by the Army (1912) and the Navy (1913), and the Department of the Interior's contractual arrangements with itinerant dentists to provide care on American Indian reservations. At that time, PHS's involvement in public health included research at its Hygienic Laboratory (predecessor of the National Institutes of Health), a small number of field epidemiologic studies, quarantine and the inspection of immigrants, and direct care to beneficiaries, merchant seamen, through a network of hospitals and relief stations.

Dentists employed by the Federal Government, like others who worked in private settings, used clinical observations as a basis for field research into the nature of mottled tooth enamel and its geographic distribution among populations. In 1901, Dr. Frederick McKay began a series of surveys about the prevalence of mottled enamel, also known as "Colorado Brown Stain," which he linked to the water supply. After 1908, McKay collaborated with the renowned dental educator Dr. Greene V. Black. In 1915, a Federal dentist, Dr. Fernando E. Rodrigues, reported the extensive mottling of enamel in the Pima Indian tribe, a condition that he attributed to the drinking water supply.

McKay, Black, and Rodrigues did not apply the results of their research toward diagnosis, treatment, or prevention of dental disease.

WWI proved to be a watershed for dentistry in PHS. Great numbers of civilians entered the military, increasing the demand for a wide range of health care services. The U.S. Treasury Department's new Bureau of War Risk Insurance, established in 1914, provided health care benefits in PHS facilities for all disabled veterans of WWI.

While Surgeon General Rupert Blue's plans for postwar health care reform were encouraging to advocates of a PHS Dental Corps, two legal developments led directly to the creation of a dental section. One was the belated recognition by Congress of the need for a Reserve Corps for the PHS. In the wake of the influenza pandemic of 1918, Congress passed legislation in October 1918 that created a Reserve Corps. Eligibility for Regular Corps commissions was restricted to those with medical training, but Reserve commissions were made available for dentists, sanitary engineers, pharmacists, scientists, and other health professionals.

The second development was the passage of Public Law 326 on March 3, 1919. The War Risk Hospital Act added WWI veterans as a new category of Federal beneficiary and dictated that a variety of services be made available. PHS officials moved quickly to recruit dentists from the Army Dental Corps. On June 24, 1919, (Dental) Surgeon (Reserve) Ernest E. Buell became the first commissioned dentist in PHS. Like most of the first generation of PHS dentists, Buell was recruited on the basis of his experience with the Army Dental Corps, where he had served as a major during WWI.

A diversity of service settings. The early years of the dental section were a challenge to Buell and his assistant, Passed Assistant (Dental) Surgeon (Reserve) Lloyd Beers. PHS worked from a very limited appropriation of \$9.5 million, while the 1919 Act "specified facilities, most of them inadequate hospitals in old Army camps, which had to be used." Arrangements for the war veterans meant expansion of PHS beyond its network of marine hospitals to a series of 14 districts that spanned the nation, each with its own dental consultant.

In addition to recruiting from the Army Dental Corps, Buell met an acute shortage of dental officers by contracting with 5,000 civilian "dental examiners" to provide care to the veterans and by developing a civil service career track for surgeons' assistants to work in dentistry. By December 1919, PHS employed 100 dental officers, with 68 assigned to clinical work at marine hospitals and relief stations and the remainder to administration.

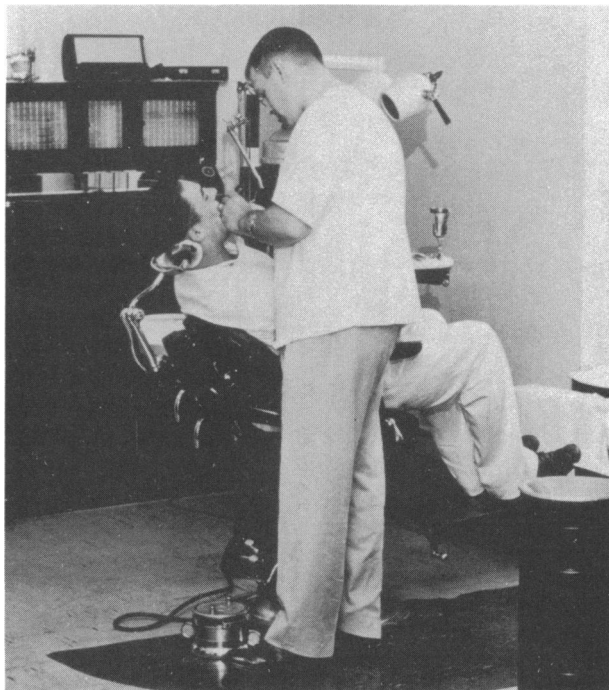
In the spring of 1922, PHS lost its mandate for veterans' care to the new U. S. Veterans' Bureau. Between February and May 1922, much of the equipment and most of the dental officers were transferred to the new agency—according to one account, 146 of 169 dental surgeons, 12 of 14 oral hygienists, and all 17 dental mechanics. Beers took charge of dental services at the Veterans' Bureau. Senior (Dental) Surgeon (Reserve) Buell continued his career with PHS. He departed for San Francisco, where he would direct the PHS Marine Hospital's dental clinic until his retirement in 1928.

In 1923, Dental Surgeon (Reserve) Clinton T. Messner succeeded Buell as Chief of the Dental Section. Messner had been assigned to the Washington, DC, Relief Station No. 360, Dental Clinic. Under his leadership the fledgling dental section maintained and expanded its program of care for Federal beneficiaries, through the detail of dental officers to the Marine Hospitals and through the hiring of civilian, contract dentists. As Chief of the Dental Section, Dr. Messner fulfilled a number of duties, from administrative oversight of dental supplies for the marine hospitals to care delivery at Washington, DC's Dental Clinic.

During the 1920s and into the 1930s, PHS dentistry developed as a professional career along the lines of graduate training, research, and clinical care. The first dental internship was established in 1927 at the New Orleans Marine Hospital. The Parker Act of 1930 admitted dentists to eligibility for appointment to the Regular Commissioned Corps. There were opportunities for research in the field and in the PHS's Hygienic Laboratory. For example, in 1926 McKay began a study of enamel mottling in Bauxite, AR, in response to requests of State health department officials.

Responsibilities to deliver dental care multiplied as PHS gained new categories of Federal beneficiaries. PHS dentists treated immigrants at the Ellis Island Marine Hospital. They were detailed to U.S. Coast Guard cutters, bases, and the Coast Guard Academy in New London, CT. When PHS gained responsibility for care of Federal prisoners in 1930, dentists were assigned to penitentiaries, prison camps, and reformatories, to work together with contract dentists. An informal arrangement to serve American Indians and Alaska Natives through the Bureau of Indian Affairs became more formal in 1932, when PHS detailed Dental Surgeon Frank Cady to reorganize and supervise a dental program. Under Cady's guidance, school children became the focus of care, because of the relative accessibility of schools and the opportunity to use teachers for public education about oral hygiene.

A grants-in-aid program administered by the U.S. Department of Labor's Children's Bureau introduced yet



Clinical care in a Bureau of Prisons facility. Photo courtesy of the Office of Archives, Federal Bureau of Prisons



PHS leaders in the development of water fluoridation. Left to right: Dr. Frank McClure, Dr. Francis A. Arnold, Jr., Dr. H. Trendley Dean, and Dr. Elias Elvove. Photo courtesy of the National Institute of Dental Research

another important role for Dental Corps officers as technical advisors to State and local health departments. The Sheppard-Towner Act, passed in November 1921 and funded until June 1930, distributed funds that were often used to establish State oral hygiene programs. During the 1930s, the Dental Corps would become more actively involved in applied research, staff training, and technical assistance in support of State programs, at first through Federal emergency relief programs and then through the Social Security Act of 1935. The Act's provisions for grants-in-aid to State and local health departments funded new oral health programs.

Legacies of the early years. While New Deal legislation and World War Two (WWII) would bring dramatic changes to the Dental Corps, as to PHS overall, new programs and



Interior of a mobile dental clinic serving American Indians circa 1934. Photo courtesy of the Indian Health Service

areas of expertise would build on the foundation of service laid during dentistry's first decades within PHS. For example, Dr. H. Trendley Dean, Dr. John Knutson, and others at the new National Institute of Health used early studies of mottled enamel to develop a theory that linked

fluoridated water with protection against dental caries. Community studies of the efficacy of fluoridated drinking water supplies, conducted during the 1940s and 1950s, and the creation of the National Institute of Dental Research in 1948 have enabled PHS dentists to use research to enhance the effectiveness and accessibility of clinical care, both for beneficiaries and for the general public. Evidence of the success of water fluoridation is reflected in recent studies that indicate a one-third decline in dental caries among school children during the 1970s, followed by a second decline of one-third during the 1980s.

In the direct provision of care, the Dental Corps tradition of service has flourished. Although the PHS hospital system was dismantled in 1981, the Corps has maintained a vigorous presence in the U.S. Coast Guard and in the Federal Bureau of Prisons. Delivery of clinical care has increased markedly with the establishment of the Indian Health Service in 1955, the advent of Great Society programs such as Project Head Start, and the creation of the National Health Service Corps in 1971.

In the 1990s, the early years of the Dental Corps continue to shape opportunities for growth and renewal. Dental policy has been advanced through collaborations across the full range of PHS programs, with dental health professionals serving as advisors, researchers, administrators, and deliverers of care. The successes of technological measures such as water fluoridation are historical lessons that are being applied to new challenges as PHS dentists prepare recommendations for health care reform plans.

—LYNNE PAGE SNYDER, PhD Candidate, Office of the PHS Historian

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