

By Gretchen Gibson and Kenneth Shay

# Dental Care for Older Veterans and the VA's Leadership Roles in Dental Geriatrics

The demographics of the VA's target population have resulted in VA dentistry having a heightened focus on dental conditions that predominantly impact older veterans.

Dental care has been a component of the palette of services the nation has made available to its veterans for nearly a century. As such, many of the same forces and circumstances that led to the Department of Veteran Affairs' (VA) prominent role in the emergence of medical geriatrics—strong ties to medical schools, medical research, physician education, and the disproportionate increase in number and proportion of elders within the veteran population during the past three decades—also positioned the VA to play a prominent and analogous role during the past thirty years in its contributions to clinical, research, and educational advances affecting dental care for older veterans. Many survivors of mid-century American wars have aged into and beyond their seventh decades.

At the same time, a great deal of the educational, clinical, and research effort and accomplishments that benefited older veterans' dental care has not explicitly had a “geriatrics” brand—something that can also be said for other health disciplines. Yet the demographics of the VA's target population has of necessity resulted in VA dentistry having a heightened focus on, and

therefore strong contributions to, the knowledge and management of dental and oral diseases and conditions that predominantly impact older veterans. Historically, the mission of the Veterans Health Administration (VHA) has been provision of patient care, education of health-care professionals, biomedical and health services research, and a clinical backup role to the Department of Defense. Using the first three of these four missions, we can look at the role of VA dentistry in the care of older adults.

## Clinical Dental Care for Older Veterans

Because dental pain has the potential for being so severely debilitating, the United States armed services have historically included professionals skilled in the diagnosis, treatment, and prevention of dental diseases, largely out of necessity for preserving the efficacy of the fighting force. As such, the continued provision of healthcare for veterans, many of whom had no contact with any such resources prior to enlistment, has included dental care for more than 100 years. The first national program for addressing veterans' needs, the Veterans

Bureau, initially relied on the services and resources of the Public Health Service (PHS), and, to a lesser extent, services purchased from private dentists to provide dental care for beneficiaries (Director, United States Veterans Bureau, 1923).

In 1923, the Bureau began to open its own set of health facilities across the country and specified the inclusion of dental personnel in all of them (Director, United States Veterans Bureau, 1922). This ended the VA's reliance on the PHS for many dental needs, but arrangements with private dentists continued (Director, United States Veterans Bureau, 1923). When the Veterans Bureau became the VA in 1930, dental was among the range of services made available for veterans under the new system (Committee on Veterans Affairs, 1967).

For the next fifty years there were no explicit restrictions placed on veterans' access to VA dental services other than those posed by mismatches between supply and demand. Each of the more than 130 VA medical centers had a dental clinic staffed with a mix of generalist, specialist, trainee dentists, dental assistants and dental hygienists, and, in many cases, dental laboratory technicians who fabricated dental prostheses. Dental clinics ranged in size from a single provider plus support staff to more than 100 employees and trainees.

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Beginning in the early 1980s, wait times for dental care became so excessive system-wide that a priority system was introduced, under which veterans with the most severe service-related disabilities and those who had been incarcerated for more than 90 days as prisoners of war were given the highest priority for care. In decreasing priority order came those recently discharged, those with less severe service-related disabilities, those whose service-related

medical disabilities became more complex to treat as a result of dental conditions, those whose medical care (unrelated to service) was made more complex by the dental conditions, and inpatients (those in acute care, long-term care, and residential care).

The lowest dental priority classes are of particular relevance to veterans of advanced age. The higher prevalence of chronic disease and rising rates of hospital and institutional placement with advancing age make it far more likely the conditions for qualifying to receive dental care would be met, particularly during episodes of inpatient care. There have been adjustments to this system and the degree to which it is applied over the past twenty years, largely reflecting fluctuations in staffing levels of dental personnel both nationally and locally and changes in public support for national military and veterans policy, but the basics endure.

Currently there are 758 full-time dentists and approximately fifty-two part-time dentists employed by the VA. The VA's dental services reported 372,700 veterans treated in fiscal year (FY) 2008, of which 30 percent were patients ages 65 and older and approximately 11 percent were ages 85 and older. Overall, 39 percent of veterans receiving healthcare through the VA were ages 65 and older (National Center for Veterans Analysis and Statistics, 2009). The

American Dental Association's 2007 survey of dental practices shows that practitioners estimate that between 14

percent and 15 percent of their patients are ages 65 and older (American Dental Association, 2009).

Dental care for veterans is disproportionately delivered to those of advanced age because of the age distribution of the veteran population, and because of the higher priority for receiving VA dental care associated with chronic disease and inpatient status. Because veterans of advanced age are, on average, affected by

disease and disability to a degree more characteristic of non-veterans who are ten to fifteen years older (Selim et al., 2004), VA dental personnel are particularly adept at working with complex medical records, integrating their care with non-dental health considerations (such as assessing medical risk and avoiding drug interactions), managing patient behaviors that would not be accommodated in many private dental practices, and interfacing with other members of the health professions.

The VA currently has the largest healthcare computerized database in the United States. For this reason, VA dental services now have the opportunity to interact during the medical care of older veterans on a more proactive level. Through electronic consultation, this treatment and follow up can be better assured and tracked.

Access to general health as well as dental care records is a component of the National Healthcare Information Infrastructure and a concept already embraced in the VA. All VA dental records are electronic, but by comparison, a 2007 American Dental Association survey showed that only 43.7 percent of non-VA dentists currently work with electronic patient records as part of their primary practice (American Dental Association, 2008).

The VA's dental procedures for older veterans span the full sweep of the profession. Preventive care is a focus of patient education in ambulatory settings and a focus on staff education in long-term care. Dental caries and periodontal diseases, as chronic conditions, become increasingly prevalent with increasing age, but on a population scale, they diminish in very advanced age when loss of the affected teeth lessens the treatment need for fillings, cleanings, and scalings. As part of the natural history of advanced decay, the need for root canal treatment follows a similar trend, as does demand for crowns and fixed and removable bridges to replace limited numbers of teeth. Complete dentures for those missing all their teeth—the demand for which on a population scale increases steadily over a lifespan—has long

been a prevalent need in veterans of advanced age, although less so in recent decades as older veterans in the second half of the twentieth century are more likely to have been exposed to dental care and fluoride (in drinking water and dentifrice) earlier in their adult life (Ettinger and Beck, 1982). In recent years the introduction of viable osseointegrated implants to anchor prosthetic devices has offered older veterans a dramatically superior alternative for enhancing the function of complete and partial dentures. This same technology has also broadened the range and acceptability of options available to the maxillofacial prosthodontists responsible for fabricating prosthetic portions of the face lost to battlefield trauma or disease in veterans of all ages.

### **The VA's Role in Educating the Dental Profession**

The particular blend of advanced age and medical complexity characteristic of veteran populations makes VA settings outstanding clinical training sites for members of all health professions. Dental training is particularly enriched in VA facilities because a patient's ability to afford a recommended but costly dental option, which can constrain what the dentist actually provides, plays no role in VA dentistry. This same insulation from financial considerations also makes VA dentistry appealing to clinicians motivated to offer patients new technologies, materials, and techniques—a factor that further enhances trainees' experiences. Many VA dental staff hold adjunct or part-time appointments at affiliated dental schools, where the richness of their experiences with older and medically and dentally complex veterans can be a useful complement to dental, post-graduate, and continuing education training activities. The dental school affiliations frequently support specialty dental training programs that both expand the range of dental therapies available to veterans and broaden the experiences of the trainees to include particularly challenging cases to treat.

Unlike physicians who, almost without exception, undertake at least one and usually three or more years of postgraduate clinical training, most dental students graduate and immediately begin to practice their profession.

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About a third undertake some post-graduate training, the most common of which is one of two different one-year clinical tracks (either of which may be extended to two and, in some cases, three years). The older of these general practice residencies (GPR) were historically hospital-based (usually but not always independent of dental schools) and intended to increase proficiency in all aspects of dental practice, with particular emphasis on integrating dental care with patients' medical care. A more recent addition to dental post-graduate education is the Advanced Education in General Dentistry program (AEGD), which was historically dental school-based and more focused on strengthening new dentists' diagnostic and restorative skills. Customarily these programs offer trainees advanced training and clinical experiences with medically complex patients, often in affiliation with nearby VA hospitals and dental clinics. Recently, a number of VA dental services have initiated AEGDs or converted some of their GPR positions to the more clinically focused track. Of the 1,486 post-graduate general dentistry positions (AEGD and GPR) available in the United States for the academic term starting July 1, 2007, 233 (or about 16 percent) were located primarily in VA medical centers.

In 2008, the VA also supported graduate training programs in most of the recognized dental specialties, including oral and maxillofacial surgery (54.5 positions), prosthodontics (33.5 positions), maxillofacial prosthodontics (one position), periodontics (19.7 positions), and endodontics (14.2 positions). As noted by the fractional numbers, the VA also shares training

positions with other learning institutions. The latter four of these confer clinical expertise that is of particular benefit to older adults, who are more likely to be in need of the particular services offered.

The VA's most noteworthy contribution to geriatric dental education was inarguably its Dentist Geriatric Fellowship program (DGFP) a two-year, post-residency training experience modeled after the medical geriatric fellowships that the VA introduced in 1976 to 1977. The DGFP began with five trainees in 1982, one each beginning training at the VA medical centers in Denver, Milwaukee, Loma Linda, Bedford/Boston, and West Los Angeles/Sepulveda (and their academic affiliates, University of Colorado, Marquette University/Medical College of Wisconsin, Loma Linda University, Harvard University/Boston University, and University of California Los Angeles, respectively) (Vidmar and Kress, 1985). A sixth program was added in 1990 at the Gainesville VA, affiliated with the University of Florida. The programs had the goal of developing leaders in the profession who would define and initiate investigations within a research agenda in geriatric oral health; acquire and then share their knowledge of geriatrics with all levels of the profession and with other disciplines working with elders; and serve as role models for what was envisioned to soon become a rapidly growing interest area—possibly even a specialty—within dentistry (Kress and Vidmar, 1985).

Yet the higher costs of dental care for those of advanced age, the absence of dental coverage under Medicare, and relatively few retired individuals with dental insurance undermined much of the market appeal for geriatric dentistry as a viable career option. The hope that graduates of VA programs would effect curricular change within dental education collided with a fiscally difficult time for American dental schools, resulting in most of the graduates initially remaining within the VA and working as staff dentists. Optimism for the

potential for a specialty was dampened and recruitment to the DGFP flagged. Recruitment to the program was further challenged when, in 1990, the Bureau of Health Professions/Health Services and Resources Administration awarded training grants for joint medical/dental geriatric fellowships to eighteen medical schools, with prerequisite requirements for the dental trainees less stringent than those imposed by DGFP (Shay, Berkey, and Saxe, 1990). As a result of these changes, in 1992 the VA redirected funding for the DGFP to support dental research fellowships.

Despite its truncated lifespan, the DGFP graduated a cadre of forty-two uniquely trained dentists whose training in education, clinical care, administration, and research prepared a substantial portion of them for subsequent leadership positions in dental academia, in the VA, and in the industry. Presently nine of the Bureau's programs remain in operation, and DGFP alumni or their protégés direct many of the dental components.

An important but presently diminished contribution to education about dental care of older veterans has been through the VA's national dental education program. Through the 1980s and 1990s, there were two national dental education centers (DEC), one in Washington, D.C., and the other in West Los Angeles, in addition to the VA's five regional medical education centers (RMEC). The primary targets of the DEC's were VA dentists and dental personnel. The DEC's offered correspondence, multi-site lecturers satellite teleconferences, and hands-on training that spanned all topics within the discipline.

In the early and mid-1980s, geriatric dentistry was a sought-after topic; subsequent to that, topics that focused on dental care for medically compromised veterans addressed many of the management challenges that dental personnel encountered when working with older and disabled veterans. The VA reorganized its Office of Academic Affairs in the mid-1990s and, with the emergence of the employee

education system, the RMECs and DEC's were repurposed and phased out.

Finally, the interface between the academic and clinical worlds on which many VA dentists sit provides them greater access to library and academic resources, resulting in a sustained flow of review articles from them for the dental literature (Henry and Wekstein, 1997; Shay, 1997; Friedlander and Norman, 2006). Because the literature is not catalogued by authors' affiliations, a full accounting of these contributions is impossible, but the number published since the middle of the twentieth century undoubtedly numbers in the thousands.

### **VA Geriatric Dental Research**

The alignment of VA dentistry with dental schools has fostered the involvement of many VA personnel in dental research and, in turn, has provided access for school faculty to involve veterans in their clinical investigations. Many of the DGFP graduates also contributed a great deal in the arena of geriatric dental research. Much like the VA's draw as a training facility for dental professionals, it is an excellent arena for research to improve the oral health of older and medically compromised adults.

The single most visible and enduring example of VA dental research concerning veterans of advanced age is the Dental Longitudinal Study (DLS), which was an early outgrowth of the VA's Normative Aging Study (NAS). The NAS began at the VA outpatient clinic in Boston in 1963, enrolling healthy male veterans born between 1884 and 1945 (Bell, Rose, and Damon, 1966). Of approximately 6,000 screened, eventually 2,280 participated, each presenting triennially for an extensive examination and medical history update for the purpose of characterizing the norms of healthy aging and identifying precursors of and risk factors for many of the common diseases prevalent in elders, such as hypertension, coronary artery disease, diabetes, and osteoporosis (Bosse, Eckerdt and Silbert, 1984). The study is ongoing and the median age in 2005 was 74 years (R.I. Garcia, personal communication, 2009).

In 1968, dental staff of the VA, who also had faculty appointments at Tufts University Dental School, initiated the DLS on a subgroup of 1,231 of the NAS subjects (Kapur et al., 1972). The extensive NAS assessment was initially supplemented for these subjects with detailed oral, dental, periodontal and oral-radiological examinations, saliva analyses, taste tests, oral cytology, and questions on diet and food preferences (Glass et al., 1973). In time, the range of information gathered in each cycle has diminished, but the DLS, now and for the past two decades under the direction of its third head (now in affiliation with Boston University), still continues. The subject panel is currently in its twelfth cycle of triennial assessments. The DLS has provided and continues to provide some of the most robust information available to the profession on how oral structures, functions, and diseases change their presentation with advancing age.

The DLS has been the source of reports on caries (Chauncey, Glass, and Allman, 1989), periodontal disease (Feldman et al., 1982), tooth loss (Chauncey et al., 1987), and “oral quality of life” (Kressin et al., 1996) across the age spectrum. Studies have focused on changing dietary preferences with age, with tooth loss, and in the presence or absence of artificial replacements (Wayler et al., 1984). Others have reported on changes in salivary composition and function as a function of age (Garrett et al., 1987). The impact of dental status on nutritional status is a recurring theme (Chauncey et al., 1984; Krall, Hayes, and Garcia, 1998). The uniquely detailed

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### ***The VA’s dental procedures for older veterans span the full sweep of the profession.***

and longitudinal characterization of both dental and medical status among subjects has allowed the NAS and DLS populations to be among those studied in investigations into the correlation between periodontal disease and hypertensive, cardiovascular, and cerebrovascular diseases (Garcia, Krall, and Vokonas, 1998).


A second longitudinal aging study on frail older veterans with a prominent dental component was initiated out of the Ann Arbor geriatric research, education, and clinical center (GRECC) and the University of Michigan School of Dentistry in the 1990s. The Geriatric Oral Science Project followed cohorts of community-dwelling and nursing home-residing veterans for five years and tracked their dental, periodontal, salivary, oral microbial, and pulmonary health and the interactions between them (Loesche et al., 1995; Langmore et al., 2002). Dental issues have been the focus of investigations at other GRECCs as well, including studies on oral health-related quality of life at the facility in Bedford (Kressin, 1996) and on regeneration of saliva and salivary gland tissues (Wang et al., 2006). Several other strictly geriatric dental VA contributions flowed from dental epidemiological descriptions of VA nursing home residents (Weyant et al., 1993; Jones et al., 1993) and a recent report on oral hygiene in a VA nursing home in Florida (Bassim et al., 2008).

Yet as with education and clinical care, the majority of dental research effort and contributions benefiting older veterans has not focused on those of advanced age exclusively because of their age, but has benefitted this group because those of advanced age are most likely afflicted by the particular diseases or conditions that are the focus of the investigations. Many of the early contributions to the professional literature on the unintended consequences of irradiation for head and neck cancer (a disease seldom encountered earlier than age 50), such as severe caries secondary to the destruction of salivary glands and osteoradionecrosis), were from dental research staff at the Dallas and Houston VAs (Wescott et al., 1978). This same group developed saliva substitutes and topical stannous fluoride gel (Shannon, Trodahl, and Starcke, 1978; Potter et al., 1984). VA researchers have produced multi-site longitudinal studies of different alloy systems for crowns and bridges (therapies used for older veterans to a greater degree than other age groups) (Morris, 1986).

Longitudinal studies of osseointegrated implants for lost teeth were directed out of VA dental research enterprises in southeast Michigan (Truhlar, Casino, and Cancro, 1997). Other topics addressed by dental researchers have included preventive dental care (Morhart et al., 1986), atherosclerotic plaque identification on dental radiographs (Friedlander and Baker, 1994; Friedlander and Cohen, 2007), and periodontal therapies (Nery et al., 1990).

## Conclusion

The higher percentage of geriatric patients in the VA system is also notable in its dental services. The need to appropriately care for these older veterans pushed the VA into an early leadership role in geriatric dental research and

education, as well as into focusing on dental care provision. In serving this patient population, the VA is always ready to be a major contributor to the evidence-based practice guidance that is continually needed to improve the oral health of our nation's aging population. 

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