

FALL 2023
vol. 90 | no. 2



eJACD

**The Official Journal of the
American College of Dentists**

Access to Care
acd.org

**A publication advancing
excellence, ethics,
professionalism, and
leadership in dentistry.**

*The Journal of the American
College of Dentists* (ISSN 0002-7979)
is published by the American
College of Dentists, Inc.
103 North Adams Street
Rockville, Maryland 20850.
Copyright 2023 by the American
College of Dentists.

Send address changes to:
Publication Manager
*Journal of the American
College of Dentists*
103 North Adams Street
Rockville, Maryland 20850

While every effort is made by
the publishers and the Editorial
Board to see that no inaccurate
or misleading opinions or
statements appear in the Journal,
they wish to make it clear that the
opinions expressed in the articles,
correspondence, etc., herein are
the responsibility of the contributor.
Accordingly, the publishers and
the Editorial Board and their
respective employees and officers
accept no liability whatsoever for
the consequences of any such
inaccurate or misleading opinions
or statements.

For bibliographic references, the
Journal is abbreviated J Am Col
Dent and should be followed by
the year, volume, number, and
page. The reference for this issue is:
J Am Col Dent 2023; 90 (2): 1-54.

Communication Policy

It is the communication policy of the American College of Dentists to identify and place before the Fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. The goal is to stimulate this community to remain informed, inquire actively, and participate in the formation of public policy and personal leadership to advance the purpose and objectives of the College. The college is not a political organization and does not intentionally promote specific views at the expense of others. The positions and opinions expressed in college publications do not necessarily represent those of the American College of Dentists or its Fellows.

Objectives of the American College of Dentists

THE AMERICAN COLLEGE OF DENTISTS, in order to promote the highest ideals in health care, advance the standards and efficiency of dentistry, develop good human relations and understanding, and extend the benefits of dental health to the greatest number, declares and adopts the following principles and ideals as ways and means for the attainment of these goals.

- A. To urge the extension and improvement of measures for the control and prevention of oral disorders;
- B. To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all, and to urge broad preparation for such a career at all educational levels;
- C. To encourage graduate studies and continuing educational efforts by dentists and auxiliaries;
- D. To encourage, stimulate, and promote research;
- E. To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;
- F. To encourage the free exchange of ideas and experiences in the interest of better service to the patient;
- G. To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public;
- H. To make visible to professional persons the extent of their responsibilities to the community as well as to the field of health service and to urge the acceptance of them;
- I. To encourage individuals to further these objectives, and to recognize meritorious achievements and the potential for contributions to dental science, art, education, literature, human relations, or other areas which contribute to human welfare—by conferring Fellowship in the College on those persons properly selected for such honor.

Content Director

Nanette Elster, JD, MPH, FACD
Editor, *eJACD*

Managing Director

Suzan Pitman
Publication Manager, *eJACD*

Design Director

Matthew Sheriff, BA, MS

Editorial Board

Kristi Soileau, DDS, MEd, MSHCE, FACD
Eric Klintmalm, DMD, MPH, FACD
Guenter Jonke, DMD, FACD
Cathleen Taylor-Osborne, DDS, MS, FACD
Carlos Smith, DDS, MDiv, FACD
Earl Sewell, MFA
Vishruti Patel, DDS, FACD
Ethan Pansick, DDS, MS, FACD
Elizabeth Shick, DDS, MPH, FACD
Pamela Zarkowski, JD, MPH, FACD
Joshua D. Bussard, DDS, FACD, FPFA
Michael Maihofer, DDS, FACD

Correspondence

Address correspondence relating
to the Journal to: Managing Editor
Journal of the American College of Dentists
103 North Adams Street
Rockville, Maryland 20850

Letters from Readers

Comments concerning any material
appearing in this journal are welcome at
suzan@acd.org. They should be no longer
than 500 words and will not be considered
after other letters have already been
published on the same topic. The Editor
reserves the right to refer submitted letters
to the Editorial Board for review.

Business Office

Journal of the American
College of Dentists
Tel. (301) 977-3223
Fax. (301) 977-3330

Officers

Robert M. Lamb, President
Teresa A. Dolan, President-elect
Robert A. Faiella, Vice President
Carole M. Hanes, Treasurer
Richard E. Jones, Past President
Nanette Elster, Editor, *eJACD*

Regents

Julie A. Connolly, Regency 1
Peter H. Guevara, Regency 2
Robert G. Plage, Regency 3
Terry L. Norris, Regency 4
Thomas E. Raimann, Regency 5
Kristi M. Soileau, Regency 6
Ned L. Nix, Regency 7
Lance M. Rucker, Regency 8
Krista Jones, At Large Regent
Cecile A. Feldman, At Large Regent
Pamela Alston, At Large Regent
Joseph P. Crowley, At Large Regent
Pamela Zarkowski, ASDE Liaison
Erik G. Klintmalm, SPEA Liaison
Joshua Bussard, Regent Intern



The ideas expressed in ACD publications are entirely those of the authors and are not necessarily reflective of those of the ACD, the ACD Foundation, the Board of Regents, the Editorial Board, or the Staff. The goal of the eJACD is to publish thought-provoking, relevant, and timely articles and research that will engage our readership in reflection and respectful discourse.

-
- 4** From the Editor: Access to Care
Nanette Elster, JD, MPH, FACD
 - 6** Fear and Antiquated Belief Systems:
A Barrier to Oral Healthcare Access
Earl Sewell, MFA
 - 11** Access to Care for Vulnerable
Populations at Times of National Crises:
State and Local Resources
Amy Martin, DrPH, MSPH
 - 17** Unmasking Oral Health Disparities in
Vulnerable Populations: Reflections
of a New Dentist
Joshua D. Bussard, DDS, FACD, FPFA
 - 20** Underserved, not undeserving: How a West
Texas Dentist is Expanding Access to Care
Kathleen Nichols, DDS, FAGD
 - 24** Utilizing Best Practices from the United
States Military Health System To Advance
a Universal Healthcare System
Stephen M. Pachuta, DDS, MS, MA
 - 34** From the Archives; Barriers to Access to
Dental Care: an Economic Examination
Donald R. House, PhD
 - 42** The Ethical Basis for Student-to-Student
Training in Dentistry
Larry Jenson, DDS, MA and Joel White, DDS, MS



Nanette Elster, JD, MPH, FACD

Content Director, American College
of Dentists and Editor, eJACD

Associate Professor, Neiswanger
Institute for Bioethics

Loyola University Chicago
Stritch School of Medicine

Barriers to Accessing Oral Health: Past, Present and Future Considerations

*“Of all the forms of inequality, injustice in health is
the most shocking and the most inhuman...”*

—Rev. Dr. Martin Luther King Jr. (1966)

This quote, from over a half century ago, unfortunately still rings true today. Health encompasses both physical and mental well-being and, as such, cannot and must not exclude the mouth. Barriers such as cost, physical location, language/health literacy, previous trauma, provider and patient biases, disability, childcare, hours of service are just some of the limits to accessing oral health that perpetuate inequality and injustice.

This issue of the *eJACD* examines the broad issue of access to oral health from a range of perspectives – past and present with a look to the future. The issue begins with a personal narrative from guest editor, Earl Sewell, about how systemic bias tied to race, socioeconomic status, education and disability led to personal bias, resulting in delayed care and irreversible damage.

What follows is a discussion of the importance of bolstering the dental safety net for the most vulnerable in the population. Using lessons learned from COVID and prior catastrophic events, Professor Amy Martin, calls for a firm commitment to repairing and strengthening the dental safety net in preparation for what catastrophic event(s) may come next so as not to exacerbate the inequities of those most vulnerable in society.

The next two articles consider access to oral health and its barriers from the perspectives of both a new dentist and a retired dentist with almost 40 years of practice experience. New dentist Josh Bussard reflects on the lessons he learned during his time in dental residency working at a Federally Qualified Health Center (FQHC). He stresses the need to consider what is at the root of health disparities to be better equipped to find solutions to improve health outcomes. Dr. Bussard's reflections is followed by Dr. Kathleen Nichols' reflection on her experience as a newly retired dentist volunteering her time to serve a traditionally underserved community in Post, Texas which is located about 40 miles outside of Lubbock, Texas. Post is a community with limited access to care, diverse residents and a staffing shortage. Dr. Nichols reflects on the value of working in this community not only for the residents but for her own personal growth as well.

In seeking a solution to improve access beyond a safety net approach, Dr. Stephen Pachuta offers an

analysis of how the military health system can serve as a model for promoting a more universal health system that better integrates healthcare for all. He identifies the advantages of such an integrated universal healthcare delivery system as well as the challenges that might be encountered, concluding that the model of the military system can serve as a valuable guide in efficiently improving access to care for a diverse population.

To frame the issue of access, this issue includes an article from 1978 found in the ACD archives. In viewing this piece from today's perspective, one can see how persistent (and consistent) barriers to care are. Dr. House, like Dr. Pachuta, discusses universal health care as a way to improve access, but he, too, notes the challenges and tradeoffs that it presents. His piece is prescient and nicely contextualizes the impediments that have limited notable improvements in access to care.

This issue concludes with a thought-provoking article by Dr. Larry Jenson and Dr. Joel White that analyzes the ethics of student-to-student training in dental education. The authors consider the ethics from a range of perspectives including the student learner, the student patient, the educational institution, the faculty at the institution, the general public and the profession as a whole. They address both the challenges and the benefits, concluding with a framework that is designed to balance the interests of all of the 6 identified stakeholders.

I want to thank Earl Sewell for guest editing this issue on a topic that continues to confront not only dentistry but healthcare as a whole. By combining personal and professional perspectives as well as academic and systemic analysis, he provides a well-rounded discussion by the authors which highlights the ACD pillars of excellence, ethics, professionalism and leadership in dentistry.



Fear and Antiquated Belief Systems: A Barrier to Oral Healthcare Access

Earl Sewell, MFA

Earl Sewell is a healthcare advocate and has written, published, and narrated over forty non-fiction and fiction works. He has also taught writing and public speaking for colleges and universities across the United States.

After World War II, America was experiencing an economic boom. Resources were abundant, jobs were plentiful, and many citizens were exiting urban America to develop suburban communities to start families and live the promise of the American Dream—health, wealth, and prosperity.

“You never really understand a person until you consider things from his point of view.”

– Atticus Finch in Harper Lee’s, *To Kill a Mockingbird*

During this same era, my grandmother Lorraine was in her 20s and looking forward to living the same dream and beginning a family with her husband, John Perry, Sr., a World War II Veteran. Although her economic opportunities only extended to domestic work in suburban communities, she was hopeful that she and John would do well through his part-time employment at multiple Fruit Docks in Chicago, where he unloaded trucks. With the help of the G.I. Bill, John and Lorraine purchased a modest urban home to begin their family.

Their first child John Jr. was born in 1948 with Cerebral Palsy. Medical science at the time believed the condition to be psychological and presented John and Lorraine with parental emancipation documents and advised them to place John in a mental institution and move forward with their lives. With a lack of financial resources, no medical insurance, and no family support to care for John, Jr., the option seemed practical. However, Lorraine refused to give up parental rights to her child. She suspected that her newborn baby would become the subject of medical experiments, perhaps like those at Tuskegee during the period. She declined the recommendation, which marked the beginning of her mistrust of practitioners. The life stressors and emotional struggles of war-induced, post-traumatic stress syndrome that followed caused the marriage to fail, and Lorraine found herself existing in abject poverty as a single mother. For the next 60 years of John and

Lorraine’s life, trauma, social determinants, lack of knowledge, and generational poverty exacerbated access to care barriers, ultimately resulting in adverse oral and overall health outcomes.

In the book *Bridges Out of Poverty Strategies for Professionals and Communities*, Ruby K. Payne states, “to better understand people who struggle with poverty, the definition of poverty will be the extent to which an individual does without resources.”¹

Society automatically defaults to the belief that resources are only linked to financial ability. However, Payne defines eleven resources that are not necessarily obvious to healthcare practitioners serving the public that can influence an individual’s willingness to seek care and therefore impede access to it. Those resources are as follows, “Financial, Emotional, Mental, Language, Social Capital, Health, Spiritual, Integrity and trust, Motivation and persistence, Relationship/Role Models, and Knowledge of Hidden Rules.”¹

In the 1940s, medical knowledge about Cerebral Palsy was not what it is today. There was scarce support within marginalized communities for struggling families. Compounding the problem was the societal stigma of giving birth to a child who was different. Lorraine found herself seeking healthcare for her child in non-traditional settings. Like many of us who receive an adverse health report or have to undergo surgery of some sort, we embrace our faith

REFLECTION

Fear and Antiquated Belief Systems: A Barrier to Oral Healthcare Access

Earl Sewell

in a higher power. We may begin praying more than usual or offer prayers to help the healing process of others going through a medical hardship.

Lorraine decided to use spirituality, her most significant resource, in hopes of medical healing. Payne defines this resource as “Believing in divine purpose and that you are part of something larger than yourself.”¹ Having been raised in a Southern Baptist Church, Lorraine had a strong belief in a higher power that was greater than herself and whom she could bring her burdens to and ease the suffering her child. This was a powerful belief because it allowed her to see herself as resourceful rather than helpless.

Lorraine heard about a revival taking place in her community under a large tent. Soon, stories began circulating throughout the neighborhood about people on crutches and in wheelchairs suddenly walking again after seeing the faith healer. Lorraine took John Jr. to the revival, hoping for the miracle she and others had prayed for. It did not work, but Lorraine took John Jr. to as many of them as she could, her heart filled with hope. Eventually, it became clear that quackery was being practiced at these events.

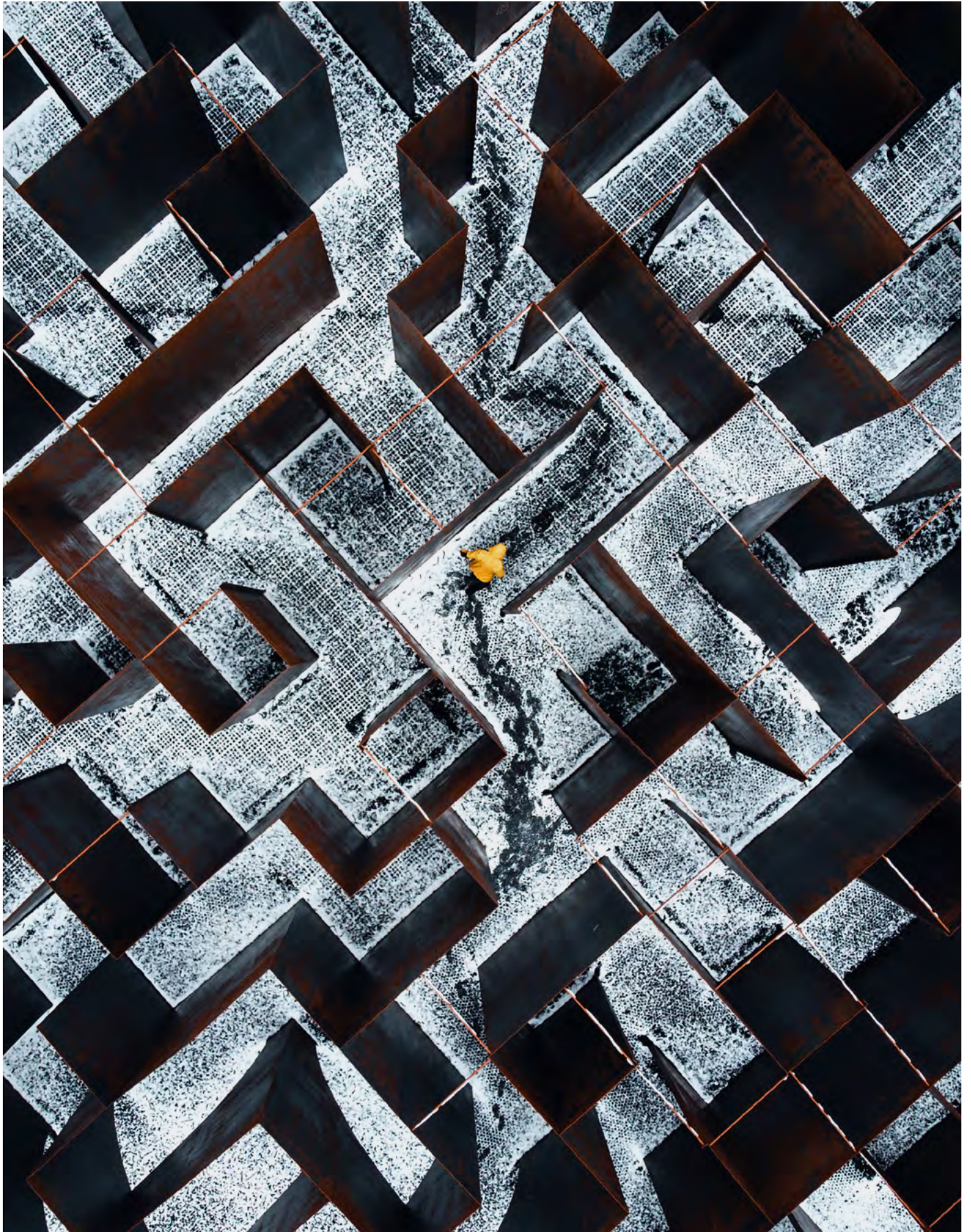
As John Jr. grew older and had to seek the assistance of professional healthcare practitioners, the only option available to Lorraine that she was aware of and had access to was a teaching hospital. There, the resources of integrity and trust were once again tested. Payne defines these resources as “Having the ability to keep your word, honoring the laws that govern you, and making decisions based on high ethical standards. It is equally important to be able to trust others to act with integrity.”¹ Whenever John, Jr. was brought into the accessible teaching hospital for any type of medical examination, Lorraine felt pressured by medical science to institutionalize her son or allow experimental surgeries to be performed to figure out what was wrong with no assurances her son would survive. The pressure manifested into

emotional trauma and eroded trust in all specialties of the medical profession. This mistrust ran so profoundly that Lorraine taught her son never to allow any doctor to do anything to him, especially cut or work on him for any reason.

“Knowledge of Hidden Rules is crucial to belonging in the socioeconomic class in which the individual wishes to live. Hidden rules exist in poverty, in middle class, and in wealth, as well as in racial and ethnic groups and elsewhere. Hidden rules are about the unspoken understandings that help signal to members of the group that an individual does or does not belong to the group. In all classes there are hidden rules about food, dress, decorum, etc.”¹ Within the African American community, hidden rules still exist around not trusting practitioners due to America’s history of medical experimentation on marginalized communities. Lorraine used this rule to protect her son from potential medical harm.

Within the African American community, hidden rules still exist around not trusting practitioners due to America’s history of medical experimentation on marginalized communities. Lorraine used this rule to protect her son from potential medical harm.

By the 1970s, I was a young lad, and John, Jr., my uncle, was in his 30s. John, Jr., having no genuine history of seeing a dentist, had pungent breath that never went away, even after using mouthwash or brushing his teeth. In addition, his gums were noticeably



REFLECTION

Fear and Antiquated Belief Systems: A Barrier to Oral Healthcare Access

Earl Sewell

swollen, and his teeth were distinctively dark yellow and brown. According to the American Dental Association, “Bad breath that just won’t go away or a constant bad taste in your mouth can be a warning sign of advanced gum disease, which is caused by a sticky, cavity-causing bacteria called plaque.”² At the time, access to oral healthcare information was non-existent and exacerbating this was a household with a low literacy rate.

By the early 2000s, Lorraine had passed away, and extended family members were left to care for John, Jr. By this time, John, Jr. had also developed Type 2 Diabetes which compounded his ongoing oral health problems. According to the American Dental Association, “Diabetes is a chronic disease which affects your body’s ability to process sugar. The resulting high blood sugar can cause problems with your eyes, nerves, kidneys, heart and other parts of your body. Diabetes can also lower your resistance to infection and can slow the healing process. If you have diabetes, you are at greater risk of developing some oral health problems, including gum disease.”³

When discussing seeking treatment at a health center for his oral health condition, John was adamant about not seeing a doctor out of fear of being experimented on. He used the knowledge of hidden rules to remind family members of what Lorraine had said about doctors wanting to harm him. The antiquated belief system had become his access to care barrier.

Eventually, the family could no longer ignore John’s oral health condition and were forced to take him in for treatment. His gums were bright red with inflammation, and in some areas, the gums had turned black. When John arrived at the clinic, the terror in his eyes was heartbreaking. He felt betrayed and that experimentation and death were imminent. His blood pressure skyrocketed to a level that prevented treatment, and his family had to reschedule.

More time passed, and John’s oral health condition harmed his overall health. As he aged, John lost several teeth, making it difficult for him to chew and break down food before it entered his digestive system. Eventually, this led to an obstruction in his intestines. To save his life, doctors operated.

Ultimately, after a lifetime of carrying a belief system that was not serving him and prevented him from accessing the healthcare available, John consented to have a portion of his oral health needs addressed before passing in 2016.

In this case, access to care ran much deeper than the ability to reach safety net healthcare services, transportation issues, or chronic appointment cancellations. Fear, outdated attitudes, and society at large conditioned Lorraine and John to view themselves as others. As a result of this belief system and societal reinforcement, self-imposed limitations were enacted for protection even though the actions led to adverse outcomes.

REFERENCES

1. Payne, R. K., DeVol, P. E., Smith, T. D., & Krebs, E. K. (2022). *Bridges out of poverty: Strategies for professionals and Communities*. aha! Process, Inc.
2. *Gum disease myths*. MouthHealthy. (n.d.-b). <https://www.mouthhealthy.org/common-myths-of-gum-disease>
3. *Gum disease myths*. MouthHealthy. (n.d.-b). <https://www.mouthhealthy.org/common-myths-of-gum-disease>



Access to Care for Vulnerable Populations at Times of National Crises: State and Local Resources

Amy Martin, DrPH, MSPH

Chair & Professor, Department of Biomedical and Community
Health Sciences, James B. Edwards College of Dental Medicine,
Medical University of South Carolina

Based on a Presentation given April 2, 2022
at the PFA/ACD Spring Conference

DISCUSSION

Access to Care for Vulnerable Populations at Times of National Crises: State and Local Resources

Amy Martin, DrPH, MSPH

The COVID pandemic revealed many vulnerabilities in the dental safety net. It also provided opportunities for dentistry to re-evaluate how it is organized and financed, especially for vulnerable Americans. Most of us have normalized our professional and personal lives since the apex of the pandemic. This new chapter in the American landscape may mean many of us are returning to pre-pandemic priorities. As such, our best intentions for strengthening the dental safety net could be replaced with complacency and distractions from competing advocacy agendas. To keep momentum for ensuring a robust dental safety net, this paper revisits a presentation I gave at the PFA/ACD Spring Conference in Asheville, NC on April 2, 2022.

What do we mean by dental safety net?

Many of us are familiar with the published works of Dr. Howard Bailit and his commitment to finding solutions for strengthening the dental safety net,¹ which is defined by specific providers, patients, and payers of care. Providers usually identified include Federally Qualified Health Centers (FQHCs), free clinics, emergency rooms, Colleges of Dental Medicine, primary care providers, and public school-based oral health programs. Providers in these settings have unique business and clinical models that provide dental and oral health services to vulnerable patient groups which are usually identified as Medicaid and Medicare enrollees, uninsured, children living in poverty, communities with high infant mor-

tality rates, and communities described as economically distressed or underserved.

Many dental safety net providers such as those in FQHCs and rural providers receive an alternative reimbursement from their state Medicaid providers, or can sponsor National Health Service Corps (NHSC) practitioners if they are located in areas designated as Health Professional Shortage Areas (HPSAs) or Medically Underserved Areas (MUAs). Both of these designations are determined by the U.S. Department of Health and Human Services, Health Resources and Services Administration.² The chief criticism of dental HPSAs is that they do not adequately measure access to care. While an imperfect measure, the designation brings cost-based reimbursement for many providers, especially in rural areas, without which they would be unable to remain financially viable. Since its inception, there have been many efforts to improve HPSAs scoring to improve its accuracy. Politicos know that HPSA designations are the fulcrum for incentivizing providers to practice in underserved areas because of enhanced reimbursements, federal loan repayments, and NHSC provider placements it can bring. Changes to how we designate underserved areas should be considerate of its impact on the many policy levers tethered to it.

Measuring Vulnerability.

The aforementioned dental safety net dimensions along patients, providers, and payers serve as a proxy for vulnerability. But what does it mean for a community to be vulnerable? The Centers for Disease Control and Prevention³ have made available an online tool to provide this very definition. Its website uses 16 variables from the U.S. Census to quantify a county's social vulnerability. Interactive maps are available for users to understand their counties' levels of vulnerability and the drivers of that vulnerability. Measures of vulnerability include factors linked to socioeconomic indicators, household characteristics, race and ethnicity, housing, and transportation

needs. Our team is currently completing a study to determine how, if at all, dental HPSAs and community social vulnerability indices are correlated. Our hope is that this analysis will better inform how community vulnerabilities intersect with availability of dental care.

In addition to social vulnerabilities, economic vulnerability measures can also help oral health advocates focus their agendas. The Appalachian Regional Commission (ARC) provides an exemplar method for quantifying economic vulnerability. Annually, they categorize the 423 ARC counties in 13 states based on their economic distress.⁴

Lessons Learned from Previous States of Emergency.

Quantifiable vulnerability measures can serve as useful tools for evaluating and prioritizing advocacy efforts. Often times, it is the anecdotal and not the empirical data that influences policy and decision-makers to take action. We offer three examples from previous states of emergency: climatological, economic, and environmental. As a resident of a hurricane-prone region, Hurricane Katrina and its aftermath had a generational impact on how many of us in rural and oral health think about policy responses to natural disasters. While faculty at the University of South Carolina's Rural Health Research Center, our team, led by Dr. Jan Probst, was asked to weigh in on \$10 billion in proposed Medicaid cuts to offset the cost to restore New Orleans. While there was universal support for the restoration of one of the nation's most beloved and economically relevant cities, such a solution would have obliterated the region's safety net. At the time, the following statistics contextualized why the proposed Medicaid cuts were not a viable solution:

- 534 counties were declared FEMA disaster areas as a result of Hurricanes Katrina and Rita. Nearly two-thirds, 62% (n=331), were rural counties.
- Of the 331 counties that were both rural and FEMA disaster areas:
 - 170 (51%) were within the top national quartile for percent African American population

- 183 (55%) were within the top national quartile for percent Hispanic population
- 233 (70%) were within the top national quartile for percent population living in poverty.

Within the 331 rural, disaster declared counties, there were 477 rural health clinics and 155 FQHCs providing safety net medical and dental services. Cutting their Medicaid dollars would have resulted in the collapse of what was a fragile system of care prior to the hurricanes.

The second example is the impact of the Great Recession on utilization of dental services, which has been well examined by the American Dental Association's Health Policy Institute.⁵ Despite growth in both the total U.S. population and dental workforce, the Great Recession showed how abrupt changes in the economy can have seismic impacts on how dental care is used. The Great Recession drove scores of Americans away from private practice dental offices and into hospital emergency departments and FQHCs. In fact, during this time in U.S. history, it was people with Medicaid and Medicare who had the greatest buying power of health services, including dental. The surge in dental services during this time ultimately led to the greatest expansion of FQHC dental clinics in the program's history. This would later prove to be essential infrastructure in the response to the COVID pandemic.

The third example comes from my home state of South Carolina. In the middle of the night in 2005, a switch misalignment caused a freight train collision in the small, rural town of Graniteville. The train derailment resulted in a chlorine spill, killing 9 people and forcing the evacuation of 5,400 residents in a 1.5 km radius. The train collided with Avondale Mills which had to close after 160 years of operation, taking with it 1,600 jobs from the rural town. While the primary surge into emergency departments by residents concerned they had been exposed to chlorine gas was anticipated, the secondary surge of people with undiagnosed and untreated chronic disease was not.⁶ The secondary surge continued for two years after the train derailment.

DISCUSSION

Access to Care for Vulnerable Populations at Times of National Crises: State and Local Resources

Amy Martin, DrPH, MSPH

Often times when we discuss safety net policy, we focus on unmet needs that have been identified. What we learned from the tragic events in Graniteville was identified unmet need was the tip of a safety net iceberg. The volume of people with undiagnosed hypertension and diabetes was truly unanticipated. Our nation's financial and policy investments in the safety net are funded by measurable need. Based on the Graniteville experience, this is flawed logic, which is why the previously described measures of vulnerability may aid considerably in strengthening and growing the safety net to meet need during times of predictability and times of crisis. Three important lessons can be learned from previous national and state crises:

- Vulnerable communities are usually the first targets of reactionary policy and economic corrections.
- An unstable safety net negatively impacts the broader healthcare system.
- The disproportional response – the impact of crises are typically felt over a longer period of time in vulnerable communities compared to more resilient ones.

Post Mortem on COVID and the Dental Safety Net.

With the past as prologue, we may be able to appraise how COVID impacted the viability of the dental safety net. The most recent event to which we can compare effects is the Great Recession. The table below summarizes themes of what we have observed in our individual communities, as well as published trends. (See *table next page*)

Other than the obvious differences between the two catastrophic events (economic vs. pandemic), there were important policy and program actions taken between the Great Recession and the COVID-19 pandemic that may have averted greater erosion to

the dental safety net during the pandemic. It is difficult not to attribute some resiliency to the Affordable Care Act and its expansion priorities, especially Medicaid and FQHC access points. More than 1,200 new points of care we expanded nationally. While many consider the ACA a partisan bill, support for FQHCs has historically been bi-partisan. President George W. Bush, for example, led one of the country's largest FQHC expansion efforts during his time in office. Approximately \$156 million was invested in 2016 to support FQHC expansion, including more than 70 new dental clinics. The ADA's Health Policy Institute closely tracked dental clinic capacities for both private offices and FQHCs. Their analyses showed private practices were faster to reopen "business as usual" and with uncompromised capacity, compared to FQHCs.⁷ By December 2020, only 38% private practices were open but with reduced capacity, compared to half of FQHCs. Without antecedent investments, the outcomes may have been likely more disparate.

The second policy that likely contributed to preserving elements of the dental safety net is the Action for Dental Health Act (2018). This legislation reauthorized initiatives that increased access to oral health treatment and prevention services, especially for underserved communities. It too received bipartisan sponsorship from Senators Scott (R, SC); Hiro-no (D, HI); Booker (D, NJ) and Cassidy (R, LA). This legislation accomplished the following:

- Reauthorized oral health promotion & disease prevention activities at CDC such as school-based sealant programs & community water fluoridation
- Established an Action for Dental Health Program to improve oral health education; and
- Reauthorized HRSA oral health workforce grants

While antecedent legislation likely cushioned the impact the pandemic had on the dental safety net,

Thematic Area	The Great Recession (2007 – 2009)	COVID-19 (2020 – Present)
Private Practice Utilization	General dental visits dropped to 38.4%	Volatile data trends due to seasonality of community spread
Workforce	Minimal disruption to dental workforce	Considerable disruption to dental workforce
Preventive Care	Hygiene services for cleanings increased	Hygiene services difficult to access due to workforce shortage
Medicaid's Value	Medicaid's value was greater compared to private insurance due to economic factors.	Medicaid's value increased during the pandemic but is seeing disruption and retraction three years post outbreak.

reactionary policy may have exacerbated fractures. The Coronavirus Aid, Relief, and Economic Security (CARES) Act allowed for direct payments to health care providers.⁸ This \$100 billion provider relief fund (PRF) has been thoroughly examined for medical providers, but not dental. We published a single-state study that showed no differences, with regards to who received PRF funds, between rural and urban dentists, and no differences between Medicaid and non-Medicaid accepting practices. Our results indicated that the PRF effectively distributed resources needed to keep some practices in operation. The missed opportunity may have been need-based distribution of resources.

Are We Ready for the Next Storm?

The answer to this question largely depends on how well we use the data and evidence available to us, and the call to action from the Oral Health in America report, which challenges us all to consider the following:

- "Policy changes needed to reduce or ameliorate oral health inequities that affect behaviors and access to care;"
- "Dental and other providers must work together to offer integrated care in a variety of settings: schools, FQHCs, nursing homes, medical and dental clinics;"
- "Strengthen the workforce through diversification, reduce education costs, and a strong research enterprise dedicated to improving oral health."⁹

For those of us who conduct research, NIDCR has clearly communicated its priorities, which align nicely with the Oral Health in America report:⁹

Strategic Priority #1
Integrate Oral and General Health
Advance discoveries across the translational research spectrum and drive innovations that improve the early diagnosis, prevention, and treatment of DOC diseases across the life span.



Strategic Priority #2
Precision Dental Medicine
Develop more precise and individualized treatments for the management and prevention of DOC diseases.



Strategic Priority #3
Translate and Implement
Accelerate the translation of research and the implementation of new discoveries into oral and general healthcare practices that reduce health inequities and disparities and improve oral health outcomes for individuals and communities worldwide.



Strategic Priority #4
Diverse Research Pipeline
Nurture future generations of DOC researchers and oral health professional scholars who can address public health needs within a continually evolving landscape of science and technology advances.



Strategic Priority #5
Partner and Collaborate
Expand existing partnerships and create new ones to advance the NIDCR research enterprise and increase its reach and impact.



In closing, we have the blueprint and evidence, along with the strategic plan for our nation's leading research enterprise. The dental safety net took a demonstrable hit during COVID and is slowly recovering and rebuilding its workforce and capacity. I encourage us all to not grow complacent by contributing to its full recovery and expansion through our unique contributions as practitioners, educators, researchers, and policymakers. The next national disaster is always looming on the horizon. Let us commit to not weathering it on the backs of vulnerable communities.

Access to Care for Vulnerable Populations at Times of National Crises: State and Local Resources

Amy Martin, DrPH, MSPH

REFERENCES

1. Bailit H, Beazoglou T, Demby N, et al. Dental Safety Net: Current capacity and potential for expansion. *JADA* 2006; 137:807-15.
2. U.S. Department of Health and Human Services. Health Resources and Services Administration, Bureau of Health Workforce. Scoring Shortage Designations. Retrieved from <https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation/scoring> on August 12, 2023.
3. Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry. CDC/ATSDR Social Vulnerability Index. Retrieved from <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html> on August 15, 2023.
4. Appalachian Regional Commission. Classifying Economic Distress in Appalachian Counties. Retrieved from <https://www.arc.gov/classifying-economic-distress-in-appalachian-counties/> on August 15, 2023.
5. Vujicic M. Where have all the dental care visits gone? *JADA* 2015. 146(6):412-14. Runkle JJ, Zhang H, Karmaus W.
6. Long-term impact of environmental public health disaster on health system performance: Experiences from the Graniteville, South Carolina Chlorine Spill. *South Med J.* 2013 January;106(1):74-81
7. American Dental Association, Health Policy Institute. Retrieved from Source: ADA Health Policy Institute, <https://www.ada.org/resources/research/health-policy-institute/impact-of-covid-19/private-practice-results>.
8. Marshall JL, Riley A, Martin AB. Participation in the CARES Act Provider Relief Fund policy by dentists in South Carolina's safety net. *J Public Health Dent.* 2023 Mar;83(1):94-100. doi: 10.1111/jphd.12555. Epub 2023 Jan 20. PMID: 36680347.
9. National Institutes of Health. Oral Health in America: Advances and Challenges. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research, 2021. Use of trade names is for identification only and does not constitute endorsement by the US Department of Health and Human Services.



Unmasking Oral Health Disparities in Vulnerable Populations: Reflections of a New Dentist

Joshua D. Bussard, DDS, FACD, FPFA

Joshua Bussard is a generalist in private practice, fellow of the Indiana University Orthodontic Fellowship for the General Practitioner, graduate of an Advanced Education in General Dentistry Residency program, Regent Intern on the American College of Dentists Board of Regents, and is a member of the Journal of the American College of Dentists Editorial Board.

Oral health care accessibility continues to present global challenges. A plethora of untreated dental needs is a daily reality and difficulty accessing care usually affects the most vulnerable populations. My viewpoint stems from active involvement attempting to reduce these circumstances by providing care for impoverished populations throughout dental school, working in Federally Qualified Health Centers (FQHC) during an Advanced Education in General Dentistry (AEGD) residency program, and treating populations with limited finances and significant dental insurance limitations as a recent graduate. This article aims to highlight vulnerable populations, discuss obstacles hindering dental care access, and showcase ongoing initiatives to mitigate oral health disparities.

REFLECTION

Unmasking Oral Health Disparities in Vulnerable Populations: Reflections of a New Dentist

Joshua D. Bussard, DDS, FACD, FPFA

Vulnerable and underserved populations encompass cohorts lacking access to dental care. These populations include individuals living in rural areas, people with special needs, children, geriatric, uninsured, lower socioeconomic status, pregnant women, ethnic and racial minorities, immigrants, veterans, and others.¹⁻⁶ Vulnerable populations face many challenges such as transportation, education, insurance limitations or lack of insurance, limited offices accepting insurance and/or Medicaid, work flexibility for dental appointments, minimal finances, treatment cost, and child care.¹⁻⁶ As dental professionals, we have a commitment to improve the oral health of the public under the ethical principle of beneficence.⁷ The dental profession has attempted to find and is actively seeking ways to minimize barriers to care by developing programs and advocating for dental coverage improvements. However, it is disheartening to witness our attempts resulting in a revolving cycle of patients and their families having repeated patterns of dental challenges which leads me to pose the question. Are our efforts to improve access to care actually addressing the source of oral health disparities or are we establishing solutions to combat the outcomes of these increasing concerns?

Dental students and programs recognize the necessity of improving access to care and several nonprofit clinics have been born as a result. After attending the Society of Student Run Free Clinics (SSRFC) as a representative from the Indiana University School of Dentistry Student Outreach Clinic (IUSD-SOC) in 2017, I was encouraged to witness dental participation, however, participation was minimal compared to other health professions. My involvement on the IUSD-SOC Executive Board opened my eyes to an excellent example of a clinic operating in an underserved neighborhood while collaborating with students and faculty members from other disciplines. The IUSD-SOC is a volunteer clinic providing dental care for people without dental insurance that has eliminated transportation concerns by operating within walking distance from the patients it serves.

In order for society to understand the importance of oral health and overall health, we must educate our patients and support our colleagues.

Although this may seem like a logical concept, multiple challenges are presented when implementing and maintaining this structure.

This type of experience is also unique in that it provides follow-up care by regularly operating as a dental home for a consistent patient population, and instills the values of helping underserved populations in developing oral health care professionals.

On a similar note, FQHC's and public health safety net programs maintain a similar mission of addressing the untreated oral health needs of vulnerable populations. Government supported clinics often employ providers from multiple disciplines and encourage interprofessional care by positioning different providers in close proximity to one another.² Strategic provider placement facilitates collaboration and provides a foundation for treating patients more holistically. Oral health is closely linked to overall health and fostering a support system between medical and dental professionals encourages improved comprehensive health outcomes as well as patient awareness.^{2,5} In order for society to understand the importance of oral health and overall health, we must educate our patients and support our colleagues. Although this may seem like a logical concept, multiple challenges are presented when implementing and maintaining this structure. Many providers are often discouraged when working with underserved populations due to multiple failed appointments, lack of patient understanding and/or motivation to receive care, unruly behavior, and limited financial reimbursement to cover the expenses of services provided.⁶ In spite of possible

The dental profession has an ethical and professional obligation to continue to work toward addressing oral health disparities. Vulnerable populations face significant challenges and it is essential to address the source of these challenges rather than the effects.

frustrations, reminding ourselves to consider possible sources of these reactions should fuel our desire to address the origins.

Challenges exist in providing ideal treatment with limited finances and minimal to no insurance coverage in dental private practice settings. Patients with dental insurance have tendencies to proceed with care solely covered within their covered benefits. These situations emphasize the importance of informing patients of all of their options regardless of insurance coverage, documenting all conversations, and allowing patients adequate time to reflect and make an informed decision based on clinically acceptable treatment options that best align with the patient's goals and values. In instances

where patients without dental coverage are experiencing dental emergencies, dental professionals have a duty to stabilize and manage health threatening conditions regardless of the setting and patient finances.^{5,7}

The dental profession has an ethical and professional obligation to continue to work toward addressing oral health disparities. Vulnerable populations face significant challenges and it is essential to address the source of these challenges rather than the effects. If we continue targeting the outcomes, we will always have a repeating cycle and similar frustrations will persist as a profession as well as for those we serve.

REFERENCES

1. Northridge, M. E., Kumar, A., & Kaur, R. (2020). Disparities in access to oral health care. *Annual review of public health*, 41, 513-535.
2. Jones, E., Shi, L., Hayashi, A. S., Sharma, R., Daly, C., & Ngo-Metzger, Q. (2013). Access to oral health care: the role of federally qualified health centers in addressing disparities and expanding access. *American journal of public health*, 103(3), 488-493.
3. Griffin, S. O., Jones, J. A., Brunson, D., Griffin, P. M., & Bailey, W. D. (2012). Burden of oral disease among older adults and implications for public health priorities. *American journal of public health*, 102(3), 411-418.
4. Committee on an Oral Health Initiative. (2011). *Advancing oral health in America*. National Academies Press.
5. Manski, R. J., Hoffmann, D., & Rowthorn, V. (2015). Increasing access to dental and medical care by allowing greater flexibility in scope of practice. *American journal of public health*, 105(9), 1755-1762.
6. McKernan, S. C., Reynolds, J. C., Momany, E. T., Kuthy, R. A., Kateeb, E. T., Adrianse, N. B., & Damiano, P. C. (2015). The relationship between altruistic attitudes and dentists' Medicaid participation. *The Journal of the American Dental Association*, 146(1), 34-41.
7. American Dental Association. *Principles of Ethics and Code of Professional Conduct*. Chicago, American Dental Association, March 2023 at https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/about/ada_code_of_ethics.pdf?rev=ba22edfdf1a646be-9249fe2d870d7d31&hash=CCD76FCDC56D6F2CCBC46F1751F51B96. Visited 8/13/2023.



Underserved, not undeserving: How a West Texas Dentist is Expanding Access to Care

Kathleen Nichols, DDS, FAGD

Kathleen Nichols recently retired after practicing in Lubbock Texas for over thirty-five years. Dr. Nichols serves on the Council of Ethics, Bylaws and Judicial Affairs of the American Dental Association and the Texas Dental Association Council on Ethics and Judicial Affairs. Dr. Nichols is on part-time Clinical Faculty at the University of Texas School of Dentistry – Houston, and University Medical Center in Lubbock Texas.

2022 was not only the year I chose to retire from my dental practice in Lubbock, Texas, but also when I dedicated myself to “Repurposing.” What more is there after 38 years of practicing clinical dentistry? Am I done? Where can I channel my experience and love of dentistry? In a little over a year, I have had two articles published in the Journal of the American Dental Association, lectured, and started a young dentist mentoring group in my local community. I am also part-time clinical faculty at the University of Texas – Houston School of Dentistry. West Texas, where I practiced, has traditionally been an underserved area. In Lubbock, if a dentist needed to be away from practice for health or vacation reasons, our community of dentists reached out to help cover a practice to the best of everyone’s ability. But the practice still suffered. Finding an Ad Locum dentist was next to impossible. One of my strongest plans was to provide coverage for practices in need. In my area that need was great because dental practitioners historically chose to practice in the “big cities”. Our large geographic area had and still has a huge unmet need for dentists.

I have provided vacation coverage for dentists in Lubbock (population of about 300,000), but recently I was asked to cover for a practice in Post, Texas (population 5,700). Post is a community originally started by Charles Post of the Post Cereal Company. The city is about 40 miles from Lubbock and has a large geographic patient base of cotton farmers and ranchers (cattle, wind, oil). There is an extreme access to care issue in this area.

Patients tend to drive more than 2-3 hours for dental and medical care as well as groceries and other essentials. Dr. Xochitl Anderton is a dentist with a true servant’s heart for the underserved, opening her practice in Post after serving as the Lubbock Dental Director of the Lubbock FQHC (Federally Qualified Health Center). Dr. Anderton grew up with her family obtaining care in the Community Health Center environment and found her purpose. She returned to the clinic after dental school graduation to serve her community. She later opened her practice in Post. The small community, eager to have a dentist (the previous dentist had retired after 40 years), offered her a rent concession. Currently Dr. Anderton is the only dentist in the county and many of the surrounding counties, finding that

she can blend her desire to serve the underserved and still live in the larger city with the 45 commute to the community not that different than a typical commute in a large city during rush hour.

My recent experience in Post has caused me to reflect on the convergence of my past and present.

Having practiced all my years in what some might call a “high end fee for service” dental practice, I was really looking forward to spending the week in Post. During dental school I spent summers and a few months after graduation at La Clinica de los Campesinos, a Texas migrant council clinic in Wisconsin, before opening my practice in Texas. The clinic served the migrant farmworkers and their families. I felt I was coming back to my roots... so I thought.

In my practice I was not in-network with any plans, however, the rural practice in Post is in many networks and is also a Medicaid provider. The patient population in Post ranged from the owners of the mega farms and ranches to the farmworkers and oil field workers to teachers and families. I found the patients to be so very thankful and humble for the care they received, very patient and tolerant of delays or possible discomforts. This was in stark contrast

REFLECTION

Underserved, not undeserving: How a West Texas Dentist is Expanding Access to Care

Kathleen Nichols, D.D.S., FAGD

to the needy and high maintenance patients I often encountered in other practices. I saw strong family units that were often headed by the Spanish-speaking grandmother who was raising the grandchildren or caring for them while the parents worked.

Staffing was another interesting issue. Yes, there are shortages, but the current staff of the practice were amazing. All were from Post or the surrounding local communities. One assistant had spent 13 years driving the 40+ miles to and from Lubbock every day for work. Her quality of life was significantly improved when she could work in her hometown and pick her kids up from school. Another was hired having just had a weekend assistant course, receiving on the job training in the practice and then going on to earn her expanded dental assistant certification. A job she never could have attained without the dental practice in her community. Many patients are solely Spanish-speaking or speak English as a second language, and Dr. Anderton and the majority of her team speak Spanish. I, on the other hand, have limited dental Spanish left over from my La Clinica days, but it was fun to get to use it again.

Utilizing expanded duty dental assistants (coronal polishing and sealants) in underserved areas creates an ideal adjunct to extending dental care to an even broader patient base. This model allows the one hygienist and the dentist to provide exams and cleanings in a more efficient manner. The dentist can perform, for example, a child exam and x-rays, subgingival scaling as needed, parent and child education then leave the expanded duty dental assistant to perform the coronal polishing, sealants, and fluoride application.

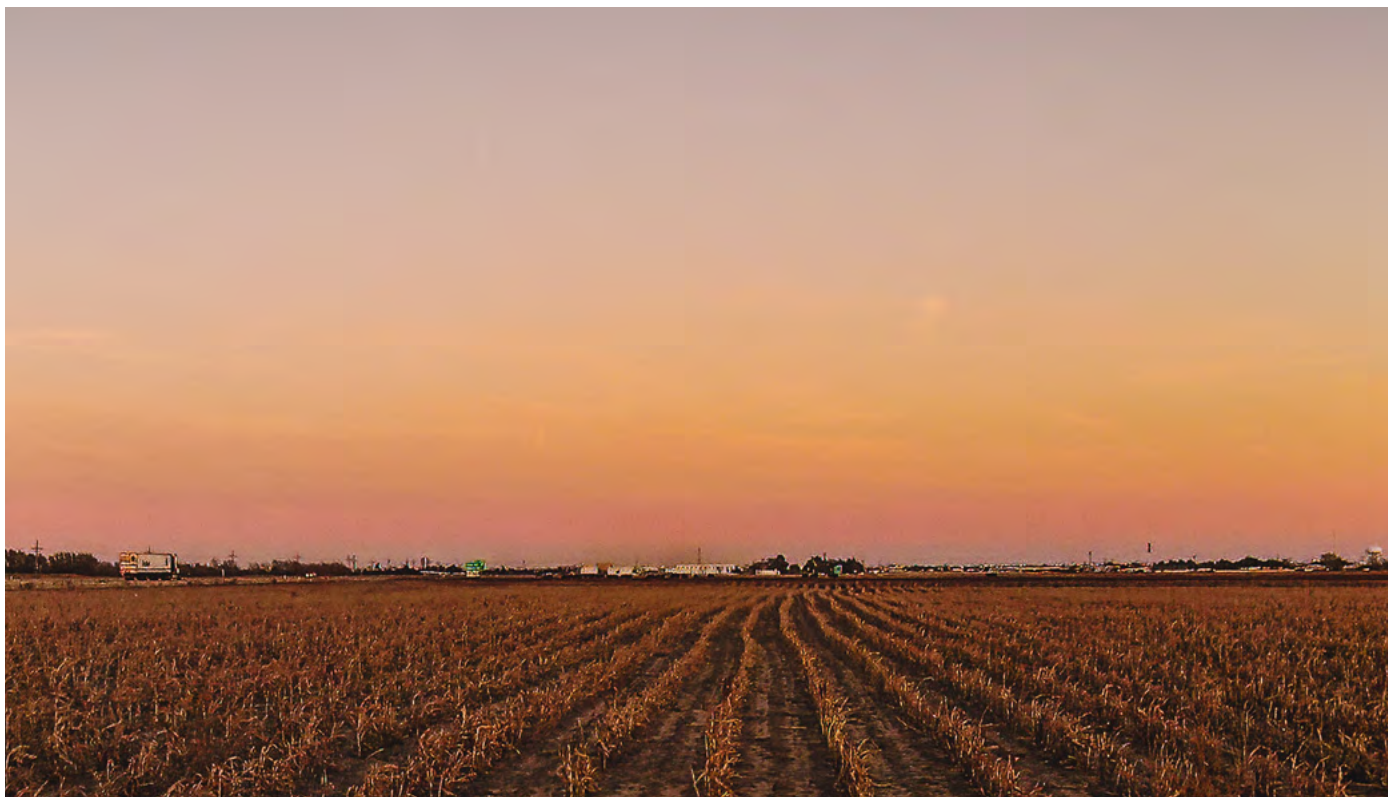
To compensate for the higher than usual no-show rate, the hygienist is double-booked. This approach concerned me; however, the staff is very flexible and adept at working with the above model to accommodate the patients. I also found that most of the patients were very amenable to delays in scheduled appointment times, patiently waiting for their turn to

be seen. Being laid back in their lifestyles and their expectations is such a comfortable way to practice.

The Medicaid model really works for this practice and the patients that they serve. Babies are seen starting at 6 months for their first exam. The baby's mouth is examined but most importantly is the dialogue that is started with the parent. Early education is critical to low caries incidence. The baby returns every three months with great emphasis placed on weaning, oral care, and diet conversations. Toothbrush prophylaxis occurs once teeth erupt along with fluoride varnish application. The 3-month frequency occurs till the age of 3 when visits change to every 6 months. This child practice model as well as the high fluoride content of the ground water found in the wells helped to decrease the caries incidence in the area.

One mom came in with her two pre-teen children. They found it difficult to obtain regular dental care due to two main access issues. One was that they did not have a dentist in their county and the second was based on financial reasons. The mom shared her frustration and feelings of guilt that while both parents worked, the kids did not qualify for Medicaid and paying out of pocket meant that they were not able to be seen regularly and had untreated caries. She shared that she grew up with Medicaid and never had any cavities which she attributed to her access to care. She was thrilled to have found a dental home for her and her family. This experience in Post exposed me to the working poor, great families, but many who struggle with access to care.

The rural dental office often doesn't compare to the bright and shiny offices found in big cities. I really think that the simple décor and less complex appearance may be more patient-friendly. Additionally, this simplicity contributes greatly to decreased overhead. Quality, however, is not compromised in any way. The quality of the dental care provided is exceptional even in humble surroundings. Modern digital technology from radiographs to scanners to intraoral imaging as well as computerized front desk



Many new dentists and hygienists are not interested in practicing in these rural areas and as such it is difficult to find associates. My experience showed me, however, that providing care to underserved, remote communities while living in the bigger city, even with a 45-minute commute from home, can be as rewarding if more rewarding than that same time commute in the bigger cities.

duties were all still in place exemplifying that simple décor did not mean lack of current technologies.

There are advantages of rural dental practice for the community as well as for the dentist, and I believe they far outweigh the disadvantages. Clearly the community engagement and support are immeasurable. Local medical districts and other services often help to supplement the costs of rent and equipment to decrease rent and other overhead as well as less need for opulent décor. Staffing seems less of an issue as there are plenty of people wishing to have good jobs within their community. On the job training is plentiful in the dental office. Currently an adjacent county has approached the dentist to open another office in their county as they currently do not have a dentist. They have offered to establish the clinic and staff it. The opportunities are endless for a dentist looking to

practice. Many new dentists and hygienists are not interested in practicing in these rural areas and as such it is difficult to find associates. My experience showed me, however, that providing care to underserved, remote communities while living in the bigger city, even with a 45-minute commute from home, can be as rewarding if more rewarding than that same time commute in the bigger cities.

Every morning and evening driving home through the plains of west Texas was glorious with colors and the sights of the changing landscapes and views of windmills and oil wells and miles of cotton fields. These breathtaking views allowed me to recenter my thoughts and give thanks for our wonderful profession and all that it provides us but, more importantly, the communities we serve.



Stephen M. Pachuta serves as Dean of his alma mater, the West Virginia University School of Dentistry. He is a retired United States Navy rear admiral.

Utilizing Best Practices from the United States Military Health System to Advance a Universal Healthcare System

Stephen M. Pachuta, DDS, MS, MA

Disclaimer

The views expressed in this paper are those of the author and do not reflect the official policy or position of West Virginia University, the Government of West Virginia, the Department of the Navy, Department of Defense, or the United States Government.

The escalating costs of healthcare in conjunction with the expectation of who pays for the care, or who pays for the insurance that provides for healthcare, remains one of the primary challenges and barriers to access. Whether healthcare costs are self-funded, covered by public or private insurance, or by state and federal government programs, funding is a significant challenge.

The United States is one of the few modern, industrialized countries in world that does not offer some type of universal healthcare system to address the healthcare needs of its residents. There are dynamic forces at play in developing a workable system to address access to healthcare. The escalating costs of healthcare in conjunction with the expectation of who pays for the care, or who pays for the insurance that provides for healthcare, remains one of the primary challenges and barriers to access. Whether healthcare costs are self-funded, covered by public or private insurance, or by state and federal government programs, funding is a significant challenge.

To look at advancing a universal healthcare system, understanding the goals of a universal healthcare system are important. These goals include access to safe high-quality healthcare for all members of the served population thus minimizing gaps in access to care, a focus on primary healthcare and preventive services, options for affordable prescription medications, as well as cost containment of overall healthcare expenditures. The Military Health System has been aggressively implementing clinical and business practices to address these specific areas of its healthcare system.

This article examines applying the successes and best practices of a large, federally operated healthcare system, the United States Military Health System, as a model for advancing a universal healthcare system.

DISCUSSION

Utilizing Best Practices from the United States Military Health System to Advance a Universal Healthcare System

Stephen M. Pachuta, DDS, MS, MA

INTRODUCTION

Community healthcare leaders recognize the benefits of a comprehensive healthcare system that addresses access, quality, safety, and cost.¹ To better understand the opportunities of a universal healthcare system, reviewing how gaps in access and quality develop is relevant. The social determinants of health as defined by the World Health Organization² are the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.² There are many challenges related to social justice and the social determinants that impact access to healthcare.³ Social status generally determines one's ability to not only access health care, but also determines the amount and type of healthcare that can be accessed.⁴

The costs of healthcare and who pays for it must be considered. Currently, those with means (jobs, financial security, health insurance, etc.) have a different tier of access than those without means.⁵ Addressing the inequities, the costs and the gaps in access to safe, high-quality healthcare for all, regardless of demographic or social determinate is challenging.

Gaps in access to healthcare, as well as in the quality of the care provided that exist across ethnic, racial, and social economic status are defined as health disparities.⁶ Multiple strategies exist for mitigating health disparities associated with the social determinants of health.⁷ Economic stability is closely aligned with employment, income, and debt management.³ Physical environment focuses on housing, transportation and physical geography and is connected to food security and the ability to access a healthy diet.³ Social integration and community engagements are closely connected to the social determinants especially as it relates to stress management and social support systems.³ Education is integral to accessing programs that facilitate expanding one's ability to grow personally and pro-

fessionally and thus improve employment and future economic opportunities³ Improving on any or all, of these areas of social determinants of health can contribute to addressing social injustices.

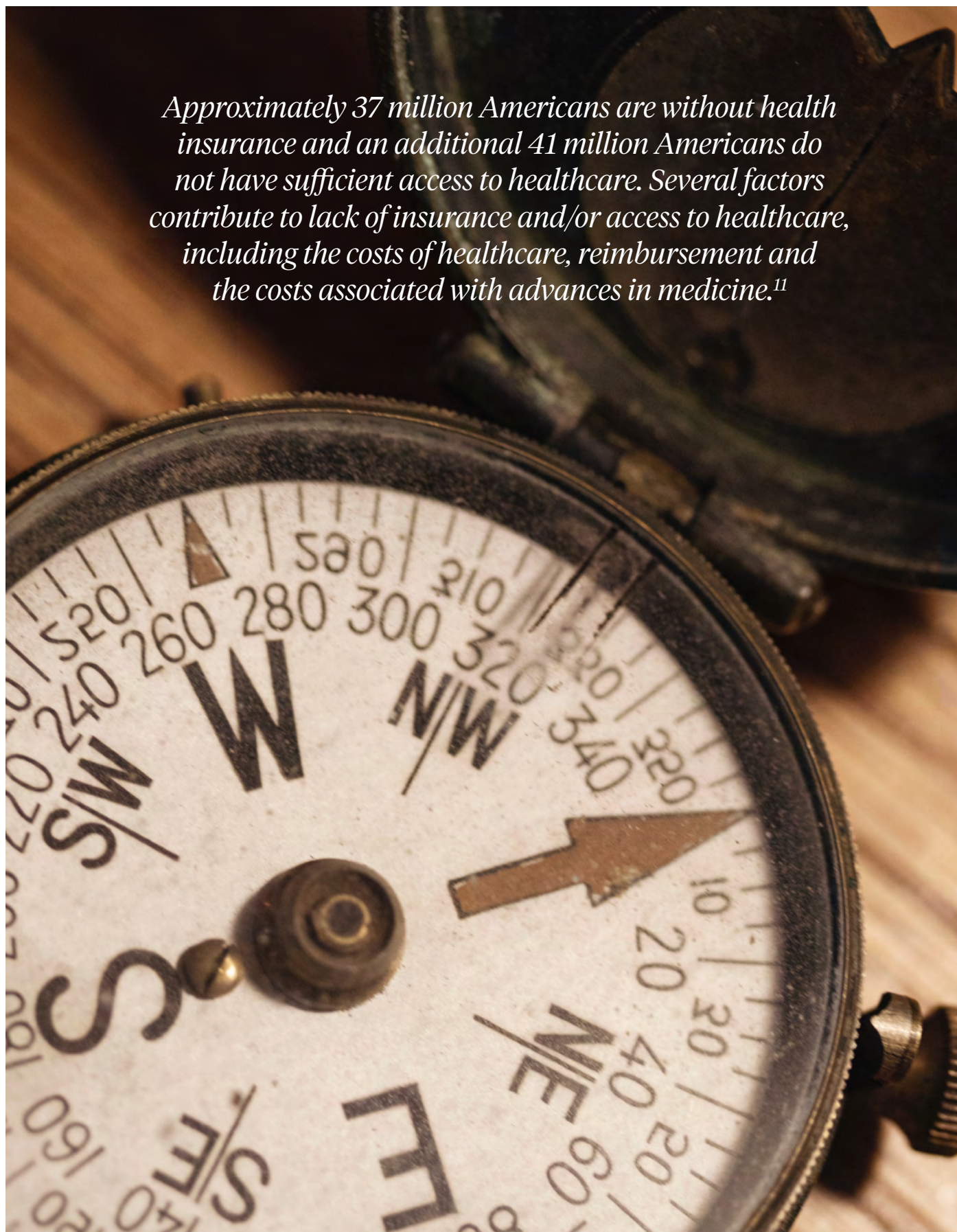
Some of the factors that are driving the transformation of healthcare include challenges to access to care, health disparities, undesired outcomes, and unsustainable costs.⁸ More money is spent on physician and clinical services, prescription medications, and administrative services per person in the United States than in any other peer industrialized country in the world.⁹ Challenges related to the affordability of health insurance is the reason people do not obtain coverage.⁹ Focusing on specific areas of the healthcare system, including access to care, healthcare coverage costs, and quality of care provides an opportunity to address some of the challenges related to universal healthcare.

The Military Health System is modernizing its clinical and business practices to improve access to care, quality of care and enhanced options for purchased care.¹⁰ Many of these best practices from the United States Military Health System can be utilized to advance a universal healthcare system.

UNIVERSAL HEALTHCARE

Approximately 37 million Americans are without health insurance and an additional 41 million Americans do not have sufficient access to healthcare.¹¹ Several factors contribute to lack of insurance and/or access to healthcare, including the costs of healthcare, reimbursement and the costs associated with advances in medicine.¹² The Affordable Care Act expanded health coverage by offering various coverage options through a network of private insurance options and by expansion of Medicaid to attempt to close the gaps in access across ethnic, social, and racial demographics.¹³ The Affordable Care Act focused on expanding access to care, providing opportunities for insurance coverage, em-

Approximately 37 million Americans are without health insurance and an additional 41 million Americans do not have sufficient access to healthcare. Several factors contribute to lack of insurance and/or access to healthcare, including the costs of healthcare, reimbursement and the costs associated with advances in medicine.¹¹



DISCUSSION

Utilizing Best Practices from the United States Military Health System to Advance a Universal Healthcare System

Stephen M. Pachuta, DDS, MS, MA

phasizing prevention, improving quality and overall health system performance, and curbing escalating healthcare costs.¹⁴ The Affordable Care Act also led to health insurance reforms and created cost-sharing options for premiums and copayments which resulted in expanded opportunities for purchasing health insurance for individuals and families.¹⁵ Patients had choices as to the type and amount of coverage they purchased. The Affordable Care Act was designed to improve access to care and the quality of healthcare as well as the affordability of healthcare.¹⁶ Though not a comprehensive solution, it was considered a starting point for insuring many uninsured Americans.

Several health insurance systems have been identified as possible models for universal healthcare. One model, the Beveridge system, provides for universal healthcare coverage for all residents and is paid for by the government and financed by government taxes.⁹ In this system the government operates a majority of the hospitals and employs the staff providing the care.⁹ Examples of this system are the United Kingdom, Italy, and the United States Veterans Health Administration.⁹ Other models for a universal healthcare system include expanding current government programs such as a Medicare for all type of program or a combination of a government or private single-payer insurance-based program.⁹ These models employ various programs that require some form of compulsory enrollment or employer provided private insurance coverage. Financing can be self-funded, employer funded, government funded or a combination of funding sources.⁹

A universal healthcare system could provide an opportunity to address access to care, healthcare coverage and the quality of care provided. Though debated, the most important piece of healthcare legislation since the creation of Medicare and Medicaid is the Affordable Care Act.¹⁶ Although the Affordable Care Act was not a universal healthcare system, it addressed many of challenges facing the healthcare system in the United States related to

access, cost and quality.¹⁶ These factors align with many of the goals of a universal health system.¹³

The United States Military Health System is one of the largest and most complex health systems in the world.¹⁷ The Military Health System has multiple interrelated missions to include readiness or the ability to provide highly trained medical personnel and equipment to deliver medical care on the battlefield in support of global combat operations and the delivery of comprehensive healthcare as part of the medical benefit to care for eligible beneficiaries.¹⁷ The Military Health System provides medical treatment through a system of 700 global military medical treatment facilities.¹⁰ It utilizes the Tricare network to provide for integrated care between military treatment facilities and a network of civilian healthcare providers which are operated by managed care support contractors around the world.¹⁸ Together the direct care system and the purchased care system provides care to 9.6 million active-duty personnel, military retirees, and their family members around the world.¹⁷ The Military Health System also provides medical education and training, conducts medical research and development, and ensures the medical readiness for 1.4 million active duty and 331,000 reserve personnel.¹⁷

The Military Health System is a health equity system of care, in that regardless of military rank, position or demographic, patients have access to comprehensive healthcare.¹⁹ The Department of Defense is America's largest government agency.²⁰ The Military Health System, as an organization within the Department of Defense, highlights that a high-quality healthcare system can be operated by the Federal government. Access to care is provided to a large, diverse population that is *not* based on financial status, ability to pay, race, or gender.¹⁹ The provision of primary care in the Military Health System is through a system of patient-centered medical homes focused on access, prevention, health, wellness, and cost containment.

TABLE 1	Military Health System	Veterans Health Administration	A Domestic Model for a National Health Care System.²⁵
Centralized Administration	Yes	Yes	Yes
A Primary and Preventive Care Focus	Yes	Yes	Yes
Networked Electronic Health Record	Yes	Yes	Yes
Comprehensive Pharmacy Plan	Yes	Yes	Yes

The Veterans Health Administration (VHA) is not part of the Military Health System.^{10,22} The Military Health System is funded, staffed, and overseen by the Department of Defense, whereas the Veterans Health Administration is funded, staffed and overseen by the Department of Veterans Affairs.²³ It is composed of 170 medical centers and 1074 outpatient clinics forming the largest integrated healthcare system in the United States.²⁴ In discussions regarding universal healthcare, “the Veterans Health Administration is emerging as a local (domestic) model for the US national healthcare system.”²⁵

There are four reasons why the Veterans Health Administration is considered a workable model for a U.S. national healthcare system:²⁵

- 1) a centralized healthcare administration organizational and leadership structure
- 2) a focus on primary and preventive care
- 3) a networked electronic health record and robust health informatics system
- 4) an evidenced based pharmacy plan that provides for affordable prescription medications

Many of the reasons identified in the Veterans Health Administration system has advantages for a universal healthcare system mirror the same reasons that the Military Health System is also a successful model (Table 1).

The concept of using an existing government program and supplementing it with private insurance could be developed utilizing business practices of the Military Health System. Some of the best practices of the Military Health System provide an opportunity to focus on access to care, quality and opportunities for cost containment.¹⁰

DISCUSSION

Developing a comprehensive universal healthcare system requires strong leadership and a robust partnership between government and private industry. A focus on justice is critical in a universal healthcare system. Justice, one of the four principles of bioethics, is the fair distribution of resources and benefits while considering the risks and costs of the benefit.²⁶ Considering gaps in access to healthcare that arise from social injustices, the principle of justice is integral to any discussion on universal healthcare.

The cost of healthcare in the United States continues to increase.²⁷ National healthcare expenditures in the United States were \$3.8 trillion in 2019 and were estimated to increase to \$4.0 trillion in 2020.²⁷ It is projected that national healthcare expenditures will reach \$6.2 trillion by 2028. As a percent of gross domestic product, this reflects an increase from 17.8% in 2019 to 19.7% in 2028 for a total of one-fifth of the United States total Gross Domestic Product.²⁷ It is estimated that 31% of healthcare expenditures are related to administrative operations.²⁸ One-third of healthcare expenditures are

DISCUSSION

Utilizing Best Practices from the United States Military Health System to Advance a Universal Healthcare System

Stephen M. Pachuta, DDS, MS, MA

related to hospital services. Clinical services account for an additional 20% of expenditures with pharmacy services accounting for 9% of expenses.⁹

Considering the challenges of establishing a universal healthcare system, strong executive and organizational leadership are essential. If done correctly, universal healthcare provides an efficient health system focused on prevention and treatment, affordable access, appropriate pharmaceuticals, and sufficient fiscal and human resources.²⁹

With universal healthcare, all people have access to the health services they require.² This type of open access to care is a key feature of the Military Health System.³⁰ The Military Health System provides healthcare through a direct care system (care delivered in the military treatment facilities) and a purchased care network (Tricare network).¹⁸ Direct care is provided by an interconnected system of military medical treatment facilities that are staffed and operated with a specific mission of treating eligible beneficiaries. Due to the large number of the Military Health System treatment facilities, the organizational structure is regionalized into specific regions or service markets for oversight and management of specific geographic populations. If access to care needs cannot be met by a treatment facility in the regionalized direct care system, patients can be referred to a network provider. The Tricare health plan provides a managed care type of plan and a preferred provider option network plan.¹⁰ This dual option type of plan for purchased care should be considered a best practice for a universal healthcare system. One proposed plan for universal healthcare, examines maintaining and improving the Affordable Care Act; keeping and strengthening the current private insurance system as well as establishing a government healthcare insurance program; or possible expanding Medicare to every American who does not have healthcare insurances.³¹

Affordable prescription medication is also important in a universal healthcare system. The cost of pre-

scription medications is the fastest growing medical expense for patients.³² The Department of Defense Tricare Program and the Veterans Health Administration both negotiate prices for prescription drugs.³³ A universal healthcare system, that builds on best practices of the Military Health System would have an opportunity to negotiate with the pharmaceutical industry for best pricing options for medications. The result would be a more affordable pharmacy formulary for patients.

To receive healthcare treatment in a military facility, a patient must be eligible for care as an active-duty member, family member or retiree.³⁴ There are exceptions for civilians who require emergency treatment to receive care in a military facility, however non beneficiaries are billed for the care they receive. In 2020, the proposed *Financial Relief for Civilians Treated at Military Hospitals Act* cancels all pre-existing medical debt incurred by civilians at military hospitals and prohibits military treatment facilities from billing future civilian patients who receive emergency care in military hospitals.³⁵ Though not enacted, the proposed Act was referred to the Senate Armed Services Committee for action.³⁶ The significance of this type of legislative action is that it could open the door for expanding access to care in the Military Health System to non-military beneficiaries.

Any initiative to open access to care in the Military Health System for non-military beneficiaries must be weighed against the impact to the mission of the Military Health System. "Maintaining readiness and medical skills is the primary mission of the MHS and will always take highest priority."¹⁰

CONCLUSION

The Military Health System and the Veterans Health Administration demonstrate that a high-quality healthcare system can be operated by the Federal government. The Military Health System and the Veterans Health Administration provide access to care for a large, diverse patient population that is



not based on financial status, race, gender or any other demographic other than to have beneficiary status in the military service.

The United States is frequently referred to as the only industrial nation in the world that does not have some form of a national, universal healthcare system.⁹ The current system of systems is expensive, restrictive, has limited access, and by most accounts, fiscally inefficient.⁵ The United States pays more for the administration of healthcare and for pharmacy services than any other similarly developed country. The widening gap between those with access and those without access to affordable, safe, high-quality healthcare, serves to highlight some of the social injustices with the current United States healthcare system. Transitioning the existing healthcare system in the United States to a universal healthcare system will cause disruption in the healthcare industry.⁹

Leadership, organizational structure, and funding are essential to *establishing* a universal healthcare

system. Access, quality, and safety are essential to the success of a universal healthcare system. The organizational successes and best practices of the Military Health System should be considered when advancing a universal healthcare system for the United States.

To more fully understand the feasibility of utilizing the successes and best practices of the Military Health System to advance a universal healthcare system, further study will be required. A detailed analysis should include a review of health outcomes, quality metrics and cost projections related to administrative operations, enrollment, staffing, health insurance, facility infrastructure and pharmacy benefits. The costs and outcomes analysis should then be contrasted and compared to Medicare, Medicaid, the Military Health System and two to three large peer civilian health systems and health insurance providers.

Utilizing Best Practices from the United States Military Health System to Advance a Universal Healthcare System

Stephen M. Pachuta, DDS, MS, MA

REFERENCES

1. Sacks, E., Schleiff, M., Were, M., Chowdhury, A. M., & Perry, H. B. (2020). Communities, universal health coverage and primary health care. *Bulletin of the World Health Organization*, 98(11), 773–780. <https://doi.org/10.2471/BLT.20.252445>.
2. World Health Organization. (n.d.) Universal Health Coverage. World Health Organization. Retrieved February 26, 2021, from https://www.who.int/health-topics/universal-health-coverage#tab=tab_1.
3. Artiga, S., & Hinton, E., (2018). Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. Henry J Kaiser Family Foundation, Figure 1. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>
4. Becker, G., & Newsom, E. (2003). Socioeconomic status and dissatisfaction with health care among chronically ill African Americans. *American journal of public health*, 93(5), 742–748. <https://doi.org/10.2105/ajph.93.5.742>
5. Reforming America's Healthcare System Through Choice and Competition (2018). U.S. Department of Health and Human Services, U.S. Department of Treasury, & U.S. Department of Labor. Accessed April 24, 2021. <https://www.hhs.gov/sites/default/files/Reforming-Americas-Healthcare-System-Through-Choice-and-Competition.pdf>
6. Riley W. J. (2012). Health disparities: gaps in access, quality and affordability of medical care. *Transactions of the American Clinical and Climatological Association*, 123, 167–174.
7. Thornton, R. L., Glover, C. M., Cené, C. W., Glik, D. C., Henderson, J. A., & Williams, D. R. (2016). Evaluating Strategies For Reducing Health Disparities By Addressing The Social Determinants Of Health. *Health affairs (Project Hope)*, 35(8), 1416–1423. <https://doi.org/10.1377/hlthaff.2015.1357>.
8. Salmond, S. W., & Echevarria, M. (2017). Healthcare Transformation and Changing Roles for Nursing. *Orthopedic nursing*, 36(1), 12–25. <https://doi.org/10.1097/NOR.0000000000000308>
9. Crowley, R., Daniel, H., Cooney, T.G., Engel, L.S. (2020). Envisioning a Better U.S. Health Care System for All: Coverage and Cost of Care. *Annals of Internal Medicine* 2020;172:S7-S32. [Epub ahead of print 21 January 2020]. <https://www.acpjournals.org/doi/full/10.7326/M19-2415> .
10. Smith, D. J., Bono, R. C., & Slinger, B. J. (2017). Transforming the Military Health System. *JAMA*, 318(24), 2427–2428. <https://doi.org/10.1001/jama.2017.16718>
11. Galvani, A. P., Parpia, A. S., Foster, E. M., Singer, B. H., & Fitzpatrick, M. C. (2020). Improving the prognosis of health care in the USA. *Lancet (London, England)*, 395(10223), 524–533. [https://doi.org/10.1016/S0140-6736\(19\)33019-3](https://doi.org/10.1016/S0140-6736(19)33019-3) .
12. Factors That Affect Health-Care Utilization. 2018. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Committee on Health Care Utilization and Adults with Disabilities. Health-Care Utilization as a Proxy in Disability Determination. Washington (DC): National Academies Press (US). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK500097/>
13. Zieff, G., Kerr, Z. Y., Moore, J. B., & Stoner, L. (2020). Universal Healthcare in the United States of America: A Healthy Debate. *Medicina*, 56(11), 580. <https://doi.org/10.3390/medicina56110580>.
14. Reisman M. (2015). The Affordable Care Act, Five Years Later: Policies, Progress, and Politics. *P & T : a peer-reviewed journal for formulary management*, 40(9), 575–600.
15. Rosenbaum S. (2011). Law and the Public's Health. *Public Health Reports*, 126(1), 130.

16. Obama B. (2016). United States Health Care Reform: Progress to Date and Next Steps. *JAMA*, 316(5), 525–532. <https://doi.org/10.1001/jama.2016.9797>
17. Health.mil (n.d.) About the military health system. Retrieved February 26, 2021, from <https://www.health.mil/About-MHS>.
18. Health.mil (n.d.) Elements of the MHS. Retrieved April 5, 2021, from <https://www.health.mil/About-MHS/MHS-Elements>
19. Pierre-Louis, B. J., Moore, A. D., & Hamilton, J. B. (2015). The Military Health Care System May Have the Potential to Prevent Health Care Disparities. *Journal of racial and ethnic health disparities*, 2(3), 280–289. <https://doi.org/10.1007/s40615-014-0067-6>
20. U.S. Department of Defense (DoD) (n.d.) Our Story. Accessed April 15, 2021 from <https://www.defense.gov/our-story/>
21. Hudak, R. P., Julian, R., Kugler, J., Dorrance, K., Lynch, S., Dinneen, M., Evans, P., Kosmatka, T., Padden, M., & Reeves, M. (2013). The patient-centered medical home: a case study in transforming the military health system. *Military medicine*, 178(2), 146–152. <https://doi.org/10.7205/milmed-d-12-00170>
22. Hutchinson, J., Mack, R., Pérez Koehlmoos, T. and DeLeon, P.H. (2016). Lessons for Health Equity: Military Medicine as a Window to Universal Health Insurance. *NAM Perspectives*. Discussion Paper, National Academy of Medicine, Washington, DC. <https://doi.org/10.31478/201611a>.
23. VA (n.d.) Veterans Affairs. Office of Budget. Accessed April 15, 2021, from <https://www.va.gov/budget/products.asp>
24. VA (n.d.) Veterans Affairs. Veterans Health Administration. Accessed February 28, 2021, from <https://www.va.gov/health/aboutvha.asp>.
25. Ibrahim S. A. (2007). The Veterans Health Administration: a domestic model for a national health care system?. *American journal of public health*, 97(12), 2124–2126. <https://doi.org/10.2105/AJPH.2007.125575>.
26. Beauchamp, T. L., & Childress, J. F. (2019). *Principles of biomedical ethics* (8th ed.). Oxford University Press.
27. Keehan, S. P., Cuckler, G. A., Poisal, J. A., Sisko, A. M., Smith, S. D., Madison, A. J., Rennie, K. E., Fiore, J. A., & Hardesty, J. C. (2020). National Health Expenditure Projections, 2019–28: Expected Rebound In Prices Drives Rising Spending Growth. *Health affairs (Project Hope)*, 39(4), 704–714. <https://doi.org/10.1377/hlthaff.2020.00094>.
28. Woolhandler, S., Campbell, T., & Himmelstein, D. U. (2003). Costs of health care administration in the United States and Canada. *The New England journal of medicine*, 349(8), 768–775. <https://doi.org/10.1056/NEJMsa022033>.
29. Greer, S. L., & Méndez, C. A. (2015). Universal Health Coverage: A Political Struggle and Governance Challenge. *American journal of public health*, 105 Suppl 5(Suppl 5), S637–S639. <https://doi.org/10.2105/AJPH.2015.302733>
30. U.S. Department of Defense, Instruction Number 6000.14, Incorporating Change 2. 2020. DoD Patient Bill of Rights and Responsibilities in the Military Health System. Accessed April 20, 2021. <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/600014p.pdf>
31. Jones, G., & Kantarjian, H. (2019). The many roads to universal health care in the USA. *The Lancet. Oncology*, 20(10), e601–e605. [https://doi.org/10.1016/S1470-2045\(19\)30517-0](https://doi.org/10.1016/S1470-2045(19)30517-0).
32. Balon R. (2018). The inexplicable rise of medication prices. *Annals of clinical psychiatry: official journal of the American Academy of Clinical Psychiatrists*, 30(3), 165–166.
33. Waxman, H. A., Lower Drug Costs Now. (2019). *Health Affairs Blog*. <https://www.healthaffairs.org/doi/10.1377/hblog20191003.118206/full/>
34. Final Report to the Secretary of Defense, Military Health System Review (2014). Accessed April 7, 2021. https://archive.defense.gov/pubs/140930_MHS_Review_Final_Report_Main_Body.pdf
35. Warren, E., Financial Relief for Civilians Treated at Military Hospitals Act (2020). Accessed 24, April 2021. <https://www.warren.senate.gov/newsroom/press-releases/senator-warren-introduced-the-financial-relief-for-civilians-treated-at-military-hospitals-act>
36. Congress.gov. S.4005 - Financial Relief for Civilians Treated at Military Hospitals Act. (2020). <https://www.congress.gov/bill/116th-congress/senate-bill/4005/all-actions>

the
journal
of the

**AMERICAN
COLLEGE
OF DENTISTS**

JULY 1978

VOLUME 45

NUMBER 3

Mutual Accountability
Dentistry as a Learned Profession
Access to Dental Care
Social and Psychological Barriers

Barriers to Access to Dental Care: an Economic Examination

Donald R. House, PhD

*Article reprinted from the Journal of the American College of Dentists
July 1978, Volume 45, Number 3*

Only until the last few years has the nation's health become a major policy issue. Congressmen hope the Carter administration will propose a national health plan which would control health care costs and improve access to care to those now restrained by various economic and sociological barriers. Some attempt to further the notion that adequate health care is an American right—not a privilege. But before one can intelligently assess these issues, one must appreciate the present market forces that determine health care costs and the resulting economic barriers to access to care. This paper briefly examines present barriers in the dental market and discusses the determinants of these barriers.

Barriers to access to dental care are a natural consequence of our capitalistic system. Although ours is a rich nation by world standards, we are not blessed with enough goods and services to go around. Economists have long realized that individuals seek a balance among needs and desires for the near-endless list of commodities available in today's market-

place. Dental care is only a very small fraction of all purchased items in the family budget. (The average family spends less than 1% of its income on dental care.) And although dentists, with good intentions, frequently voice concern over the segment of the population with poor oral health, these individuals are reacting to market barriers, choosing little or no dental care in return for more from other markets. Their numbers are significant.

The National Health Survey of 1969 indicates that 6% of the population over five years of age had never seen a dentist. Approximately 55% of the population had not seen a dentist within the past 11 months. And 13% indicate that their last visit was at least 5 years prior to the interview. There may be many reasons one might present in explaining why some rarely seek professional dental care. Surely several psychological factors play a part, including patient fear and anxiety. But from an economic perspective, dental fees and patient time create barriers that deserve examination. This paper focuses upon these two economic barriers.

A shorter version of the paper was presented at the Conference on Increasing Access to Dental Care, American Dental Association, May 16, 1977 in Chicago. Dr. House is Senior Economist, Bureau of Economic Research and Statistics, American Dental Association.

Barriers to Access to Dental Care: an Economic Examination

Donald R. House, PhD

DENTAL FEES

Fees represent the most commonly noted economic barrier. Families are aware of their household income and the significance of the financial sacrifice that dental care requires. Third party payments currently provide only a small contribution toward relaxing the fee barrier. In 1976, consumers on average financed 81¢ out of every dollar in dental bills—a marked contrast to the 9¢ paid out of every dollar in hospital bills.² To be sure, the household inevitably receives the entire bill in the form of taxes, insurance premiums, and reduced wages. But it is out-of-pocket expenses, the 81¢, that remains a prime determinant of dental care utilization and a significant economic barrier.

The levels of dental fees represent the single determinant of fee barriers for most individuals and a significant determinant of out-of-pocket expenses among those enjoying third-party participation in paying dental bills. These fee levels are determined by market forces—specifically the interaction of supply and demand. The economic literature does not yet include many studies of these market forces in the dental market, but two recent publications present noteworthy attempts in identifying both supply and demand in dental markets. Paul J. Feldstein in 1973 used ADA survey results of U.S. regions between 1955 and 1967, 3 and two years later Alex R. Maurizi used 1962 results from the ADA Survey of Dental Practice.⁴ More research in this area is on-going, and unless contrary evidence is discovered, economists look to the conventional market forces (i.e., supply and demand) to explain changes in dental fees.

Once fee levels are determined, it is useful to identify those individuals or households to whom fee barriers appear to be most restrictive. For this, we need only to seek the low income families with little or no third-party coverage. With fewer dollars to spend, dental care receives a low purchasing priority and rarely does the family allocation of dollars reach dental needs. For instance, in 1969, an esti-

mated 16 1/2% of the population with incomes less than \$3,000 had never seen a dentist as compared to only 5.3% with incomes in excess of \$15,000.¹

The number of individuals that fall into the low income brackets is easily determined. The Bureau of the Census reports some 5,109,000 families maintain incomes below the official poverty level as of March 1975. This amounts to 9% of all U.S. families. However, it is more difficult to identify the extent of third-party coverage among these individuals.⁵ Many are eligible for dental benefits under Medicare programs while others receive dental prepayment as an employee fringe benefit. One would expect that these income-poor families enjoy the bulk of the government-provided dental benefits (during fiscal year 1976, government supplied \$469 million representing 5.4% of the total dental bill), but they may receive little dental prepayment coverage since only about 30% of family heads either have or seek employment and their unemployment rate approaches 17%—3 times the national average. (Today, virtually all dental prepayment is offered as employee benefits.)

PATIENT TIME

The time barrier to access to dental care has only recently received attention in the economics literature and is commonly ignored among many who study dental care behaviors. In short, the time barrier reflects the patient's time spent in receiving dental care, both at home and in the dentist's office. For professional care, the time barrier includes the value of the patient's transportation time, waiting time, and treatment time. In this regard, dental care is not unlike any other service; successful delivery of the service requires the consumer's time. Unlike the fee barrier, third party payments cannot significantly alter the time expense of receiving professional dental care.

As an illustration of the time expense, consider an hourly wage earner that leaves his place of employ-

ment for his periodic dental visit with treatment limited to a routine oral exam and prophylaxis. Suppose he earns \$3.60 per hour and must spend 30 minutes travel time to the dental office. Once at the office he waits 20 minutes before treatment and 50 minutes with the hygienist and dentist. In total, the visit required two hours and ten minutes of his time. Assume that the dental bill is \$25 in fees. His total cost of the dental visit includes both fees and the value of his time. Since he gave up \$3.60 per hour at work, his value of the time spent equals \$7.80 (2 hours and 10 minutes times \$3.60 per hour). His total expense is \$32.80.

The patient time cost of dental care is, like dental fees, market determined. This is, it requires a balance among the relevant market forces. For a clearer understanding of the determinants of the three components of patient time (transportation, waiting, treatment), an examination of each is presented below.

Patient transportation time reflects a locality's modes of transportation and the dentist's practice-location decision. Each dentist has an economic incentive to locate his practice where patient transportation time is minimized (i.e., in the vicinity of his patients). This location decision, however, is affected by other considerations such as land values, area zoning, and the dentist's transportation time. A dentist, residing out in the country, is often encouraged to maintain an office in town, thereby making his services more convenient for his clientele.

Patient waiting time, the second time category, is also of concern to both dentist and patient. The dentist spends most of his time treating patients, but from time to time he is idle due to patient tardiness or no-shows. To him, this time is quite expensive. Not only does he lose dental fees during idle time, but he also must meet his payroll demands which are largely independent of patient flow. If a patient misses a scheduled appointment, the dentist faces little reduction in practice costs but a large reduction in gross income. Hence, the dentist must create an "inventory" of patients as a means of reducing idle time produced by patient tardiness and no-shows. On the other hand, if waiting time gets excessive, the patient will either change dentists or limit his dental visits to a bare minimum. Accordingly, the patient's waiting time balances his desire for short waiting times and

the dentist's desire for large patient inventories.

Lastly, treatment time often represents the largest time expenditure. Historically, treatment time has changed slowly through the years, but its changes, however slight, can be explained as an example of economic behavior. As time becomes more valuable to both patient and dentist, there exist greater incentives to develop and implement faster treatment techniques. Four-handed dentistry represents an important innovation in this regard as well as the high-speed hand piece. But if time were not as valuable, fewer dentists would have implemented these technologies.

As with the dental fee barrier, the examination of the time barrier leads to an identification of individuals to whom the time barrier appears most restrictive. With this examination, one soon realizes that the patient time cost is greater among those with the greater hourly earnings. The hourly wage earner in the above example lost \$3.60 per hour for time away from the job. In contrast, an attorney with a successful business could lose up to \$80 per hour in net income during the dentist's office hours. Consequently, the time cost is greater for the attorney—not the wage earner. One might further consider the unemployable welfare recipient who merely gives up daytime T.V. during a dental visit. His time cost is indeed minimal.

GOVERNMENT POLICIES

Today, the government is an active participant in the economy and especially in the health care markets. Its activities are extensive, ranging from medical research to funding and controlling expansions of hospitals. Beyond the health care markets, the government redistributes income through public assistance and social security programs and redistributes goods and services through agencies responsible for food stamps, public housing, etc. Almost all of these contribute to changes in dental care utilization.

Government participation in dental markets, as mentioned previously, amounts to the control of 5.4% of dentists' services. Most (83%) is funded under Medicaid programs with the remaining being funded under the direction of the Veterans Administration

Barriers to Access to Dental Care: an Economic Examination

Donald R. House, PhD

(12%), Maternal and Child Health Services (3%), Department of Defense (1%) and General Hospital and Medical Care (1%).² It must be noted that virtually all funding is directed to a relaxation in the dental fee barrier. Among those enjoying the benefits of these programs, dental fees become only trivially important and the major economic barrier separating recipients from professional dental care is the time barrier. Inasmuch as most recipients (especially those eligible under Medicaid) place a relatively low value on their time (i.e., low or no wages), economic barriers would seem to play but a minor role in restricting dental care utilization among these individuals.

The government, in addition to dental programs, affects dental care through income transfers whereby recipients receive a higher income. Economists have determined that as individuals' incomes increase, they purchase more professional dental care. That is, as families receive more income, the fee barrier to access to dental care becomes less restrictive. One of the earlier examinations of this relation was published by Ronald Andersen and Lee Benham. Their study found that if family income increases by 10%, dental care expenditures will increase by 10%.⁶ Several later studies confirm these results.^{3,4,7} Again, one expects that the major recipients of the income transfer programs are those with little income and a relatively low time valuation.

Other government programs include a multitude of in-kind transfers whereby the government distributes goods and services (such as food stamps). Each of these programs potentially affects dental care utilization among recipients. But the impact of these programs depends upon how recipients value the goods and services distributed. Frequently there is a major loss of value in these programs. Recipients often do not value the government benefits as they would value an equal amount of income. If a family receives a \$400 a month apartment from the government, but privately would only pay \$250 for it, its receipt has the same impact as if \$250 in income were distributed. The dental care purchases would

increase as if income had increased \$250 per month instead of \$400/month.

The Federal government has established legislation that is designed to reduce the economic barriers to access to care for the provider side of the market. The Health Profession Educational Assistance Act of 1976 (PL94-484) attempts to increase the supply of dentists, improve their productivity, and alter dentists' location decisions. The recent act first broadens capitation grant support to dental schools in order to insure increasing supplies of new dentists. For example, during the 1978-79 school year, each participating dental school will receive \$2000 for each full-time student. (A school participates if among other requirements, it does not decrease its total enrollment in the current year below the preceding year's level or the 1976-77 level, whichever is greater.) Further, the act finances education of expanded function dental auxiliaries which should increase the pool of trained dental auxiliaries.⁸ Studies have already recorded the increase in dentists' productivity with employment of dental auxiliaries.⁸ These results partially offer a rationale for such legislation. To alter location decisions, the act supports the National Health Service Corps wherein recipients of Corps scholarships are obligated for service for a minimum of two years. A portion of those obligated are sent to establish a private practice within a government-defined "shortage area".

The success of the act in reducing economic barriers to access to dental care remains to be seen. Supposedly, the increase in the number and productivity of dentists will increase both fee and time barriers. With more productive dentists, the market requires lower fees in order to balance market forces (in the absence of compensating increases in demand for dental care). Moreover, with more dentists, the average travel time to the dentist should decrease, especially in the "shortage areas". Consequently, supporters of the act expect increased utilization of dental care as a result of reductions in both economic barriers.

PATIENT RESPONSE TO BARRIERS

A patient, through his own activity, can reduce the restrictiveness of both barriers to access to dental care. Obviously, an individual can earn more income by working longer hours or seeking eligibility for government programs. Each of these would reduce the fee barrier. But beyond these obvious options, the individual can 1) seek employment that offers dental prepayment as a fringe benefit and 2) search for less expensive dental care.

The economics literature includes several theoretical and empirical examinations of the demand for health insurance. Currently union and non-union employees alike appear to be demanding more insurance-type benefits in lieu of more wages. And dental prepayment is becoming a popular benefit in today's labor markets. There appears to be two major factors behind this current trend.

First, in the face of rising health care prices, more individuals seek insurance as a means of decreasing the probability of unwanted major health care expenditures. By pooling risks among relatively similar individuals, premiums for insurance packages can be reduced below what is available to the public at large encompassing all types of health conditions. Hence, it is economical to obtain coverage through one's place of employment.

Second, tax laws strongly encourage a switch from wages to in-kind benefits as a form of remuneration. With such high income tax rates, the employee can sacrifice taxable wages and receive a greater value in insurance-type benefits. For example, at a 20% tax rate, the individual can decrease his gross income by \$200 and receive an equal value in dental prepayment coverage for he and his family. But while premiums equal \$200, the employee gives up only \$160 in after-tax income. Consequently he receives an extra \$40 in benefits to the dismay of the government treasury. If the family is entitled to \$190 in dental benefits for the year, the family in effect enjoys an extra \$30 worth of dental care financed directly by the treasury simply by receiving dental prepayment as a fringe benefit. Additionally, individuals shop for the least expensive dental care offered in the market-place. Such shopping does not mean that each individual spends several hours compar-

ing fees among all dental offices in the community. Indeed, the lowest dental fee may not be the least expensive. But individuals choose the dental office which minimizes the sum of the dentist's fees and the patient's time cost. The typical family chooses a dentist relatively close to the family residence—an example of this shopping activity. By reducing transportation time, the restrictiveness of the time barrier is reduced. Beyond the transportation time, patients seem to recognize a market trade-off between dentist's fee and waiting time. At least one study shows that physicians, charging higher fees, often require patients to wait less time before treatment.¹⁹ An attorney can reduce the total expense of physician care by paying \$10 more in fees and reducing waiting time by one-half hour. A welfare recipient can reduce his total expense by saving \$10 in fees and waiting an extra half-hour. Statistics illustrating this relation within dental markets have not yet been collected. But it is generally expected that the same pattern exists.

DENTIST RESPONSE TO BARRIERS

The individual practitioner, providing dental services in a viable market place, faces market forces that create incentives to minimize the barriers to access to care for the public at large. While professional integrity certainly plays an important role in the determination of barriers, the economist recognizes a profit motive, produced in the market place, which encourages the behavior that one most admires among those of the highest professional integrity. Such is the beauty of the private practice system.

First, as mentioned previously, the dentist is encouraged to reduce patient transportation time by locating the dental office within close proximity to patient residences or places of employment. This, from the dentist's perspective, promotes growth in the size of the practice.

Second, the dentist cannot establish fee levels out of line with the other competing dentists within the community. While on paper it would seem that a \$200 fee for an initial exam would substantially increase practice income, patients quickly realize less expensive alternatives and the dentist is left with both a clientele too small to support a practice and

Barriers to Access to Dental Care: an Economic Examination

Donald R. House, PhD

a well-deserved reputation in the community that would discourage any growth in the practice even if fees were reduced. On the other hand, the dentist cannot establish fee levels that are too low. A “reasonable” level of profits (or net income) is a necessary condition for the market system to work. Only if the net incomes of dentists are sufficiently high will any undergraduate student desire to enter the profession with total dedication. For example, if dentists incomes were near poverty levels, few (if any) talented students would sacrifice four years of income during dental school, tuition expenses, etc., and start-up investments to attain such a standard of living. By spending those talents in a closely related endeavor the student attains a substantially improved lifestyle that he and his family can enjoy.

In this context, dentistry must compete with all other professions in order to attract capable individuals in quantities necessary to meet the public demand for dental care. And the only way in which dentistry can meet this demand is to establish fee levels that insure an adequate supply of dentists.

Third, the dentist must offer a reasonable waiting time for the patient. While the dentist’s idle time is reduced with larger inventories of patients (and therefore longer patient waiting times), his practice prospers with the growth of a stable clientele who consistently relies upon the dentist’s advice as to frequency of visits and type of treatment. If patient waiting times are too long, they will seek alternative dental practices where the wait is not as long and unpredictable. Consequently, the dentist has sufficient economic incentives to reduce patient waiting time and hasten the growth of a stable clientele which offers a prosperous practice and a long lasting personal rapport with patients. If patients frequently wait 45 minutes before treatment in one office, and 10 minutes in all other offices, they have every incentive to change dentists.

Lastly, the dentist, from time to time, adjusts dental fees when the patient’s ability to pay is in question.

While we have no substantial evidence of the frequency of either unpaid or reduced bills, it is commonly understood that this does take place. Economic theory suggests that dentists can effectively increase their net incomes by offering service at a lower fee to low income families and charging the higher income families the higher fee. In contrast, such activity could likewise be explained by pure philanthropic motives. (Certainly net income is not improved when the dentist chooses not to charge a low-income family for services rendered.) While convincing arguments could be offered supporting either view, the effect of the behavior is the same. The fee barrier is reduced for those to whom it is most restrictive. And such behavior is strictly voluntary. Its consequence is expected to be a higher utilization of dental care among low income families.

ECONOMIC BARRIERS IN THE FUTURE

The future should bring changes in the barriers to access to dental care, especially if some form of a national health insurance program passes Congress. If such a program is established, not all of its effects

will necessarily be beneficial. For many years now, American laborers have become more productive. Accordingly, their hourly earnings have improved—directly affecting the time cost of consuming dental care. With no other changes, we should expect an increase in earnings and income which decreases the importance of the fee barrier but increases the importance of the time barrier (i.e., an individual’s time is more valuable).

With a national health insurance program in effect, one can predict several consequences. If the program is all inclusive, providing regular dental care to a significant number of individuals, the fee barrier will be reduced for program recipients. Accordingly, we would expect their utilization to increase.

But, as a consequence, patients will wait longer at the dentist's office, especially if the program provides sufficient dental benefits to low income families with relatively low earnings.

Dentists, however, could introduce a partially offsetting effect through improvements in treatment time. However, these depend upon technological advances that are impossible to predict. Certainly, the further use of dental auxiliaries will improve treatment time, but there is a logical limit to these improvements without technological change even though we currently have room for significant advances in this area.

On the whole, the net impact of national health insurance upon barriers to dental care remains in question. While on the surface it appears that patients, increasing utilization through expanded third party payments, will necessitate longer waiting times in

dentists' offices, dentists may respond by increasing productivity through technological advances, further use of auxiliaries, and more intense use of their time. Waiting times may not increase.

Since, in the future, patients will value their time more on average than they do today, dentists will pay more attention to patient waiting time in order to maintain a successful practice. If national health insurance reduces the fee barrier for dental care, legislators will find that decreases in dentists' fees have much less impact on utilization than do reductions in patient waiting time. These alterations in the marketplace should be considered in present discussions of alternative delivery systems (such as public clinics, closed panels, etc.). A system that is designed to reduce fee barriers may be somewhat successful today in increasing utilization. But its future performance in a market where patient time is a major determinant of utilization may be much less satisfactory.

REFERENCES

1. *Dental Visits, Volume and Interval Since Last Visit, United States - 1969*, Vital and Health Statistics, Series 10, Number 76, Department of Health, Education, and Welfare, July 1972.
2. "National Health Expenditures, Fiscal Year 1976," *Social Security Bulletin*, Volume 40, April 1977, pp. 3-22.
3. Paul J. Feldstein, *Financing Dental Care: An Economic Analysis*, Lexington Books (Lexington, Massachusetts), 1973, pp. 143-147.
4. Alex R. Maurizi, *Public Policy and the Dental Care Market*, American Enterprise Institute for Public Policy Research, Washington, D.C., 1975, pp. 24-35.
5. *Statistical Abstract of the United States, 1976*, Bureau of the Census, Department of Commerce, Washington, D.C., 1976, pp. 418.
6. Ronald Anderson and Lee Benham, "Factors Affecting the Relationship Between Family Income and Medical Care Consumption," *Empirical Studies in Health Economics*, ed. by Herbert Klarman, Johns Hopkins University Press, Baltimore, Md., pp. 73- 100.
7. Charles Upton and William Silverman, "The Demand for Dental Services," *Journal of Human Resources*, Volume 7, Spring 1972, pp. 250-261.
8. *Fact Sheet, Health Professions Educational Assistance Act of 1976 (PL94-484)*, Public Health Service, U.S. Department of Health, Education, and Welfare, December 1976.
9. Richard M. Scheffler and John E. Kreshman, "A Production Function for Dental Services: Estimation and Economic Implications," *Southern Economic Journal*, Volume 44, July 1977, pp. 25-35.
10. Barbara H. Kehrer, "Factors Affecting Patient Waiting Time in Physicians' Offices," *Profile of Medical Practice*, '74, American Medical Association, 1974.

The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS



Larry E. Jenson is a former Health Sciences Clinical Professor at UCSF School of Dentistry. He practiced general dentistry for 30 years and has served on the board for the American Society for Dental Ethics.



Dr. Joel M. White serves as Professor and Chair of the Division of Preclinical Education, Biomaterials & Engineering and Vice Chair at Large, in the Department of Preventive and Restorative Dental Sciences, in the School of Dentistry at the University of California, San Francisco.

We would like to acknowledge Pam Zarkowski, Larry Garetto, Alan Budenz, and Deborah Pruitt for their important role in the development of this article.

This article will focus on the most ethically contentious student-to-student training practice: local anesthesia administration. We will examine the factors that contribute to a broader understanding of the ethical issues involved and introduce a framework that will help to clarify these issues. We have identified six stakeholders in this issue: the student-as-patient, the student-as-student, the university, the faculty, the general public and the profession.

I. Introduction

Student-to-student dental training has a long and robust tradition in both US and European dental schools. Surveys of dental schools throughout the years, consistently show that the practice is prevalent and well supported by both dental faculty and dental students.¹⁻¹⁰ Student-to-student training, the practice of having dental students perform clinical procedures on each other before they are attempted on actual clinic patients, includes such learning experiences as: role-playing patient interviews, examination of oral tissues, health history review, charting of findings, plaque disclosing and indexing, risk assessment, periodontal probing, oral hygiene instruction, impression taking, local anesthesia, and nitrous oxide administration. While most of these activities may seem at first to be morally unobjectionable, the administration of pharmaceutical agents in the case of local anesthesia and nitrous oxide administration has raised obvious ethical concerns and certainly justifies more scrutiny of this practice. This article will focus on the most ethically contentious student-to-student training practice: local anesthesia administration. We will examine the factors that contribute to a broader

understanding of the ethical issues involved and introduce a framework that will help to clarify these issues. We have identified six stakeholders in this issue: the student-as-patient, the student-as-student, the university, the faculty, the general public and the profession. We believe that the scope of the discussion regarding student-to-student training has been unreasonably restricted to considering the impact that it has on only one stakeholder: the student-as-patient. Only in this artificially restricted consideration does the practice appear to be unethical. Lastly, we will argue for the conclusion that the practice of student-to-student training in local anesthesia administration is ethically justified.

II. Arguments against the practice of student-to-student training

Several authors have raised the issue of ethical and legal problems with these activities.^{1,2,6,8,11-13} While most have simply acknowledged that the practice is ethically problematic, only one has attempted to comprehensively analyze the ethical issues involved. Before these arguments are considered it would be helpful to address three relatively weak arguments often encountered in the discussion of this issue.

The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS

II.1 The medical school argument

One of the first objections to the practice of student-to-student training in dentistry is the apparent fact that student-to-student training does not occur in medical schools. These objections often come from those who have also trained in a medical school environment, namely oral surgeons, who are routinely assigned the responsibility for local anesthesia training at their dental schools. If it is unacceptable to medical schools, the argument goes, how can it be justified in dental schools? We feel it is important to address this criticism before delving into the actual ethics involved in the practice.

First, some student-to student training does indeed occur in medical schools. Some medical schools currently use Peer Physical Examination (PPE) activities wherein medical students examine partners to gain experience in the procedure.^{14,15} It is beyond the scope of this paper to investigate the specifics of medical school curricula, but no doubt, similar ethical concerns have been raised about the PPE.

Second, we argue that comparing the educational environment of medical and dental school is a mistake. Medical and dental schools have radically different goals for their pre-doctoral programs and thus should not be compared in order to question the moral basis of student-to-student training. Dental schools are responsible for producing competent dentists who are prepared to practice unsupervised immediately upon graduation from school while medical schools rely on internships and residency programs to assure that graduates are competent to see patients unsupervised. Unlike medical schools, dental schools are responsible for preparing dental students for supervised patient care very early in their education in the school's clinics. Whereas dental students are expected to be responsible for the patients assigned to them and to actually perform surgery on those patients from the very beginning of their third year or earlier, medical students have no

such expectations placed on them. Thus, the practice of student-to-student training in dental school must be seen from the larger perspective of the urgency required of the dental school curriculum to prepare students for practice. Though there is a developing trend towards more integration between dental and medical curricula, until there are sufficient residency programs in which all dental students will receive additional training prior to practicing unsupervised, the substantial differences in educational goals will remain the same.

II.2 The tradition argument

Though not specifically argued for in the literature, there is a general perception among many in the field of dentistry that because the practice has a long tradition it ought to be continued. This is a poor argument in favor of such practices. With a little reflection, we can all identify any number of traditions that have gone unexamined from a moral perspective and continue, nonetheless. Consider, for example, the medical school practice of performing pelvic exams on anesthetized patients without the patient's consent in order to train medical students. A practice that is clearly unethical yet apparently continued as a tradition even though some states have made the practice illegal.¹⁶

III.3 The alternatives argument

Another approach to deciding the ethics of the practice is to avoid the ethical issues all together by suggesting that alternative educational techniques such as the use of manikins, cadavers, and virtual reality, are just as good as student-to-student training. As this argument goes: if alternatives are just as good as student surrogates, why continue a potentially harmful and ethically problematic practice at best? This is an obvious research question: Are the alternatives just as good? At this point in time, studies have not shown this to be the case. In fact,

the few studies that have been done suggest an advantage for student-to-student training. Wong et al. (2019) conclude: "Overall, students did not feel confident learning from the manikin simulation models alone. They did not feel competent without the close supervision and guidance by their educators, which was opposite the perceptions reported in the student-to-student-trained cohort."¹² Wong, et al. (2020), when comparing student to student training to training on manikins, found that when surveyed, 66.6% of students felt sufficiently prepared for clinic as compared to 45.2% of those trained on manikins.^{2,6,12} We will argue later that alternative teaching techniques show promise as important adjuncts to student-to-student training but on their own, lack the other educational advantages of the student-to-student training experience.

IV.4 Ethical arguments in the relevant literature

Morton Rosenberg, et al. (2009) identify two important ethical aspects of student-to-student training.⁸ The first of these is the potential for dental students to feel coerced into submitting to a procedure that they would not normally choose to do if they were not in dental school. Due to the obvious power dynamic between the dental school and faculty and the students, the student's ability to fully consent to student-to-student training ought to be, at least, questioned. Even without the power imbalance, students would be reasonably susceptible to peer pressure. Whether or not truly voluntary consent can ever be had in these situations is an open question. As mentioned and cited in the introduction, student surveys over the years show an overwhelming support of this practice. For example, Hossaini (2011) found that 84.2 percent of the students surveyed agreed or strongly agreed with the statement that students should practice dental injections on each other.⁶ Given the support this practice has among both students and graduates, it is hard to imagine that a significant portion of students actually feels coerced in these situations: surveys, even with the potential for bias due to the student-instructor power dynamic, show that only a small percentage of students self-report the practice of student-to-student training to be ethically objectionable and that

a large majority of students believe the practice is important if not essential to their development as dentists.^{2,6,8} With informed consent and the option to not participate, the ethical concerns about this issue would seem to be adequately addressed.

The second ethical issue Rosenberg et.al. point out is that in a student-to-student training activity the student becomes, in fact, a dental patient and, as patients, deserve to be treated as any patient would be within the ethical standards of the profession. These standards derive from a variety of normative ethical theories and Rosenberg et.al. discuss the most common ethical principles from the ADA Principles of Ethics and Code of Professional Responsibility (ADA Code) and in medical ethics in general. Beneficence, autonomy, and non-maleficence are the relevant principles usually applied in this situation though one could as easily invoke a consequentialist approach with similar results. As there are known risks and costs to local anesthesia and nitrous oxide administration, however small the risks may be, the question remains: can we ever justify having students inject a student-patient when no dental therapeutic benefit is to be expected? The short answer is no; the risks, costs and benefit analysis from a strictly dental therapeutic perspective cannot justify these activities. Though Rosenberg et.al. do not explicitly say that student-to-student training is unethical, their conclusions on the matter are apparent. Though we generally agree with them from a restricted perspective, we must object to their conclusion that: "as with most ethical dilemmas, the correct answer lies in the individual". This is a strong relativist position on the issue and is contrary to our position that ethics is most assuredly not whatever a given person thinks it is. Our position is that through reasoned discussion, within a professional community, scholarly debate can and does eventually reach a consensus. We believe there are answers to ethical questions.

The longer answer to the question of whether we can ethically justify student-to student training requires a more profound and broader look into the ethics and legal issues involved and perhaps a broader perspective of what is ethically at stake in this type of training.

The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS

Alexander Holden (2018) provides an important advance in this type of analysis.¹³ He identifies several ethical and legal issues regarding student-to-student training that must be considered in any discussion of this practice:

1. The issue of the potential for coercion as we have already discussed. Holden rightly adds the notion of the quid pro quo nature of the practice that contributes to this concern.
2. The issue of the of informed consent: without a clear therapeutic benefit, is the practice outside the limits of consent from a legal perspective?
3. The issue of boundaries: are students being taught the wrong (unethical) message regarding the treatment of people who are friends or family?
4. The issue of addiction: are students in jeopardy of future addictive behaviors based on an early experience of nitrous oxide?
5. The issue of confidentiality: For students to ethically treat a classmate as a patient, the standard of care demands a thorough medical history review and comprehensive dental examination, leaving open the possibility that information discovered is not kept confidential. This applies to medical history information and diagnostic findings.
6. The issue of student safety: what are the actual risks and costs of such a procedure as local anesthetic injections and are they significant?
7. The issue of competency: how much can we expect from student-to-student training in preparing students for their first clinical experience with an actual patient? Following such training, are students safer, more confident, less anxious, and more empathetic following such training?

We defer to Holden's legal expertise as our paper focuses on the ethics involved and acknowledge that laws may differ in different jurisdictions. However, it is important to note one of his legal conclusions: in assessing the potential harms that a local anesthetic injection might produce, none, in Holden's analysis rise to the legal level of grievous bodily harm. Holden concludes: "Therefore, the use of local anesthetic outside of its typical therapeutic purpose, but for teaching and learning is not outside the limits of consent."¹³ Our interpretation of this conclusion is that from a legal perspective, students can consent to and participate in such a practice without a battery being committed even though there is no therapeutic value to be had. Importantly, Holden also notes that even though the risk of harm to students is quite low (risks of severe adverse effects are generally reported as less than 1% and less than 5% for low to moderate adverse effects)¹⁷ and because there is no therapeutic value to be obtained, students, unlike regular patients, should be fully informed and consent should be obtained before receiving local anesthesia.

Overall, Holden's analysis clearly concludes that the practice of student-to-student training is highly problematic and difficult to support ethically. We, however, disagree with this conclusion and instead of taking his concerns point by point would like to broaden the overall discussion and introduce an ethical framework and argument that supports the practice and thereby address the concerns that Holden and others have rightly raised. Our framework builds on the ideas of Ozar and Sokol in "Dental Ethics at Chairside" (2002), wherein they emphasize the importance of identifying stakeholders in their ethical decision making protocol.¹⁸

In any discussion of what constitutes an appropriate ethical action, the first step is to identify the stakeholders: those entities impacted by the decision to be made. The second step is to address those stakeholders (or their interests) in the decision-making process. In this case, we identify six primary stakeholders: the university, the faculty, the general public who will be served by the future clinicians trained at the university, the student-as-patient, and the student-as-student, and the dental profession.

III. The argument in support of the practice of student-to-student training

III.1 Who counts as a stakeholder?

In any discussion of what constitutes an appropriate ethical action, the first step is to identify the stakeholders: those entities impacted by the decision to be made. The second step is to address those stakeholders (or their interests) in the decision-making process. In this case, we identify six primary stakeholders: the university, the faculty, the general public who will be served by the future clinicians trained at the university, the student-as-patient, and the student-as-student, and the dental profession. Unfortunately, most inquiries into the ethics of student-to-student training have not considered these six entities adequately. Moreover, we have no evidence that dental schools routinely involve all these stakeholders when considering action that affect this type of education. However, there have been calls for dental schools to consider the “student voice” in educational policy.¹⁹ We should be clear that our position is that institutions have moral obligations and

are morally accountable for their decisions. The literature supporting the notion of institutions as moral agents is lengthy and robust but beyond the scope of this paper. It is our position that dental schools, in making ethical decisions about educational policy must include the concerns of all stakeholders in the issue. It would be hard to argue that the student-as-patient concerns supersede the concerns of all other stakeholders. The concerns about the health and well-being of the student-as-patient are most certainly important but only part of the story.

III.2 What counts as a benefit?

Given that there are multiple stakeholders in the conversation, we must accept a much broader notion of what counts as a benefit in this situation. What each stakeholder considers to be a benefit of the practice of student-to-student training must necessarily be considered separately such that the total of potential benefits can be legitimately weighed against total of risks and costs of the practice. We must also note that benefits can include both potential and actual benefits. The reality is that potential benefits

The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS

may never accrue, and actual benefits are sometimes difficult to quantify. Still, we can make a good-faith effort in these discussions to include benefits that are reasonably important to the discussion. We have already established that any dental therapeutic benefit is unavailable to the student-as-patient. Let us now consider the other stakeholder benefits.

Benefits to the Student-as-Student:

Various authors have pointed to potential educational and personal benefits of the students involved in this type of training, some are potential, and some have been empirically measured.

1. **Safe environment:** The student has the benefit of performing a procedure for the first time with close supervision wherein direct feedback can be given immediately and without embarrassment.^{2,6}
2. **Competency and Confidence:** The student gains competency in the procedure before their first clinical encounter with the public.^{2,12,20}
3. **Anxiety:** The student gains confidence in the procedure thus improving their performance and reducing their anxiety before their first clinical encounter with a patient.^{2,4,12,21}
4. **Empathy:** The student gains insight and empathy into the experience from a patient perspective. They are better able to communicate expectations to patients and alleviate anxiety in the patient.^{2,4,12,21}
5. **Professionalism:** The student gains valuable experience in being a professional: learning the process of informed consent, maintaining confidentiality, standards of care and communication skills.
6. **Sacrifice:** The student gains valuable training in what it means to be a professional, namely, that they will be called upon to make

sacrifices for the benefit of their patients and others. In becoming a dentist, one takes on a variety of obligations that necessarily entail sacrifices. For example: dentists are obliged to make themselves available for emergency treatment of the patients in their practice. This automatically means that there will be times that the dentist will be called away from family, friends and other pursuits to attend to this obligation, i.e., they must sacrifice personal needs and wants. There are other sacrifices that one accepts in becoming a professional including the increased risk of contracting diseases, the risk of being sued and the loss of autonomy in certain situations. The student's first sacrifice might well be participating in something that exposes them to slightly more risk than they usually would have while keeping the best interests of future patients in mind. For a student to object to the practice of student-to-student training simply because it is inconvenient or disagreeable is not a professional attitude. Students are largely insulated from professional obligations and sacrifice in the student clinic as the faculty and university assume all legal and professional duties for patient care. Student-to-student training is an excellent introduction to the other sacrifices that they must eventually make to become a dental professional.

7. **Student's voice is heard:** Surveys show that students overwhelmingly desire this type of training.^{6,11,19} Having their educational preferences heard and respected is of no small benefit.

Benefits to the University

For the university, there is little question that any educational practice that enhances the educational mission of the school, namely, ensuring competency upon graduation, is of benefit. Schools clearly be-



The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS

lieve that student-to-student training is and has been a valuable educational tool: it might well be the least problematic, least expensive, most comprehensive, and most effective way to accomplish the school's goals in this area. Such competencies as professionalism, communication skills, and ethics are built into the process of student-to-student training and are all part of the expressed goals of the school's accreditation process. So much more is at stake educationally as listed above in the student-as-student benefits.

Benefits to the Faculty

For the faculty, one must keep in mind that it is only under their supervision and their professional license that any patient care by students can take place at all. Any educational practice that enhances the faculty's comfort and confidence in allowing students to treat other patients would have to be considered a benefit. Moreover, the nature of student-to-student training affords a level of interaction with the student that is not ordinarily available with patients in the school's clinic. In our experience, faculty members feel freer to give more immediate feedback to students than they would in a normal school clinical setting. Clinical faculty often need to talk to students away from the patient in order to support the student-patient relationship; this is often awkward and not as effective, in our opinion, as pointing out issues as they happen. Though this type of teaching satisfaction is difficult to estimate we think it is significant; the lack of research on the subject merely points out how little this important stakeholder has been considered.

Benefits to the Public

What is too often over-looked in dental education curriculum development is the impact that the curriculum decisions will ultimately affect the public, i.e., the patients for whom care will ultimately be provided. There is no doubt that there is an implied covenant between the public and the schools that

the public's interests will be protected. These decisions are unavoidably ethical ones as they will have an impact on the safety of the public. The public defers to and trusts that dental educators will do their job and not graduate anyone that does not meet a certain standard: they trust in the degree on the wall. Unfortunately, the public, arguably the most important stakeholder here, is rarely included in talks about curriculum development. What would the general public think about student-to-student training? Their voice simply has not been heard. It isn't hard to imagine that if asked, they most assuredly would like the idea of students practicing on each other before they begin practicing on the public. Would the public think that the risks to the student-as-patient is acceptable given the ultimate objective of producing dentists that pose as little risk as possible to them? This is an empirical question, but our assumption is that the answer is in the affirmative.

Benefits to the Dental Profession

The dental profession has an ethical obligation to oversee the training and education of its members and thus has an important stake in this issue. The Commission on Dental Accreditation (CODA), an extension of the leading dental professional organization, the American Dental Association (ADA) serves the dental profession by developing accreditation standards that promote and monitor the continuous quality and improvement of dental education programs. CODA relies on educational experts in the field to establish these standards. The benefit to the profession of student-to-student is that it assures that new practitioners are properly trained and ready to treat the public. The practice of student-to-student training is a time-tested process that assures minimal competency in the essential skill of local anesthesia administration. No research has shown that it is an ineffective method of training, and no educational research has shown that alternative methods of instruction are equal to or superior.

III.3 The risks, costs, and benefits analysis of student-to-student training.

With this expanded notion of relevant stakeholders and benefits, we can now take the final step in the ethical analysis of the issue. Do the potential and actual benefits of student-to-student training outweigh the risks and costs? We realize that we have identified many benefits that have yet to be empirically validated. Future discussion of this topic will need to incorporate findings from educational studies that try to answer these questions. Weighing risks, costs and benefits unavoidably relies on judgment. There is no formula here for determining this judgment. We can only hope that reasoned debate, informed by empirical research will continue to shed light on the subject and reasoned debate will further evolve the consensus on what ought to be done.

The risk and costs to the student-as-patient have been discussed and documented. We see minimal or no risks and costs to the student-as-student in continuing this practice; students overwhelmingly agree that it is an invaluable learning experience and in no way detracts from other educational activities. Currently, we see no risk or costs to the public in the practice of student-to-student training. As for universities, we appreciate that they are perpetually under legal threat from students, and this must be considered as a risk. Students may, and no doubt have, sued their schools for damages based on coercion or breaches of confidentiality or physical complications of the practice. We suggest that if this is the only consideration in discontinuing the practice and not a part of a more extensive analysis of the risks, costs and benefits outlined here it is not ethically justifiable. We believe that the economic concerns of the university should not be a deciding factor in this discussion.

We see no risk to the profession in continuing this practice. On the contrary, the risk and ultimate cost to the profession in discontinuing this practice is an erosion of public trust in its ability to maintain proven educational standards.

Given the many benefits of student-to-student training to each stakeholder and the relatively few risks and costs to these stakeholders, we conclude that

the practice of student-to-student training has more benefits than the risks and costs and is therefore ethically justified.

IV. Our prescription for an ethical approach to student-student training.

What is the most ethical educational environment for student-to-student training? We will present in a follow-up paper a detailed prescription for the specific conditions under which student-to-student training can be ethically accomplished. For now, we outline the considerations:

1. Students participating in student-to-student training should be treated as full-fledged patients.
2. Students must be fully informed and consent to participation.
3. Students must be given the option of not participating in the training without academic repercussions.
4. Student-to-student training should be augmented by other teaching modalities such as using virtual reality platforms, injecting on manikins and injecting on cadavers.

Conclusion

With the holistic perspective regarding what counts as a benefit and who counts as a stakeholder outlined above, we maintain that the widespread practice of student-to-student training in dental schools is, indeed, ethically justifiable when specific basic steps are taken to ensure that students have every option not to participate. Moreover, schools that choose to discontinue this practice without involving the students, faculty, public, and the profession, who are the stakeholders in any such decision are acting in an ethically unjustifiable fashion. Too much educational advantage and patient benefit is to be lost if schools take a narrow perspective on student-to-student training. Future discussions about the ethics of student-to-student training will need to incorporate the results of empirical studies that compare student-to-student training with other modalities of local anesthesia administration education.

The Ethical Basis for Student-to-Student Training in Dentistry

Larry E. Jenson, DDS, MA and Joel M. White, DDS, MS

REFERENCES

1. Sjöström M, Brundin M. The Effect of Extra Educational Elements on the Confidence of Undergraduate Dental Students Learning to Administer Local Anaesthesia. *Dent J (Basel)*. Jul 1 2021;9(7)doi:10.3390/dj9070077
2. Wong G, Apthorpe HC, Ruiz K, Nanayakkara S. Student-to-Student Dental Local Anesthetic Pre-clinical Training: Impact on Students' Confidence and Anxiety in Clinical Practice. *J Dent Educ*. Jan 2019;83(1):56-63. doi:10.21815/jde.019.007
3. Tomruk C, Oktay İ, Sengift K. A survey of local anesthesia education in Turkish dental schools. *J Dent Educ*. Mar 2013;77(3):348-50.
4. Kuscu OO, Kucuktepe C, Caglar E, Cildir SK, Hacinlioglu N, Sandalli N. Role of 'student-to-student local analgesia administration' on undergraduate students' opinions regarding 'pain-free local analgesia technique' in children. *Eur J Dent Educ*. Aug 2013;17(3):185-9. doi:10.1111/eje.12040
5. Aboytes D, Calleros C. Learners' perceptions of practices in local anesthesia education. *Canadian Journal of Dental Hygiene*. 01/01 2017;51:75-79.
6. Hossaini M. Teaching local anesthesia in dental schools: opinions about the student-to-student administration model. *J Dent Educ*. Sep 2011;75(9):1263-9.
7. Brand HS, Tan LLS, van der Spek SJ, Baart JA. European dental students' opinions on their local anaesthesia education. *European Journal of Dental Education*. 2011;15(1):47-52. doi:https://doi.org/10.1111/j.1600-0579.2010.00633.x
8. Rosenberg M, Orr DL, 2nd, Starley ED, Jensen DR. Student-to-student local anesthesia injections in dental education: moral, ethical, and legal issues. *J Dent Educ*. Jan 2009;73(1):127-32.
9. Brand HS, Kuin D, Baart JA. A survey of local anaesthesia education in European dental schools. *Eur J Dent Educ*. May 2008;12(2):85-8. doi:10.1111/j.1600-0579.2008.00505.x
10. Dower JS. A survey of local anesthesia course directors. *Anesth Prog*. Summer 1998;45(3):91-5.
11. Lee JS, Graham R, Bassiur JP, Lichtenthal RM. Evaluation of a Local Anesthesia Simulation Model with Dental Students as Novice Clinicians. *J Dent Educ*. Dec 2015;79(12):1411-7.
12. Wong G, Apthorpe HC, Ruiz K, Nanayakkara S. A Tale of Two Teaching Methods: Students' Clinical Perspectives on Administering Dental Local Anesthetics. *J Dent Educ*. Feb 2020;84(2):166-175. doi:10.21815/jde.019.171
13. Holden A. The Use of Students as Surrogates: The Ethical, Legal and Professional Issues of Student-Student Practical Learning in Dental Education. *J Law Med*. Feb 2018;25(2):380-387.
14. Rees CE, Wearn AM, Vnuk AK, Sato TJ. Medical students' attitudes towards peer physical examination: findings from an international cross-sectional and longitudinal study. *Adv Health Sci Educ Theory Pract*. Mar 2009;14(1):103-21. doi:10.1007/s10459-007-9094-y
15. Wearn AM, Rees CE, Bradley P, Vnuk AK. Understanding student concerns about peer physical examination using an activity theory framework. *Med Educ*. Dec 2008;42(12):1218-26. doi:10.1111/j.1365-2923.2008.03175.x
16. Goldberg E. She Didn't Want a Pelvic Exam. She Received One Anyway. (Published 2020). 2020-02-17. <https://www.nytimes.com/2020/02/17/health/pelvic-medical-exam-unconscious.html>
17. Daubländer M, Müller R, Lipp MD. The incidence of complications associated with local anesthesia in dentistry. *Anesth Prog*. Fall 1997;44(4):132-41.
18. Ozar DT, Sokol DJ. *Dental Ethics at Chairsides: Professional Principles and Practical Applications, Second Edition*. Georgetown University Press; 2002.
19. Subramanian J, Anderson VR, Morgaine KC, Thomson WM. The importance of 'student voice' in dental education. *Eur J Dent Educ*. Feb 2013;17(1):e136-41. doi:10.1111/j.1600-0579.2012.00773.x
20. Brand HS, Baart JA, Maas NE, Bachet I. Effect of a training model in local anesthesia teaching. *J Dent Educ*. Aug 2010;74(8):876-9.
21. Chandrasekaran B, Cugati N, Kumaresan R. Dental Students' Perception and Anxiety Levels during their First Local Anesthetic Injection. *Malays J Med Sci*. Nov-Dec 2014;21(6):45-51.

Submitting Manuscripts for Potential Publication in *eJACD*



The communication policy of the College is to “identify and place before the Fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. The goal is to stimulate this community to remain informed, inquire actively, and participate in the formation of public policy and personal leadership to advance the purpose and objectives of the College.”

Manuscripts for potential publication in the *E-Journal of the American College of Dentists* should be sent as attachments via e-mail to Suzan Pitman at Suzan@acd.org. In the submission cover letter, please confirm that the manuscript or substantial portions of it or prior analyses of the data upon which it is based have not been previously published and that the manuscript is not currently under review by any other journal. Submissions must include:

1. The full name of each author;
2. E-mail address, mailing address, fax number and phone number for each author;
3. Degrees and institutional affiliation of each author; and
4. Statement of responsibility from each author indicating what they have contributed to the document.

Submissions should:

1. Be between 1500 and 3000 words in length;
2. Use inclusive language including gender neutral pronouns unless referring to specific persons;
3. Sufficiently de-identify any descriptions of patients and/or clinical encounters or have written consent from the individual or individuals;
4. Include disclosure of any conflicts of interest;
5. Designate one corresponding author;
6. Follow the most recent edition of the American Medical Association Manual of Style; and
7. All published references should be cited in the text and numbered consecutively. No references should be cited in the abstract. Each reference should be cited only once; on subsequent citations, the original number should be used.

Review Process:

The process will include: review by the editor and in some instances a “guest editor” which will occur within 21 days of receiving a manuscript to determine whether it suits the general content and quality criteria for publication in the *eJACD*. All manuscripts that are suitable for publication will undergo blind-peer review. Usually there are two anonymous reviewers comprised of subject matter experts and board members of the College and/or the *eJACD* editorial board. Because all peer reviewers are volunteers, review may take between 4 and 6 weeks. Once reviewer comments are received by the editor a decision will be made to: accept, accept with minor revisions, accept with major revisions, or reject. *eJACD* reserves the right to edit manuscripts to ensure conciseness, clarity and stylistic consistency.

ACD

American College of Dentists