# The Challenge of Medical Dental Integration

Oral health in primary care

Harkin Institute

November 15, 2019


# Learning Objective(s)

Participants will gain knowledge in:

- Rationale for integration of oral health and primary care
- Scientific evidence for oral systemic relationships
- Economic data to support integration


# The importance of Policy, Legislation, and education

- “For the past 50 years, the US health care system has been focused primarily on promoting and supporting the technological advancement of medicine. That focus has cured disease, enhanced therapies, and saved lives. But as that focus, and the success it has achieved, has dominated what and how we pay for health care, we have failed to appreciate the changing nature of illness, and the systemic gaps in care delivery that have been created by this approach”. House No. 4134 October 18, 2019
- The opioid epidemic is a prime example of the use of drugs rather than supportive and sustained therapy.

# Events of 1973

- “What kind of doctor are you anyway? “ Patient at Mass General Hospital.

- Secretariat and the 1973 Triple Crown. Importance to State practice Acts

# Growing Interest

Multiple Reports

- IOM Report Dental Education at the Crossroads 1995
- Surgeon Generals Report 2001
- 21st Century Gies Report
- Roundtable Report. National Academy
- Call for 2nd Surgeon General Report
- Sante Fe Group Medicare initiative
- Lancet Report 2019

# Atul Gawande Slow Ideas

- Introduction of ether anesthesia vs. adoption of asepsis
- Dental implants vs. HIV AIDS
- Integration of oral health into general health

# My Big Picture Take

Commentary

## Guest Editorial

**Our dental care system is stuck**

And here is what to do about it

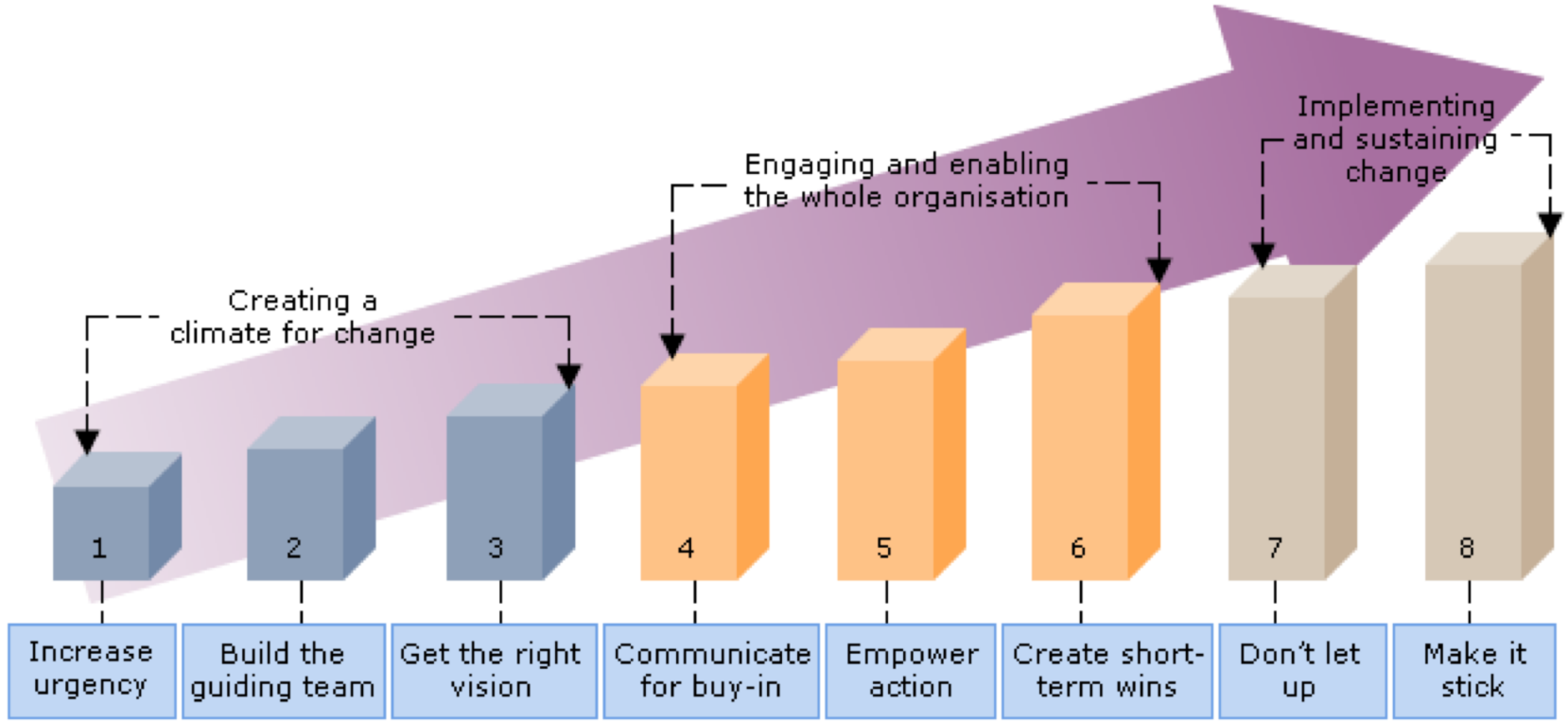
Marko Vujicic, PhD

**We will not see major expansions in dental care use and sustained improvements in oral health in the coming years, especially among those with the highest needs, under the status quo model. The dental care system needs major reforms.**

**Box. Reforms needed to drive major expansions in dental care use and meaningful, sustained improvements in oral health.**

| | |
|---|---|
| **Address the Dental Coverage Gap** | Consider dental care an essential health benefit for all age groups. Provide comprehensive dental coverage in public health insurance programs and as a core benefit in private health insurance coverage. |
| **Define and Systematically Measure Oral Health** | Define and systematically measure oral health in ways that are meaningful and relevant for both patients and providers, but mostly for patients. Measure what is done for patients, not just what is done to patients. |
| **Tie Reimbursement, Partly, to Outcomes** | Make some small portion of provider compensation dependent on oral health outcomes or, at a minimum, on some intermediate measures that influence outcomes and are more within the direct control of providers. |
| **Reform the Care Delivery Model** | Get dentistry out of its care delivery silo. Engage the rest of the health care system to nudge people into dental care. Rise above scope of practice turf wars fueled by fee-for-service payment. |

# John Kotter Leading Change



*Perspectives*

# It Is Time for a New Gies Report

**R. Bruce Donoff, D.M.D., M.D.**

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After the Flexner report on medical education was issued in 1910,[1] the Carnegie Foundation decided to perform the same service for dental education: survey the field, state the essential facts as they existed, and draw conclusions that might be helpful to those concerned with the profession in the United States and Canada. The process took five years and resulted in the Gies report of 1926, *Dental Education in the United States and Canada*; it remains to this day the most comprehensive and influential review of dental education in the context of a changing profession.[2] Although probably less widely read than the 1995 Institute of Medicine (IOM) report, *Dental Education at the Crossroads*,[3] the Gies report is still so relevant today that it must form the basis of any discussion of the continuum journalism schools are now undergoing. This experience has given me a new perspective from which to think about dental education.

Thus, my specific aims for this article are to:

1. place dentistry and dental education in the context of a constantly changing environment, drawing on general business theories of innovation and disruption; and
2. revisit the Gies report and explore the idea that another similar report is needed.

## Changed Circumstances and Disruptive Innovations

When the impossible occurred and the Boston

# Integrating Oral and General Health Care

Bruce Donoff, D.M.D., M.D., John E. McDonough, Dr.P.H., M.P.A., and Christine A. Riedy, Ph.D., M.P.H.

During World War II, the U.S. armed forces faced a surprising obstacle to recruiting sufficient field-ready personnel for the war effort: 10% of potential recruits failed service requirements related to oral health (such as having six opposing teeth), and many who met the requirements had severely compromised teeth that required tremendous resources to repair. So at the end of the war, "many dentists, military officers, political leaders, and others vowed to solve the Nation's rampant dental problems."[1] On June 24, 1948, President Harry Truman signed the National Dental Research Act "to improve the dental health of the people of the United States" by establishing the National Institute of Dental Research, now known as the National Institute of Dental and Craniofacial Research (NIDCR).

Yet today, Americans still face serious challenges in oral health that result in lost work and school hours and impose heavy costs on the health care system and society.[2] Furthermore, there is evidence that coordinating and integrating oral health into medical coverage and care reduces costs, especially for patients with chronic diseases such as diabetes or cardiovascular disease.[3] We believe that it's time to mobilize once again to improve oral health in the United States, this time in a more fundamental way — by ending medicine's artificial and harmful separation between the mouth and the rest of the body. New and compelling evidence suggests that in order to prevent disease and improve health, oral health must be a core component of comprehensive health care.

The Surgeon General's report on oral health in 2000 concluded that oral health problems not only reflect general health conditions; they can exacerbate and sometimes even trigger them.[4] Periodontal inflammation affects diabetes, heart disease, and chronic obstructive pulmonary disease, as well as perinatal health in mothers and infants.[2,4] Investment in oral health improves general health and reduces medical costs.[3] The 2007 case of Deamonte Driver, a 12-year-old Maryland boy who died when bacteria from an untreated tooth infection spread to his brain, generated sufficient awareness and legislative support that dental coverage for children was included in the federal reauthorization of the Children's Health Insurance Program (CHIP) in 2009.

Still, 15 years of research, reports, and recommendations addressing the dental–medical divide have resulted in little serious action to address our country's oral health deficiencies. Although the changes to CHIP have improved access to services for disadvantaged children, we are failing to address the serious oral health needs of adults, even though an increasing percentage of Americans 65 years of age or older have chronic diseases that are affected by poor oral health. Furthermore, disparities in coverage of and access to dental care services result in the imposition of a high-cost burden on hospital emergency departments.[5] We believe that a national effort is needed to integrate oral health

# Introduction to "Advancing Dental Education in the 21st Century" Project

**Howard L. Bailit, DMD, PhD; Allan J. Formicola, DDS, MS**

*Abstract:* In 1926, the Carnegie Foundation for the Advancement of Teaching published a report prepared by William J. Gies, PhD, a professor of biochemistry and founder of the Columbia University College of Dental Medicine. The Gies report examined the current status of dental education in the United States and Canada and made recommendations for a new direction. This report led to major improvements in dental education and research and was a critical factor in making dentistry a learned profession. Dental and allied dental education are now challenged by a new set of issues related to financing education, improved oral health, more effective treatment technologies, and a rapidly changing delivery system. In an effort to meet these challenges, this strategic planning project first examined the current status and future trends that are likely to impact the dental profession over the next 25 years. The project was organized into six sections, and 50 authors were invited to prepare 38 articles to address these issues. The executive summaries for each section are being published in the August and September 2017 issues of the *Journal of Dental Education,* and the background articles are being published in online supplements to those issues. In the next phase of the project, information from the articles will be used to make strategic recommendations to assist dental schools and allied dental education programs in preparing graduates for practice in 2040 and to meet their institutions' missions for scholarship and service. This introduction presents the project rationale, provides a list of the published articles, and acknowledges the organizations that supported this effort.

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*Keywords:* dental education, allied dental education, strategic planning

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In 1926, William Gies, PhD, a professor of biochemistry at Columbia University and founder of the Columbia University College of Dental Medicine, published a report, *Dental Education in the United States and Canada,* that had a profound impact on dental education and, in turn, the dental profession.[1] Funded by the Carnegie Foundation, Gies argued that, to best serve the oral health needs of the American people, dentistry should be considered a specialty of medicine and that dental schools should be based in research-intensive universities and have full-time faculties dedicated to teaching and research. The Gies report also called for dental students to have the same solid foundation in the basic and clinical sciences as medical students. To a large extent, Gies's recommendations were followed: the nation's oral health has improved greatly, and dentistry is a respected "learned" profession with dental education provided in accredited academic institutions.

Today, a new and perhaps equally serious set of challenges face dental and allied dental education. Unlike the period of the Gies study, historic market-driven changes are currently taking place in the dental delivery system that will have a significant impact on dental education. As a result, dental leaders called for new research to set a new course for dental education.[2,3]

The ultimate goal of the "Advancing Dental Education in the 21st Century" project is to develop practical strategies for dental and allied dental educational institutions to address long-range challenges related to finances, education, scholarship, diversity, and changing disease and practice trends. This project is a strategic planning effort and does not follow the research model of the biomedical sciences. The time frame for this project is the next 25 years—projecting out to 2040. Dental schools and allied dental programs are complex organizations, and it will likely take 25 or more years for most to adapt to a



CVS and Aetna

Amazon-JP Morgan-Berkshire Hathaway

Dental Service Organizations

Value-Outcomes

Disruptive Innovation

Blue Ocean Strategies

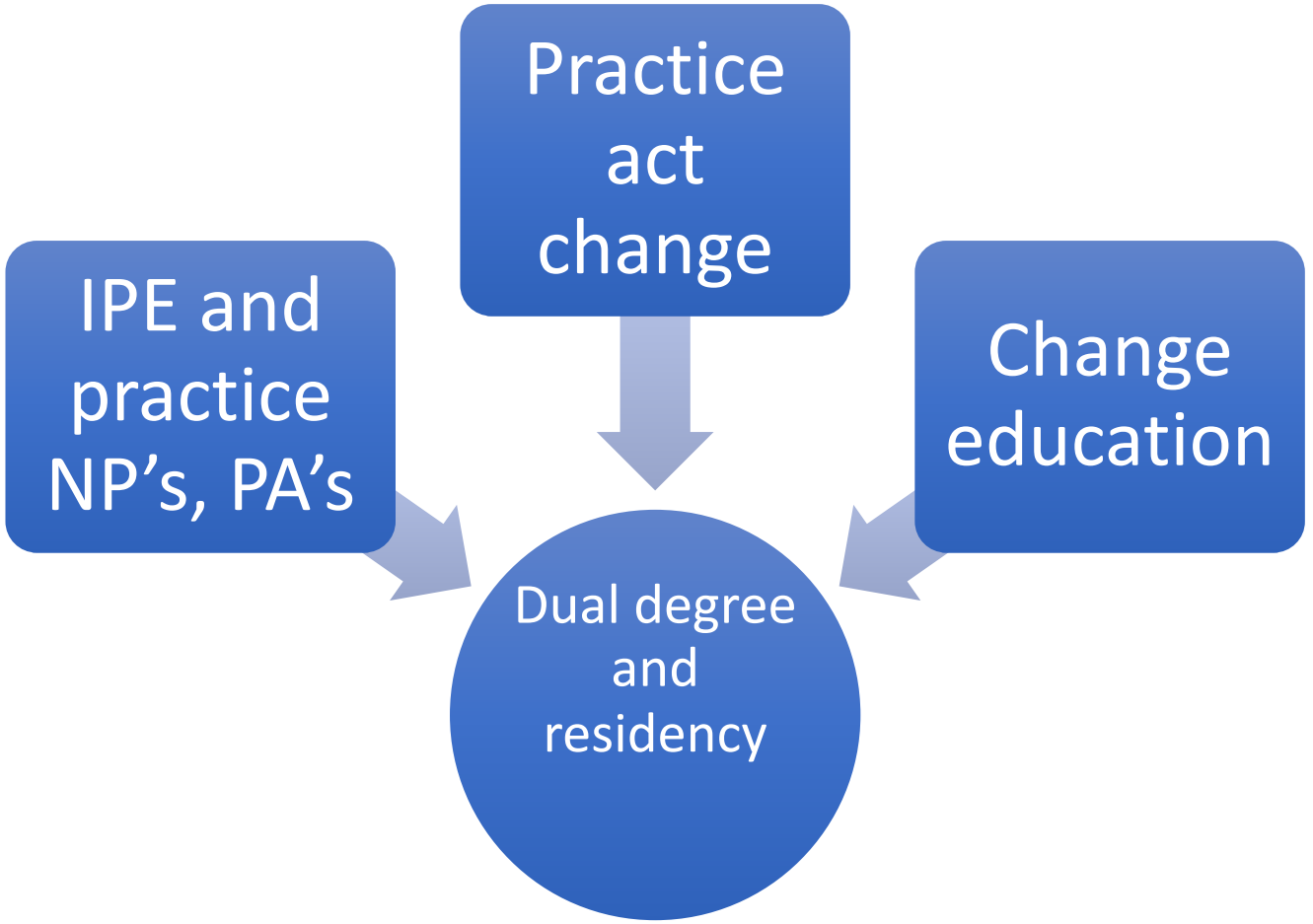
# Main issues for change

- Access and disparities of care
- Medical treatment of surgical disease – advanced science
- Aging of our population, increased chronic diseases
- Relieve the primary care shortage

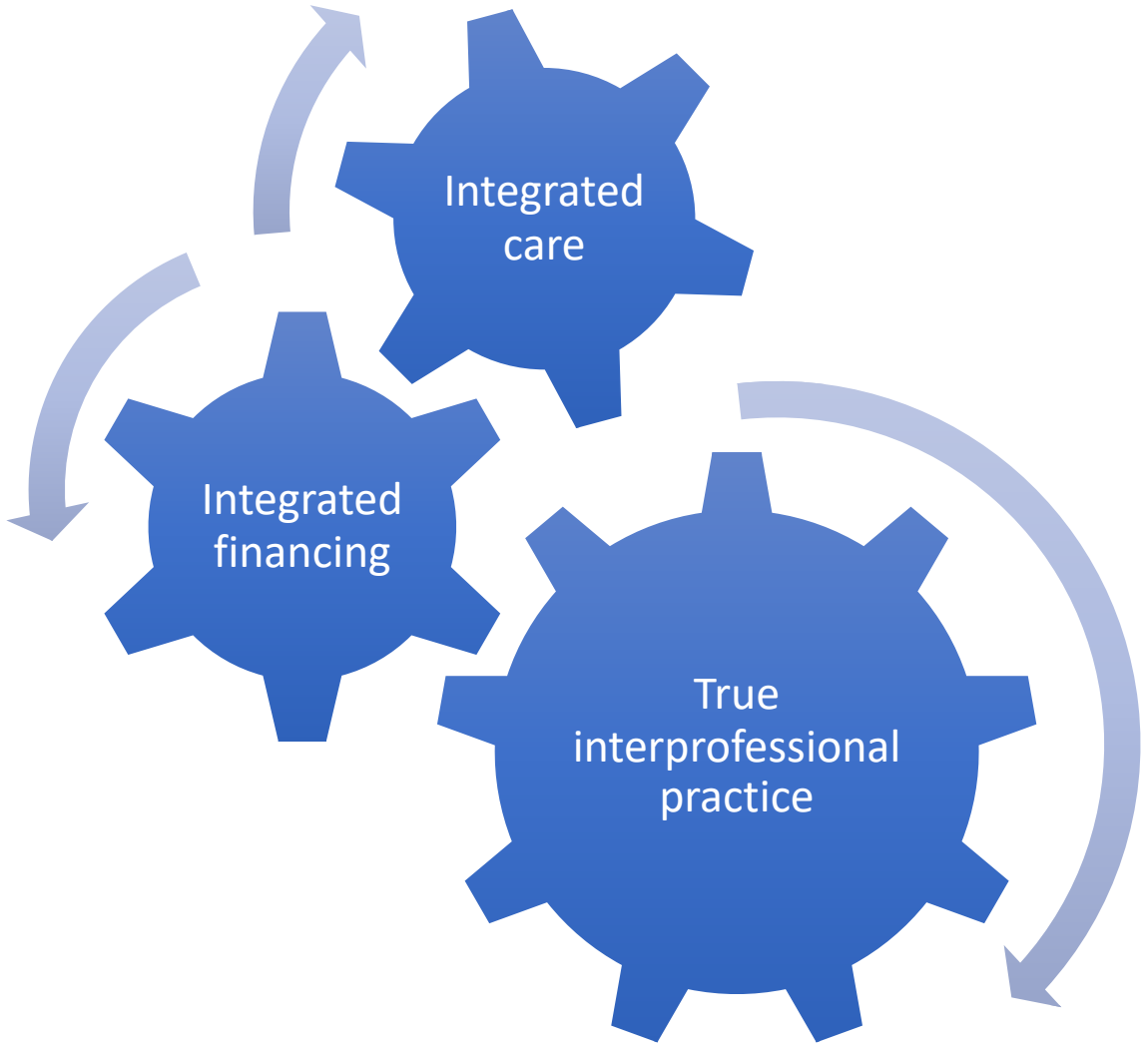
CIPCOH
Center for Integration of Primary Care and Oral Health

HARVARD
School of Dental Medicine Initiative
INTEGRATING ORAL HEALTH & MEDICINE

# Options for change



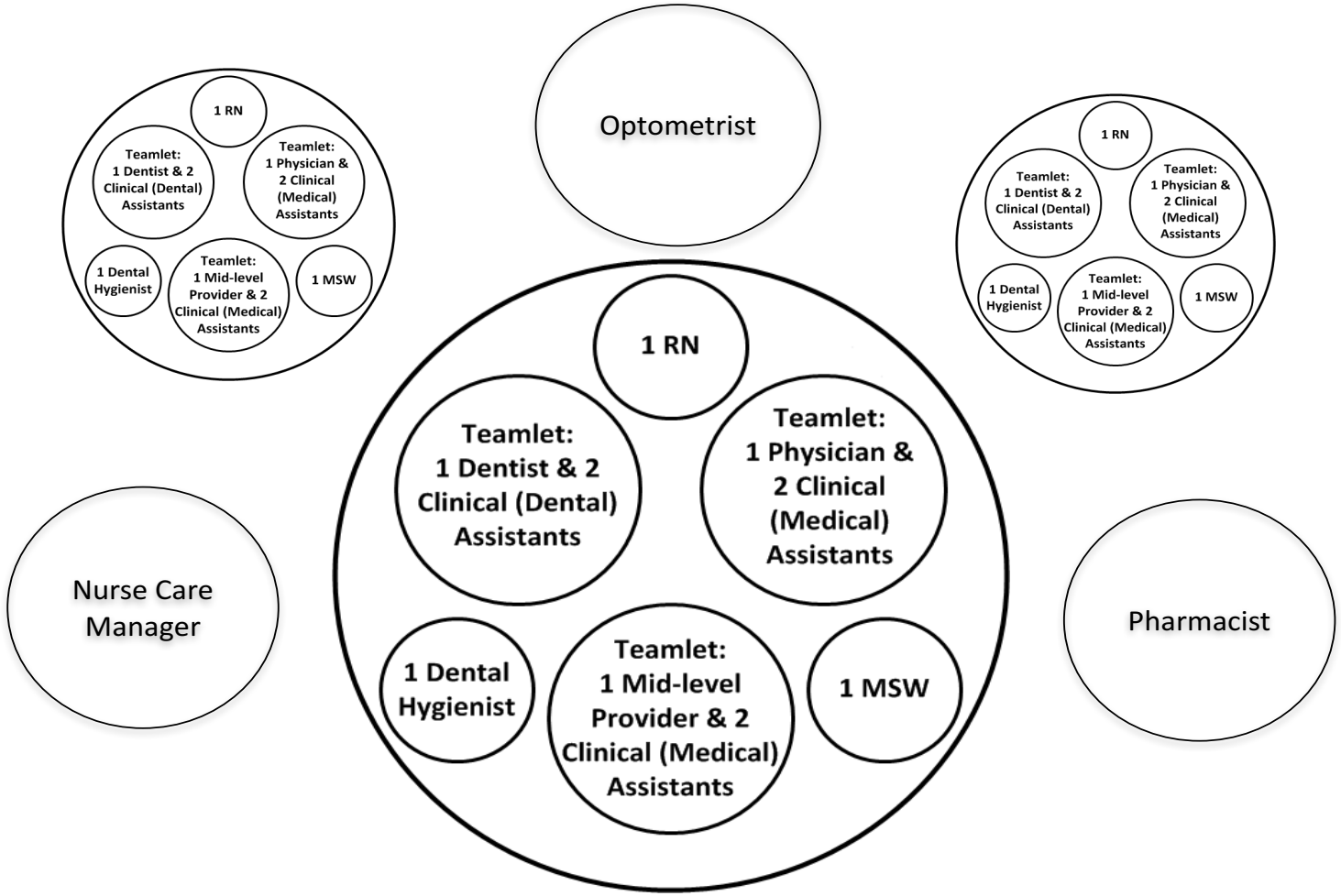
# Practice of the future

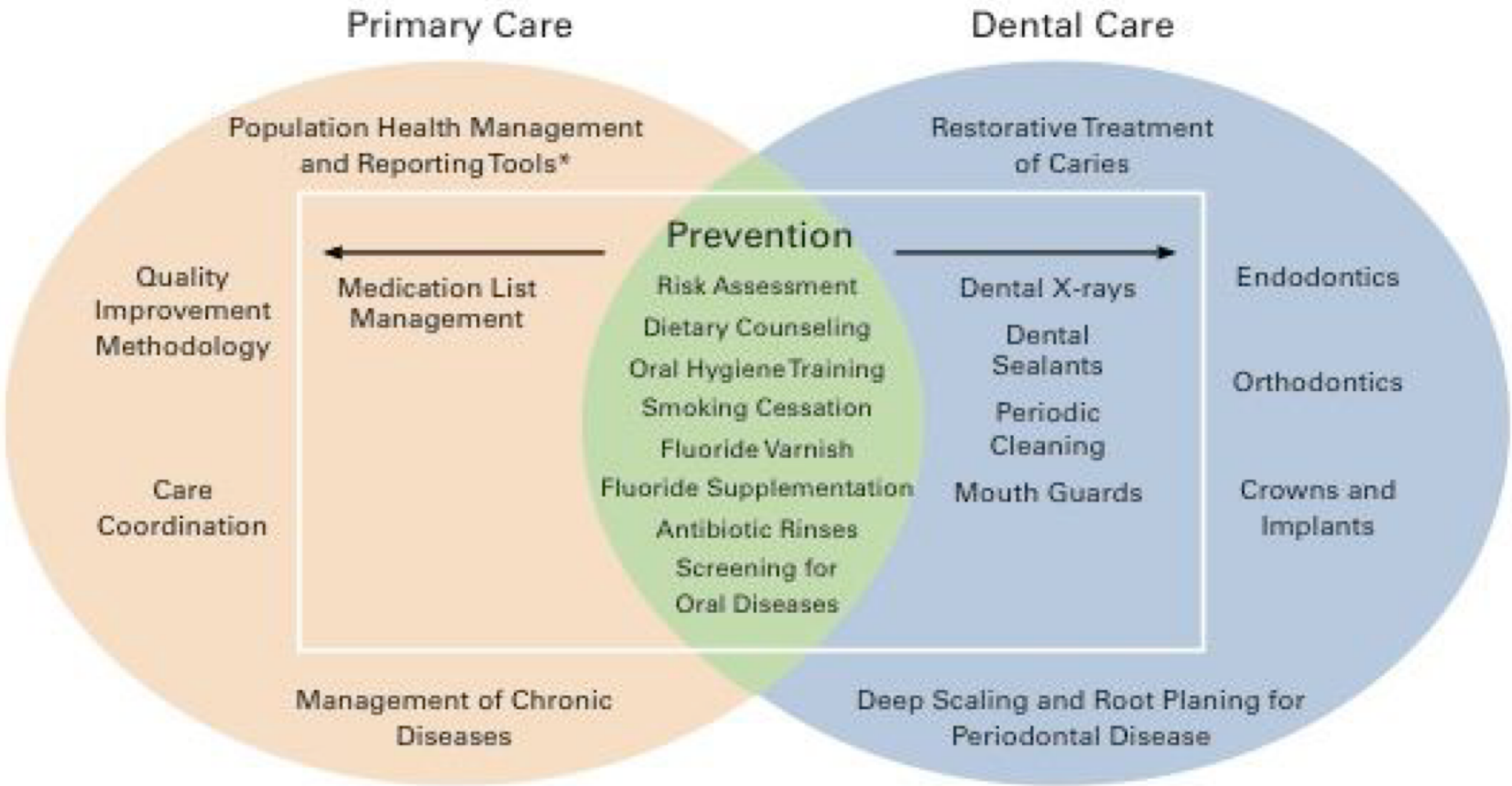


# Three Teams with Shared Resources

CENTER FOR PRIMARY CARE
HARVARD MEDICAL SCHOOL

HARVARD School of Dental Medicine

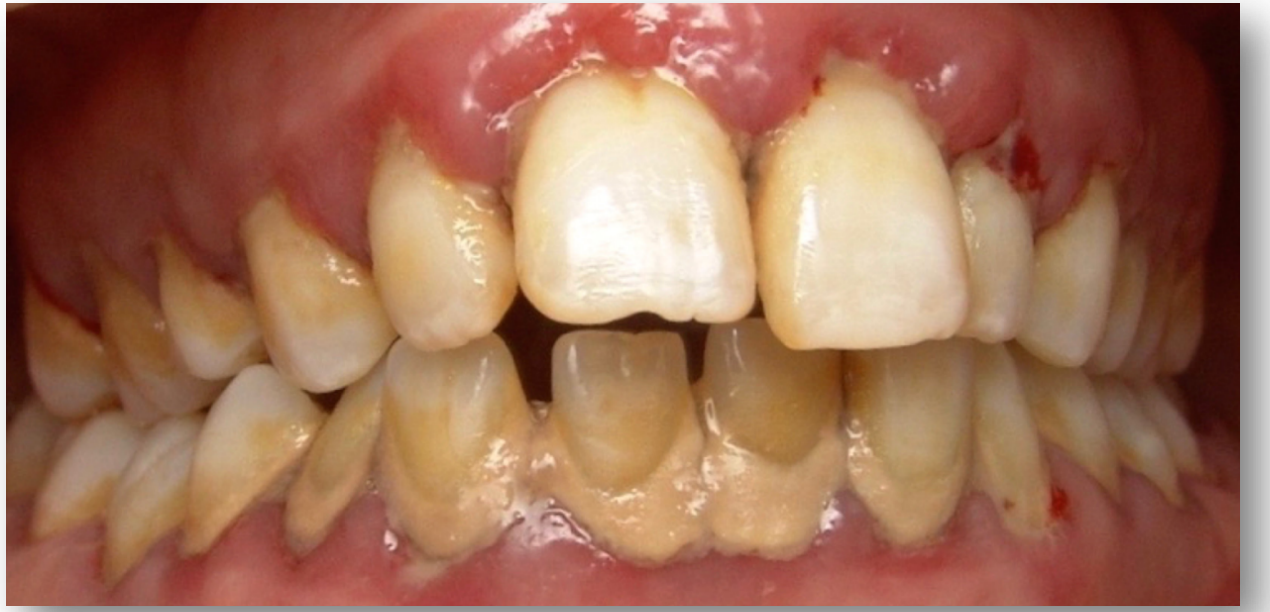


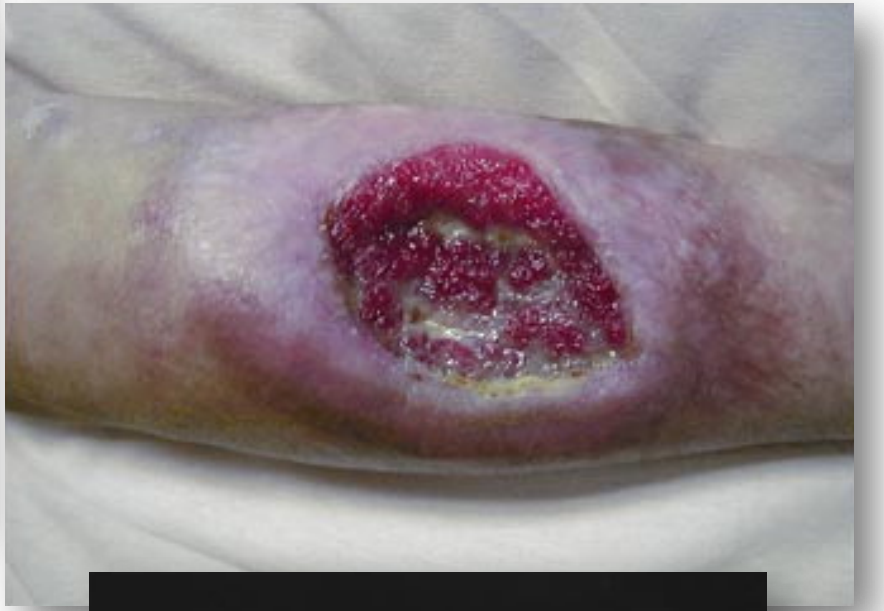


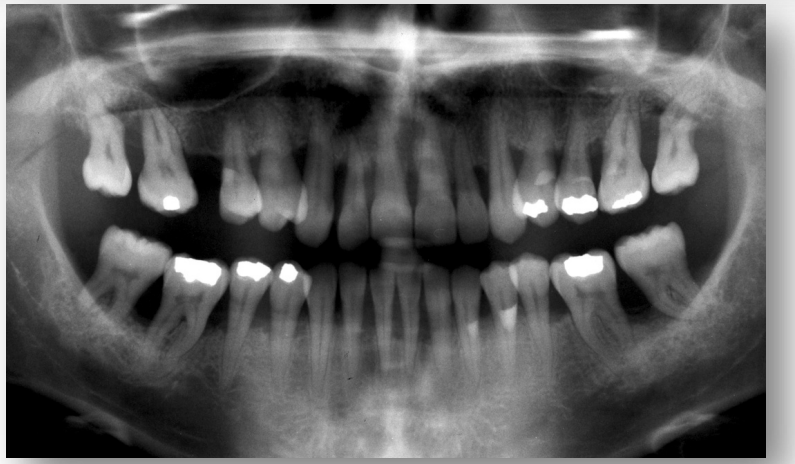

*Including structured EHR data and diagnostic codes, disease registries, and other tools

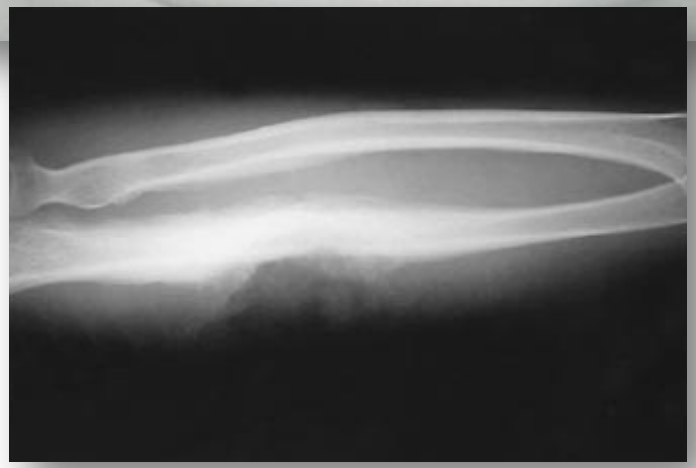
# The Cleft Palate Team – A Historical Review

- In 1930 at least four factors which together or separately had a notable influence towards producing changes in the care of people with cleft palates
- The concept of the whole child
- The study and application of knowledge about growth and development
- The inadequacies arising out of the rigid compartmentalization developing in specialty medical practice
- The use of the team to deal with complex medical problems









Tice  New England Journal of Medicine 2002

# New pathways-the future disrupts the present

- Oral health in primary care
- Nurse practitioners
- Physician assistants
- Dentists – Chronic disease management in dental practice- change in scope of practice - oral physicians
- DMD/DDS MD – family medicine / primary care ( modeled after oral and maxillofacial surgery MD general surgery program of 1971)

# The Boston Globe

TUESDAY, NOVEMBER 10, 2015 THE BOSTON GLOBE

**Pulse of Longwood**

## For these dentists, you're more than your mouth

MELISSA BAILEY | STAT

A man walked into Harvard's dental clinic for a root canal — and left with a warning about high blood pressure that may have saved his life.

That dramatic intervention took place last spring, leading to the discovery of early kidney disease, according to Dr. Bruce Donoff, dean of the Harvard School of Dental Medicine. It's the kind of story the school aims to replicate as it launches two initiatives that will bring primary care into the dentist's office.

The new programs add to an explosion of initiatives across the country seeking to end the longstanding divide between how we treat the mouth and the rest of the body. At the same time, there is an increasing scientific evidence for how oral health is tied to wider wellness, from infections caused by microbes in the mouth to oral complications of diabetes.

STAT

Harvard's initiatives aim to address what might be a counterintuitive observation: Though the popular conception is that people avoid the dental office out of dread, there are actually many people who see a dentist more than any other health professional. An estimated 19.5 million Americans skipped the doctor's office and saw only a dentist in 2008, according to a study published in the American Journal of Public Health. Dutiful patients may visit a dentist twice a year, giving a dentist the chance to keep tabs on how they are managing chronic diseases — or catch diseases that have gone undiagnosed.

Yet most dentists aren't doing that. They aren't trained to pay attention to the whole body. And the reverse is true, too, Donoff said: In a general physical exam, a physician typically checks out the head, eyes, ears, nose, and throat — but ignores the teeth and gums.

In response, Harvard is reimagining how it trains dental students, aiming to break down what Donoff calls an "artificial and harmful separation" between oral and general health.

In September, the dental school launched a primary care clinic at Harvard's bustling teaching practice, where dentists-in-training treat 14,000 patients per year. Now, for the first time, physicians from

HARVARD
School of Dental Medicine

# A New Integrated Oral Health and Primary Care Education Program in the Dental Student Clinic

SANG E. PARK, DDS, MMSC ▲ FIDENCIO SALDANA, MD ▲ R. BRUCE DONOFF, DMD, MD

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Dr. Bruce Donoff is Dean of the Harvard School of Dental Medicine.

ABSTRACT

**Objectives:** The purpose of the study was to describe the implementation of a new program incorporating primary care education into a predoctoral dental curriculum in the Student Teaching Clinic at Harvard School of Dental Medicine (HSDM) using the primary care rotations for students in a dental setting as a platform for change in our approach to patient care.

**Methods:** A survey of perspectives on the need for primary care medicine in dental education was distributed to all the Deans of Commission on Dental Accreditation (CODA) accredited dental schools in the continental U.S. for a total of 65 eligible schools.

**Results:** Of the 27 responses from the dental school deans, a majority of dental schools already had interprofessional collaborative practices at their schools, with collaborations with physicians and nurse practitioners being most common. Ninety-six percent of responders were supportive of integrating oral health and primary care to improve patient care and regarded primary care training for dental students as a potential method of improving patient care in dental education.

**Conclusion:** As patient care involves multidisciplinary and interprofessional environments with a wide array of health care providers, curricular directions for dental school should explore an education model that incorporates the concepts of primary care medicine.

INTRODUCTION

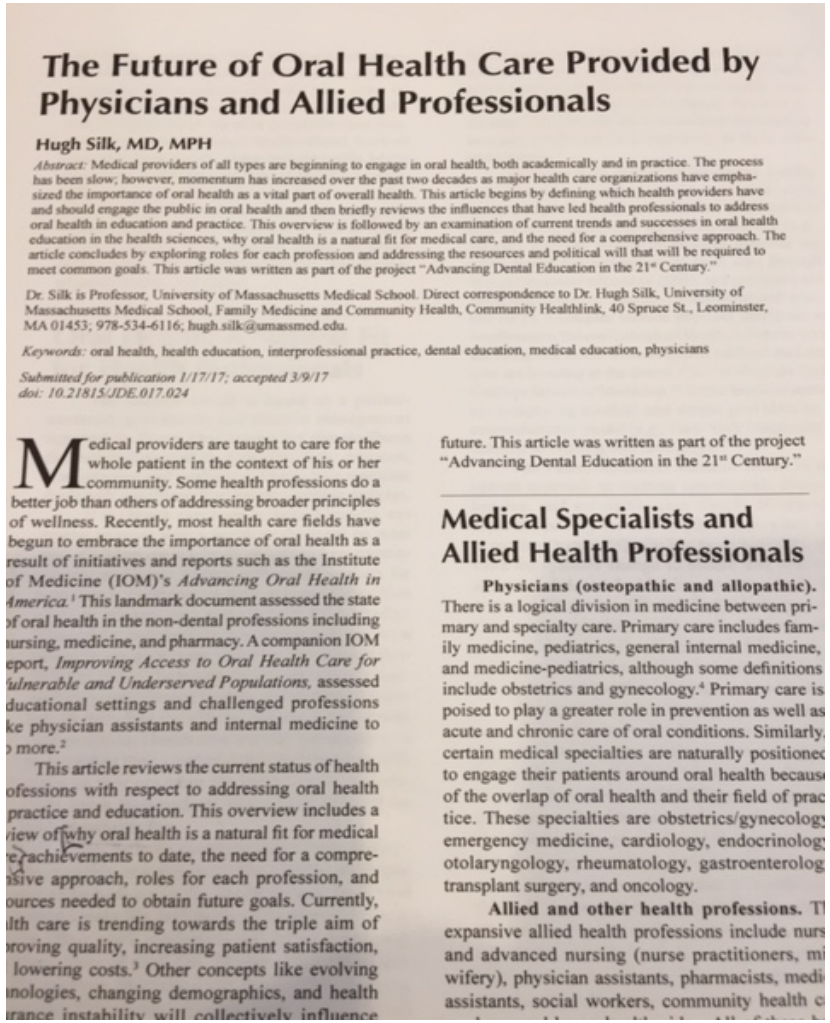
A need to create an innovative and catalytic mechanism for integrating oral health and primary care exists. The goals for greater integration of dental and medical education and practice recommended by the 1995 IOM Report Dental Education at the Crossroads[1] and the 2000 Surgeon General Report on oral health[2] remain elusive. Three major factors now push the agenda for change: advances in science and oral science, the demographic increase in the older population, and the crisis in primary care.[3]

As patient care involves a multidisciplinary and interprofessional environment with a team of health care providers, it is critical in early medical and dental education to introduce students to an interprofessional education program.[4]

The Commission on Dental Accreditation (CODA) has a new standard that has been shaping efforts of dental schools in the direction of showing "evidence of



# The Journal of Massachusetts Dental Society



# The Future of Oral Health Care Provided by Physicians and Allied Professionals

**Hugh Silk, MD, MPH**

*Abstract:* Medical providers of all types are beginning to engage in oral health, both academically and in practice. The process has been slow; however, momentum has increased over the past two decades as major health care organizations have emphasized the importance of oral health as a vital part of overall health. This article begins by defining which health providers have and should engage the public in oral health and then briefly reviews the influences that have led health professionals to address oral health in education and practice. This overview is followed by an examination of current trends and successes in oral health education in the health sciences, why oral health is a natural fit for medical care, and the need for a comprehensive approach. The article concludes by exploring roles for each profession and addressing the resources and political will that will be required to meet common goals. This article was written as part of the project "Advancing Dental Education in the 21st Century."

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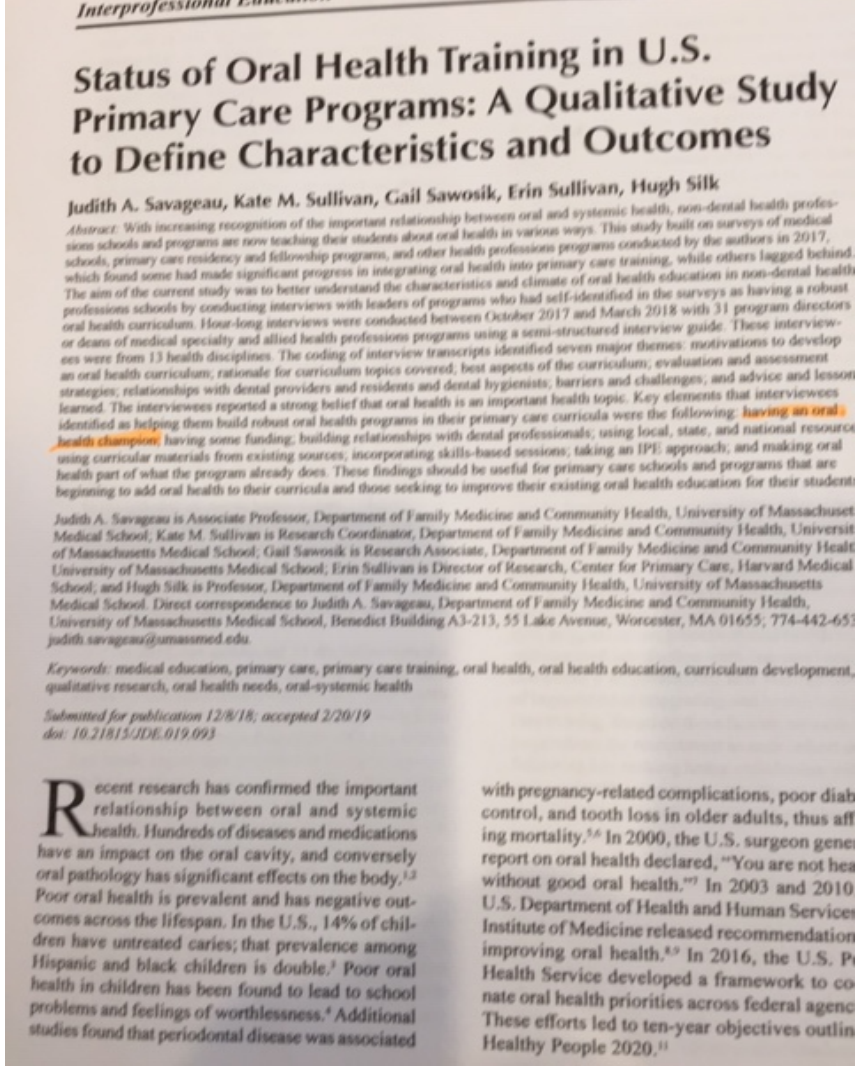
Medical providers are taught to care for the whole patient in the context of his or her community. Some health professions do a better job than others of addressing broader principles of wellness. Recently, most health care fields have begun to embrace the importance of oral health as a result of initiatives and reports such as the Institute of Medicine (IOM)'s *Advancing Oral Health in America*.[1] This landmark document assessed the state of oral health in the non-dental professions including nursing, medicine, and pharmacy. A companion IOM report, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*, assessed educational settings and challenged professions like physician assistants and internal medicine to do more.[2]

This article reviews the current status of health professions with respect to addressing oral health in practice and education. This overview includes a review of why oral health is a natural fit for medical care, achievements to date, the need for a comprehensive approach, roles for each profession, and resources needed to obtain future goals. Currently, health care is trending towards the triple aim of improving quality, increasing patient satisfaction, and lowering costs.[3] Other concepts like evolving technologies, changing demographics, and health finance instability will collectively influence future. This article was written as part of the project "Advancing Dental Education in the 21st Century."

## Medical Specialists and Allied Health Professionals

**Physicians (osteopathic and allopathic).** There is a logical division in medicine between primary and specialty care. Primary care includes family medicine, pediatrics, general internal medicine, and medicine-pediatrics, although some definitions include obstetrics and gynecology.[4] Primary care is poised to play a greater role in prevention as well as acute and chronic care of oral conditions. Similarly, certain medical specialties are naturally positioned to engage their patients around oral health because of the overlap of oral health and their field of practice. These specialties are obstetrics/gynecology, emergency medicine, cardiology, endocrinology, otolaryngology, rheumatology, gastroenterology, transplant surgery, and oncology.

**Allied and other health professions.** The expansive allied health professions include nursing and advanced nursing (nurse practitioners, midwifery), physician assistants, pharmacists, medical assistants, social workers, community health



*Interprofessional Education*

# Status of Oral Health Training in U.S. Primary Care Programs: A Qualitative Study to Define Characteristics and Outcomes

**Judith A. Savageau, Kate M. Sullivan, Gail Sawosik, Erin Sullivan, Hugh Silk**

*Abstract:* With increasing recognition of the important relationship between oral and systemic health, non-dental health professions schools and programs are now teaching their students about oral health in various ways. This study built on surveys of medical schools, primary care residency and fellowship programs, and other health professions programs conducted by the authors in 2017, which found some had made significant progress in integrating oral health into primary care training, while others lagged behind. The aim of the current study was to better understand the characteristics and climate of oral health education in non-dental health professions schools by conducting interviews with leaders of programs who had self-identified in the surveys as having a robust oral health curriculum. Hour-long interviews were conducted between October 2017 and March 2018 with 31 program directors or deans of medical specialty and allied health professions programs using a semi-structured interview guide. These interviewees were from 13 health disciplines. The coding of interview transcripts identified seven major themes: motivations to develop an oral health curriculum; rationale for curriculum topics covered; best aspects of the curriculum; evaluation and assessment strategies; relationships with dental providers and residents and dental hygienists; barriers and challenges; and advice and lessons learned. The interviewees reported a strong belief that oral health is an important health topic. Key elements that interviewees identified as helping them build robust oral health programs in their primary care curricula were the following: having an oral health champion; having some funding; building relationships with dental professionals; using local, state, and national resources; using curricular materials from existing sources; incorporating skills-based sessions; taking an IPE approach; and making oral health part of what the program already does. These findings should be useful for primary care schools and programs that are beginning to add oral health to their curricula and those seeking to improve their existing oral health education for their students.

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*Keywords:* medical education, primary care, primary care training, oral health, oral health education, curriculum development, qualitative research, oral health needs, oral-systemic health

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Recent research has confirmed the important relationship between oral and systemic health. Hundreds of diseases and medications have an impact on the oral cavity, and conversely oral pathology has significant effects on the body.[1,2] Poor oral health is prevalent and has negative outcomes across the lifespan. In the U.S., 14% of children have untreated caries; that prevalence among Hispanic and black children is double.[3] Poor oral health in children has been found to lead to school problems and feelings of worthlessness.[4] Additional studies found that periodontal disease was associated with pregnancy-related complications, poor diab[illegible] control, and tooth loss in older adults, thus aff[illegible] ing mortality.[5,6] In 2000, the U.S. surgeon gene[illegible] report on oral health declared, "'You are not hea[illegible] without good oral health."[7] In 2003 and 2010 [illegible] U.S. Department of Health and Human Service[illegible] Institute of Medicine released recommendation[illegible] improving oral health.[8,9] In 2016, the U.S. P[illegible] Health Service developed a framework to co[illegible] nate oral health priorities across federal agenc[illegible] These efforts led to ten-year objectives outlin[illegible] Healthy People 2020.[11]

Teledentistry
Electronic health records
Teach oral health to nurses and nurse practitioners
Teach oral health to physicians
Expanded duty oral health auxiliaries

# Factors Impacting Integration

- Driving forces
  - Importance
  - Health care disparities
  - Need for oral health champion for curriculum development
- Curriculum topics
  - Smiles for Life program
  - Local faculty members
- Barriers
  - Lack of time and curricula restraints
  - Lack of buy in or faculty interest
  - Lack of dental partners and opportunities for integration

# 3 ideas

1. A fundamental transformation in work
2. Teaming as the engine of change
3. Joint problem-solving IS the work

Michaela J. Kerrissey, PhD, MS

# Benefits with integrating oral into overall health

- ADA health Policy Institute documented  a reduction of $1799 in total health care cost for individuals newly diagnosed with type 2 diabetes when they received peridontal intervention
- Medical cost savings from United Concordia for CAD and stroke of $1090 and $5681  with periodontal treatment and maintenance.
- Savings also in hospitalizations costs.
- These led to formation of Harvard Initiative for Integration for Oral Health and medicine in 2015.

# Approaches for oral and general health integration

- Facilitated referral and follow-up
- Virtual integration via EHR
- Shared financing
- Co-location
- Full integration

2018

THE UNIVERSITY OF IOWA
Public Policy Center

# Medical-Dental Integration in Public Health Settings: An Environmental Scan


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## Contents


Acknowledgements . . . . . 3

Executive Summary . . . . . 4

1. Introduction . . . . . 7

2. Methods . . . . . 8

3. Integration in Clinical Settings . . . . . 11 3-1. Cardiovascular Disease and Oral Health . . . . . 12 3-2. Diabetes and Periodontal Disease . . . . . 17

3-3. Maternal and Child Health . . . . . 27

3-4. Obesity, Nutrition, and Oral Health . . . . . 31

3-5. Tobacco Use, Oral Cancer, and Oral Health . . . . . 34 4. Multimedia Health Campaigns . . . . . 37 5. Co-location of Medical and Dental Services . . . . . 39 6. Health Workforce Innovations . . . . . 41

7. Integrated Insurance Benefits . . . . . 45

8. Health Care Reform . . . . . 47

9. Conclusions . . . . . 48 Appendix A. Data Extraction Form . . . . . 52 Appendix B. Survey of State Oral Health Programs . . . . . 57 Appendix C. Survey of State Chronic Disease Programs . . . . . 60 Appendix D. Survey of Community Dental Programs . . . . . 62 Appendix E. Key Informant Interview Guide . . . . . 65 References . . . . . 67

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social support, may be necessary to improve outcomes.

With five dental sites serving 18 primary care locations, **Neighborcare Health** (Seattle, WA) has limited its dental services to existing patients within their medical clinics.[15] The oral health program at Neighborcare focuses on special populations: high-risk children, pregnant women, HIV patients, and patients with diabetes. For patients with diabetes, bidirectional referrals between primary care and dental care can be initiated in the shared EHR system. Three of the dental sites are co-located with medical facilities and expanded function assistants apply sealants and fluoride varnish, and also place restorations.

Medical and dental services are co-located at **Salud Family Health Center's** 10 sites (Fort Lupton, CO). Salud embeds dental hygienists in the medical clinics, where they are able to provide screenings and preventive services, including fluoride varnish.[58] Although current efforts emphasize oral health screenings for pediatric patients, the hygienists also focus on patients with diabetes (key informant interview, September 8, 2017). Future efforts are planned to specifically target and provide dental care to patients with diabetes in order to help control blood sugar. In addition to these activities in the medical setting, dental providers also test blood sugar levels on all patients with diabetes.

The **United Community and Family Services** organization in California implements bidirectional referrals for patients with diabetes and other chronic conditions.[46] Care is coordinated across the FQHC system comprising three primary care practices, five behavioral health practices, and one dental clinic. In one example of integration, a dental hygienist provides screenings to 1-3 year olds during routine well-child visits at the pediatric primary care clinic.

**Trillium Coordinated Care Organization** (Lane County, OR) was established in 2011 and serves over 90,000 Medicaid members.[67] Trillium is contracted with all four local dental plans to provide integrated care for Medicaid enrollees.

### *Conclusions*

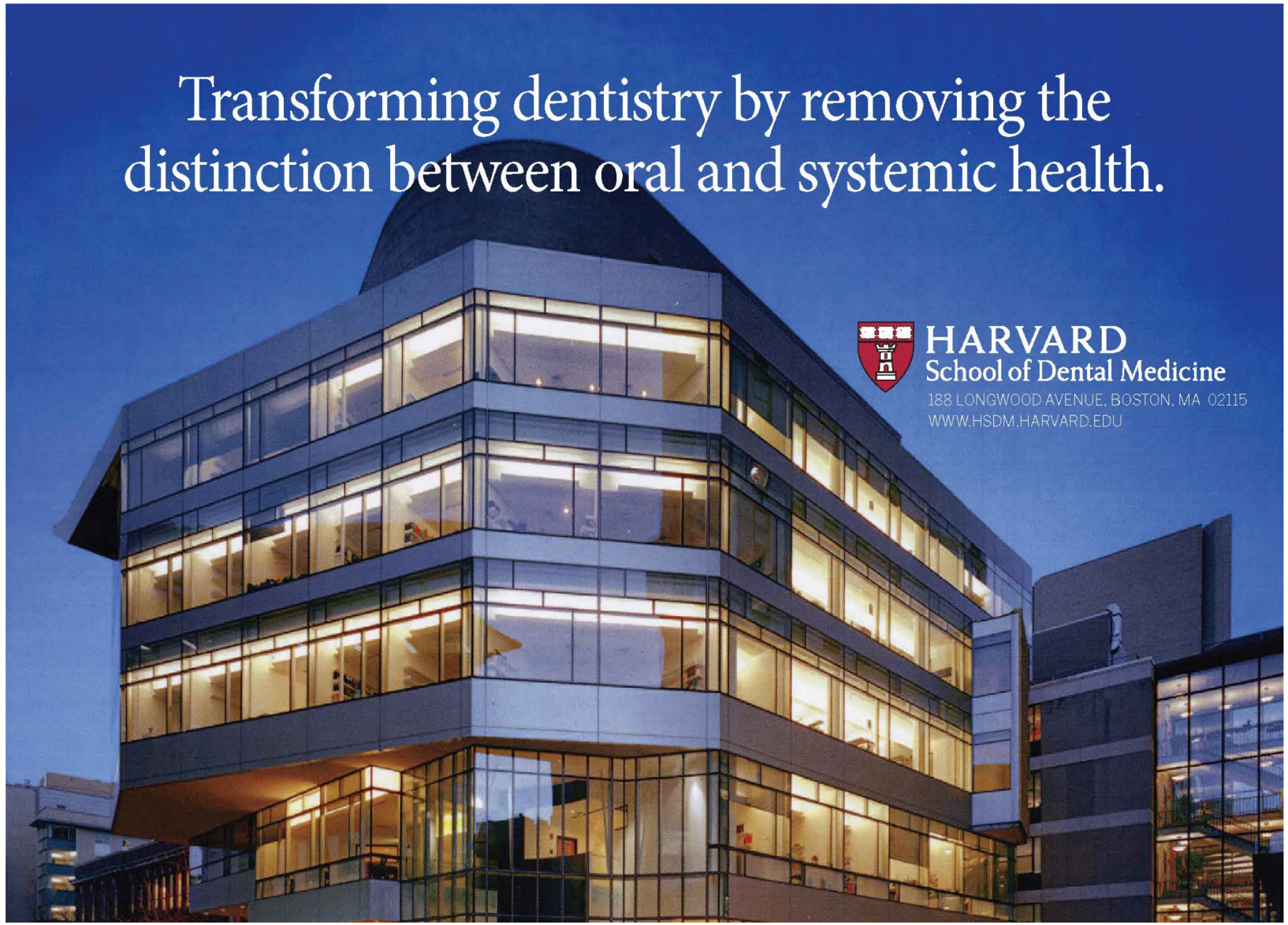
Co-location of services often refers to medical and dental providers located under one roof; alternately, it can encompass medical and dental providers working at separate facilities within a centrally managed system of care. In either model, shared EHRs facilitate bidirectional referrals and flagging records of dental patients who have chronic conditions.

## Challenges

- Noted barriers to integrated care provided within the framework of co-location include limited buy-in from medical providers, funding for oral health preventive services performed in medical settings, and insurance payment for services.[15]
- Co-location requires substantial investments in infrastructure, such as shared EHRs, shared or commonly managed facilities, and a multidisciplinary workforce.

## Recommendations

1) Create professional guidelines or toolkits for integrated activities, including bidirectional referrals, in order to reduce start-up barriers to implementation, improve provider confidence, and facilitate standardization.
2) Payment models that reimburse cross-disciplinary procedures can improve sustainability.
3) Cross-training of medical providers by their dental counterparts (and vice versa) can increase buy-in and contribute to standardization of protocols for disease management.


Transforming dentistry by removing the distinction between oral and systemic health.
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# Oral health facts

- $1.2 billion of hospital charges incurred by patients hospitalized for a dental problem
- 154 million hours of work lost/51 millions lost hours of school- due to dental disease .
- 40% of American have no dental coverage
- Medicaid – 16 cover only pain relief, 7 don’t even cover pain and infections, low reimbursement limits dentists’ participation
- Medicaid, Medicare and ACA require no acute coverage

# Discomfort of thought

- Dentistry is the only specialty in the realm of medicine taught before the doctorate is awarded. –no residency requirement
- Throughout training, the emphasis is on the perfection of methods rather than the attempt to stimulate a desire to know why the methods are necessary and what their intrinsic value is.

A. Leroy Johnson, Dentistry-As I See it Today, 1955

# Key Drivers in Dental Education

- Ready to practice upon graduation
- Licensure based upon procedural exam-rather than residency
- Interprofessional care
- New workforce models - DSO
- Globalization
- Elderly and chronic disease
- Technology advances
- Personalized medicine
- Health disparities

# The problem

- Historical separation of medicine and dentistry in education, practice and financing
- Oral health always the stepchild
- Yet #1 on best professions list (US News)
- Delivery system flawed-can dentistry afford to repeat its response to Medicare in 60’s
- Prevention needs more emphasis
- Address the interplay between oral disease and other health issues
- Shortage of primary care providers
- Problem of access to care

# Key questions

- What models exist for integrating oral health care into the primary care setting?
- What findings on oral health care delivery in the safety net can influence the move towards the patient-centered medical home or health home model?
- What changes in health policy and healthcare reimbursement are needed to support integrated oral health and primary care?

# The Case for Integration

- Increase effectiveness and efficiency of both dental and medical professionals in disease prevention, identification of precursors – IT systems key
- Raise patient awareness of importance of oral health
- Improve chronic disease management and prevention by dentists as primary care givers
- Address oral health care access issues
- Facilitate use of interdisciplinary techniques
- Provide cost savings

# Methods of Care

- Collaboration or coordination of care – when oral health and primary care providers work with one another. Patients perceive that they are receiving a separate specialist service from a dentist who works with their physician.
- Integration – when oral health works within primary care. Patients perceive that they are receiving dental services that are a routine part of their health care.

# How to achieve

- Continue to involve dental and non-dental providers in oral health-NP, dental therapists
- Develop innovative delivery models
  - Full integration
  - Colocation
  - Primary care provider focus
  - Cooperation and collaboration
- Insurance and financing – medical and dental insurance together
- Oral health in ACOs – bundled payments

# How to achieve

- Integrated training models – oral physician program, dental residencies in dept. of primary care rather than surgery
- Medical education as part of dental education- Harvard, UConn, Columbia
- DMD new curriculum - the dentist as primary care provider – DMD, MD primary care track
- MD curriculum - essentials of oral health for medical students
- CE curriculum - dentistry and oral health for physicians, CEO’s of FQHC’s

# Barriers and problems

- Reimbursement – low for Medicaid, not allowed for medical diagnosis
- Dental school /medical curriculum variances
- State practice acts – recent changes in Conn.
- Physician response – too busy
- Dentists response – not my job
- CULTURE

# Prospective health care

- Shifts focus from disease management to disease prevention and health management
- Driving force – need to improve quality of care
- Impetus – safety issues, rising costs, information sharing, health homes
- Rationale – to ensure the best possible patient outcomes

# A Profession in Transition

- Dental benefits erode for adults
- Benefits increase for children
- Access to care not addressed
- Will dental benefits be part of a medical plan
- Oral health for aging population – Medicare
- Increase value and reduce costs
- Opportunities to raise profile of oral health
- Engage dentists in primary care networks via interprofessional collaboration

# Tomorrow's dental practice landscape

- Provider consolidation continues
- Growth in large multisite practices
- Interest in midlevel providers continues
- Commercial plans increase use of selective networks and demand increased accountability
- Premium on good practice management

# Medical education/dental education

- Separate but equal education is always separate but never equal
- Physicians become educated about us and oral health
- Bring medical model into dental education
- New opportunities to change scope of practice - engage dentists in primary care networks with increased interprofessional collaboration

CIPCOH
Center for Integration of Primary Care and Oral Health

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# Dean's Advisory Board

- Created in 1993
- Major role in research strategic plan of late 1990's- led to new Building
- Serve in advisory role, development
- Developed Leadership forum concept with Harvard Business School
- Establish Initiative to Integrate Oral health and Primary Care

# Why integrate care

- Three major factors now push the agenda for change – advances in science and oral science, the demographic increase in the older population, and the crisis in primary care.

# The Forum of October 2014

- The Economic Imperative of good Oral health
- Agenda – the soundness of insurance data
- Introduction of Initiative idea
  - To foster discussion, guide as well as develop public policy and advocacy
  - Provide interdisciplinary connection at Harvard
  - Collaborate with national, state and local partners on innovative strategies to improve oral/general health
  - Provide scholarly review of clinical and epidemiologic data on the subject

# Forum Big Ideas

- Things put together that should never should have been separated or things put together that should have been kept separated- dental and medical care
- Integrating oral health with overall health insurance lowers costs
- Fee for service like selling college courses course by course vs. tuition
- What are the actionable strategies

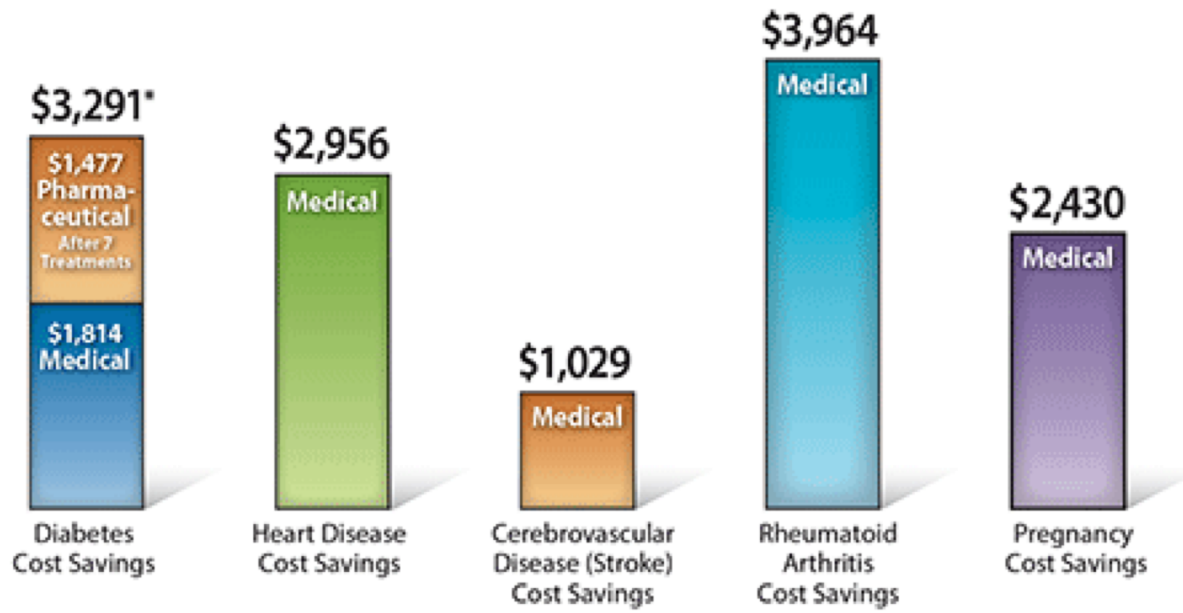
# Cost Savings

- Aetna's Dental Medical Integration Program Report 10/4/13
  - DMI members who visited the dentist have:
    - Lowered their medical claim costs by an avg. of 17%
    - Improved diabetes control by 45%
    - Used 42% less major and basic dental services
    - Required 3.5% fewer hospital admission year over year compared to 5.4 % increase for non-members

# United Healthcare
# Medical Dental Integration Study

- Performed by Optum
- Net medical costs on average $1037 lower than medical costs for members who received other or no dental care
- Larger savings for diabetic patients and other chronic diseases asthma CHF, CAD COPD chronic kidney disease

# Treating Gum Disease Equals Annual Cost Savings




United Concordia's landmark Oral Health Study shows that annual cost savings of $3,291, $2,956, $1,029, $3,964 and $2,430 are possible when individuals with diabetes, heart disease, cerebrovascular disease (stroke), rheumatoid arthritis and pregnancy are treated for gum disease.

*3-year average of $1,814 in savings from reduced hospital and office visits begins in the first year of periodontal treatment. Pharmacy savings realized annually after patient receives at least 7 periodontal treatment and/or maintenance visits.

UNITED CONCORDIA® DENTAL

# Links to education

- Primary care task force
- Crimson collaborative
- Oral physician residency
- Teaching oral health to medical students
- Interprofessional education and practice
  - Mass College of Pharmacy and Allied Health Sciences
  - Northeastern Bouve College- HRSA grants

# Create Initiative for Integration of Oral Health and Primary Care

- Vision – to incorporate oral health as an essential part of overall health and wellbeing
- Mission – create opportunities and advocacy to include oral care as a vital component and enabler of overall wellness by demonstrating the economic and health value of complete Medical/dental care integration, thus elevating the urgency and status of dental care.

# Goals

- Achieve integration of oral care into the general medical care delivery environment by 2025
- Elevate the importance of professional dental care focusing on prevention, early detection, managing patient risk, preventative self-care and dental care coverage to improve wellness and lower overall health care costs

# Strategy

- Quantify opportunities (costs, outcomes) – focus efforts on the value proposition for oral health
- Identify our allies- secure support of those who can advance our cause
- Demonstrate total health equity – new partners needed to raise awareness
- Focus on adults with chronic disease and/or pregnant women as basis for determining economic value proposition

# Next Steps

- Enlarge/strengthen the base of core participants in the initiative, as well as external to dentistry allies/partners from current 8 members
- Develop public affairs programming to engage leaders in politics, medicine, NGOs, business communities
- Develop memorable branding/marketing/communications campaign material

# Next Steps

- Develop timelines
- Develop next Forum
- Support, disseminate and participate in additional research underscoring the importance of oral health on overall health, focusing in particular on clinical and financial outcomes.

# Audience

- Public policy influencers
- Philanthropic foundation
- Health care purchasers
- Physicians
- Organized dentistry and medicine
- Influential media
- Alternate care facilities (CVS, Walmart, Target)

# Current initiatives

- Commonwealth Care Pilot – research plan to answer question does good oral are impact an elderly populations' general health
- Develop a primary care medical practice within Harvard Dental Center – Patient Centered Health Home
- Develop general dental residencies at medical centers without dental school of oral health resource

# Reform Agenda

- All health insurance policies – whether provided through Medicare, Medicaid or private insurance companies – could include coverage for dental care services, regardless of enrollee's age
- Integrate general medical and dental care in both practice and workforce education
- Ultimate goal is care not insurance
- This is about building a movement-JOIN US

# Initiative for Integration of Oral Health and Medicine

- Practice of the Future
- Recruited economists
- ICHOMS
- Next Forum Sept. 27-28, 2018
- Kaiser Northwest integrated practice
- Pacific Dental integrated practice Las Vegas
- Phillips Healthcare

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BY THE NUMBERS

**$6B**

Amount of productivity lost each year due to lack of oral health.

*— Center for Disease Control*

**19.5M**

Estimated number of Americans who, in 2008, skipped the doctor's office and saw only a dentist.

*— American Journal of Public Health*

**1.3M**

Number of U.S. emergency visits annually that are due to nontraumatic dental conditions.

*— Journal of the American Dental Association*

**44.9%**

Percentage of adults in the U.S. age 30 years and older who have some form of periodontal disease.

*— Journal of Dental Research*

## Oral health is vital to overall health, wellbeing and quality of life.

The inextricable links between oral and systemic health are becoming increasingly clear. Studies show bidirectional connections between periodontal disease and other chronic diseases like diabetes, cardiovascular disease, and hypertension. Periodontitis in pregnant women is associated with preeclampsia, preterm birth and low birth weight babies. Oral health issues can lead to malnutrition and childhood speech problems.

Research conducted by the Harvard School of Dental Medicine (HSDM) and our partners points to key benefits from integrating oral health and medicine. These include more frequent screening for associated diseases, improved quality of life, and cost savings to the overall healthcare system. Quality of life issues include the ability to chew, smile, interact socially, or attend work or school without pain.

Most insurance plans offer dental benefits as separate and elective, rather than inclusive benefits within primary health care coverage. Therefore millions of people pay multiple premiums or forgo dental coverage. Others visit a dentist while skipping the physician. Because periodontal and other diseases are connected and share common risk factors—diet, hygiene, smoking, alcohol use, stress and trauma—it is imperative to adopt a holistic, collaborative and integrated approach to health care.

"Through the Initiative, HSDM and partners are striving to transform dentistry. To that end we are pioneering new models for teaching, providing, and funding care as well as new methodologies for understanding the health and economic outcomes of integration. Our projects are designed to measure the impact of integration on all aspects of the health system, thereby providing us and our partners with the evidence needed to effect systems change."

— JANE BARROW
*Executive Director and Assistant Dean of Global and Community Health*

**INITIATIVE BOARD MEMBERS REPRESENT LEADING ACADEMIC AND HEALTH CARE ORGANIZATIONS**

Aetna, Inc.
Blue Cross Blue Shield of Massachusetts
Colgate Palmolive Co.
DentaQuest
Harvard School of Dental Medicine
Harvard T. H. Chan School of Public Health
Henry Schein, Inc.
Johnson and Johnson Consumer, Inc.
Kaiser Foundation Health Plan of the Northwest
Life and Specialty Ventures, LLC
Pacific Dental Services
Philips Oral Healthcare
The Ritrievi Group, LLC
United Concordia Companies
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## The Initiative's objectives

The Initiative to Integrate Oral Health and Medicine emerged from the 2014 HSDM Leadership Forum, which focused on the economic imperative of oral health. Our objective is to transform dentistry and fully integrate oral health into health care education, delivery and financing. We aim to improve wellness, remove barriers to coverage, and lower overall health care costs by promoting early detection, patient education, and preventative self-care.

The Initiative convenes academics and health care industry leaders to develop innovative ideas for new models that consider the perspectives of educators, patients, care providers, policy makers and insurers. The Initiative Board, consisting of industry experts and Harvard faculty, provides informed guidance.

At the core of the Initiative is our engagement in research and demonstration projects that explore new models of education, training and practice. Other projects measure outcomes and explore financial models that will demonstrate the value of integration. Additional Initiative activities include policy statements, conferences and seminars.

"The Harvard School of Dental Medicine's unique position within Harvard University and the Longwood Medical area provides many opportunities for interdisciplinary and multidisciplinary learning and discovery. In the past few years interprofessional education and practice have become important methods for improving the health of our population. We have created an academic center, the Initiative for the Integration of Oral Health and Medicine, in which education, research, and patient care occur simultaneously—each informing and improving the others. Supported by philanthropy and grants, the Initiative has the goal of making oral health care affordable, evidence based and patient centered."

— DR. BRUCE DONOFF
*Dean and Walter C. Guralnick Distinguished Professor of Oral and Maxillofacial Surgery*

## OUR VISION

**TO INCORPORATE ORAL HEALTH AS AN ESSENTIAL PART OF OVERALL HEALTH AND WELLBEING**

**Demonstration projects are focused in the following areas: education, clinical practice, outcomes and policy. Examples of our work include but are not limited to:**

## EDUCATION

These projects create collaborative, team based models where dentists and health professionals work and learn side-by-side. This interprofessional approach helps both primary care and oral health providers learn about the impact of oral health on general health and vice versa.

### CENTER FOR INTEGRATION OF PRIMARY CARE AND ORAL HEALTH (CIPCOH)

This national center, funded by a 5-year agreement with the Health Resources and Services Administration (HRSA), promotes the training of primary care providers to deliver high-quality, cost-effective, patient-centered care that addresses oral health and its disparities. In collaboration with the HMS Center for Primary Care, nurse practitioners, physicians, and physician assistants will integrate core oral health clinical competencies into their existing practice and provide early detection and preventive interventions.

**WHY** *To insure that all primary care providers have a basic understanding of oral disease, its association with the major non-communicable diseases and its impact on overall health.*

### CRIMSON CARE COLLABORATIVE (CCC)

Dental care has recently been added to a network of six student-faculty collaborative clinics spearheaded by the Stoeckle Center for Primary Care at Massachusetts General Hospital. Staffed with interdisciplinary health professions students, clinics provide fully integrated dental care for vulnerable communities, expose dental students to primary and public health care practice, and train future primary care providers in core oral health competencies. CCC at MGH-Chelsea and CCC at the Nashua Street Jail have fully integrated care delivery. A dental team, a medical team, a mental health services team, and a team offering training in substance use, oral health, and mindfulness operate in tandem.

**WHY** *To teach our next generation of Harvard trained providers to integrate oral health care into preventive and general health care services for underserved populations. As of May 2017, more than 400 patients have been screened and treated and over 150 health-professions students have been trained at these thriving sites.*

### FOUNDATIONAL CONTINUITY CLINIC (FCC)

The newly redesigned HSDM curriculum allows first year dental students to join fourth year student mentors in the dental clinic so they can master primary care principles in the dental setting. Students practice medical history taking and primary care skills under the supervision of both dentists and primary care physicians. Studies have shown that chair-side primary care screening can identify chronic illnesses, including hypertension, diabetes, depression, substance use disorder, and HIV/AIDS. Students apply what they learn in their medical school classes to a clinical setting.

**WHY** *To underscore the role of the oral health provider in primary care of the patient and demonstrate why the oral health provider should be knowledgeable in patient's overall health status. The classes of 2019 and 2020 fully participated.*

## CLINICAL PRACTICE

These projects test integrated clinical models to develop best practices for the future.

### NURSE PRACTITIONER-DENTIST MODEL (NPD)

In a new model piloted through a 3-year cooperative agreement between HRSA, HSDM, and the Northeastern School of Nursing, a full-time nurse practitioner works in the Harvard Dental Center's Teaching Practices and serves as a consultant and care navigator for older adult patients with the diagnoses of hypertension and/or diabetes. Patients are screened for hypertension and diabetes and evaluated for unmet needs. If needed, patients are referred to an NP, who can provide a Medicare Wellness Visit, point-of-care testing, and a referral to a medical home. Nurse practitioner students from Northeastern rotate through the dental clinic to develop skills in oral health screening and diagnosis.

**WHY** *To determine if patients benefit when a primary care provider is located in the dental office. Since February 2016 dozens of NP students have rotated through the dental clinic and have enhanced their oral health skills..*

### COLLABORATORS IN PRACTICE

HSDM is partnering with multiple health systems and communities to better integrate oral health with primary care services. For example, two of our partners are focused on providing care to Medicare and Medicaid populations that traditionally have had challenges accessing oral health care services. We are collaborating with CareMore, an eight state Medicare advantage plan and Commonwealth Care Alliance (CCA), a Massachusetts based care and benefits provider, to assist with best practices for the integration of dental services for medically complex patients. Together we are learning how to most efficiently and effectively deliver oral health care to these vulnerable populations and we are studying the associated health and cost outcomes.

***20% of dental patients may not see a physician each year, representing an unparalleled opportunity to identify patients with medical needs and improve their overall wellness.***

***Almost 20% of all patients admitted to the hospital carry a diagnosis of diabetes. People with diabetes are at higher risk of tooth loss and poor oral health may impact nutrition and inflammation. In spite of their higher risk, diabetic adults are less likely than their peers to visit the dentist annually.***

## OUTCOMES

These projects focus on the value proposition and economic imperative of oral health.

### THE INTERNATIONAL CONSORTIUM FOR HEALTH OUTCOMES MEASUREMENT (ICHOM)

We are a sponsor and working group member for the oral health standard set. In concert with the World Dental Federation, ICHOM has convened a group of quality and outcome experts to define a global standard of outcome measures that reflect what matters most to patients about their oral health and oral health care.

**WHY** *The metrics will facilitate provider patient conversation and satisfaction as well as promote understanding of value based oral care.*

### PREVENTIVE PERIODONTAL TREATMENT TO HOSPITALIZED PATIENTS WITH DIABETES

This HSDM-funded study conducted in partnership with Harvard Medical School and Massachusetts General Hospital aims to assess: 1) the oral health status of patients with diabetes who are hospitalized, 2) the effects of providing limited oral health services during hospitalization on care-seeking behaviors and health outcomes, and 3) the feasibility and cost-effectiveness of dental hygienist-delivered preventive oral care for patients with diabetes during hospitalization.

**WHY** *The inpatient setting presents a unique opportunity to make integrative oral healthcare services accessible to diabetic patients and increase oral health knowledge of those health professionals caring for these patients.*

## POLICY

These projects focus on developing the evidence base to support policy and systems change.

According to the Institute of Medicine, striking disparities exist in oral health care availability. Vulnerable populations facing greater barriers to attaining oral health care include racial and ethnic minorities, the financially disadvantaged, children, pregnant women, rural dwellers, older adults, the uninsured, the homeless, and people with disabilities.

HSDM faculty are collaborating with interprofessional faculty at Harvard and elsewhere to study how integration of oral health impacts individuals, populations and health systems. We believe that this work will drive health systems change by creating the evidence base needed to successfully advocate for integration of oral health care and benefits.

### ADVOCACY AND OUTREACH

We have created an Initiative Health Policy Fellowship in an effort to educate and champion the benefits of integration. The Fellow collaborates closely with the Pew Charitable Trust, Health Care for All, Community Catalyst and others to promote oral health issues and to better understand the evidence needed to support advocacy work. Our fellows, faculty and students publish a number of articles and op-eds, and have been quoted in newspapers and on the radio advocating for improved integration.

### LEADERSHIP FORUMS

Leadership Forums bring together thought leaders and influencers from academia, health care and business who can advocate for integration and systems change.

The 2016 Leadership Forum, themed "Putting Your Money Where Your Mouth is 2.0" featured speakers, panelists and discussion around the idea of connecting oral health to overall health to achieve better patient outcomes and lower costs. The forum looked at integration from all angles — its effect on health in the workplace, in a clinical setting and as a public policy issue.

The next Leadership Forum will take place in spring 2018.

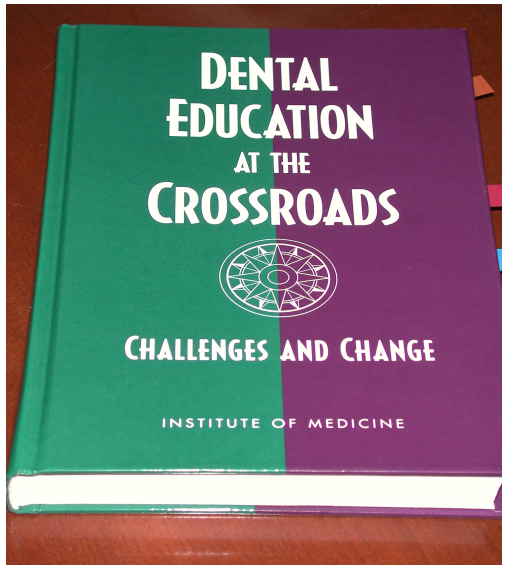

CIPCOH will contribute to the improvement of primary care practice and patient outcomes through:

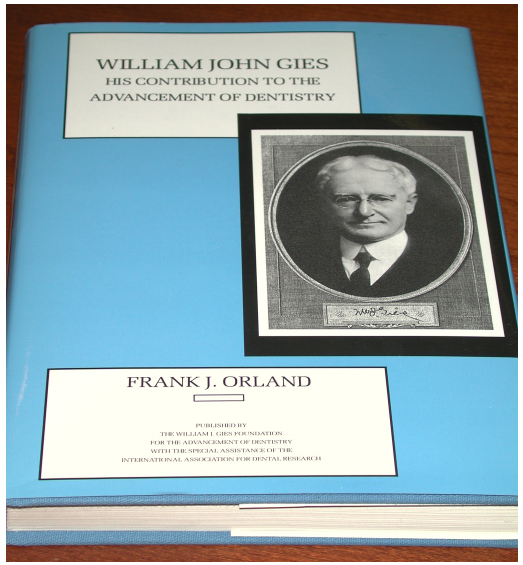
- conducting systems-level research on primary care training
- disseminating information, best practices and resources
- recommending and promoting primary care training enhancements
- developing community of practice plans that mobilize stakeholders to integrate oral health into primary care training and delivery.

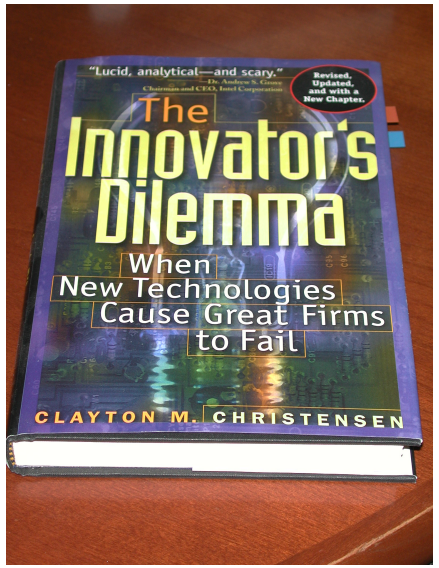
# Practice of the Future

- ***What:*** A comprehensive, patient-centered practice based on an integrated model that combines traditional family medicine with oral health, behavioral health, optometry and social services
- ***Why:*** To transform how we train health professionals and deliver care and set a new standard
- ***Status:***
  - Operations plan complete
  - Business plan complete
  - Discussions underway with potential funders
  - Working on a white paper with HMS PC Center

# Our World


DENTAL EDUCATION AT THE CROSSROADS
CHALLENGES AND CHANGE
INSTITUTE OF MEDICINE


WILLIAM JOHN GIES
HIS CONTRIBUTION TO THE ADVANCEMENT OF DENTISTRY
FRANK J. ORLAND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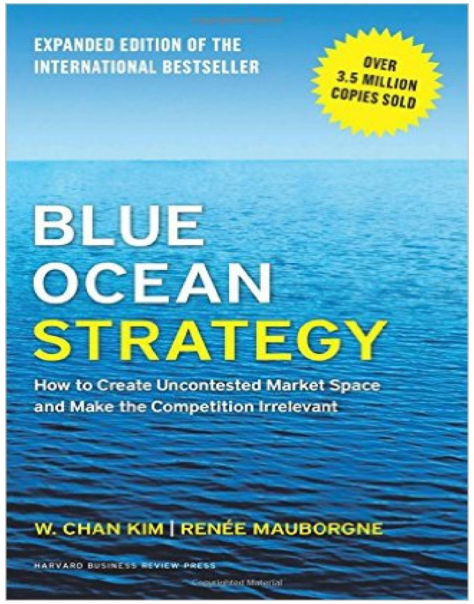
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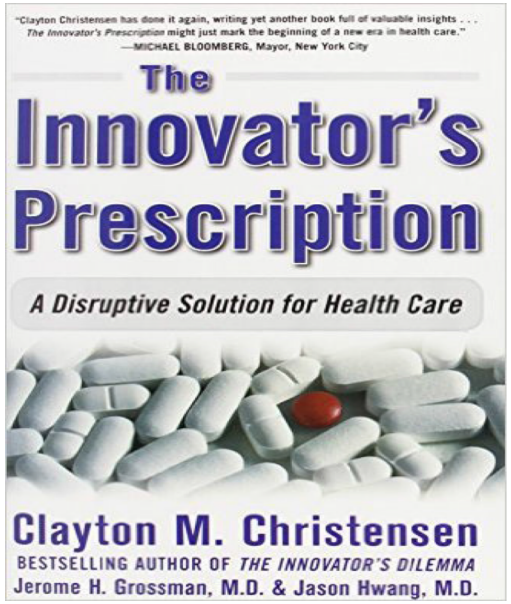
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—MICHAEL BLOOMBERG, Mayor, New York City
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HYBRIDS

DENTIST/PHYSICIAN




AND
SHALL BE THE
ABILITY OF THY


CREATIVITY
AND
IMAGINATION
SHALL BE THE
STABILITY OF THY TIMES