

Missouri Coalition for Oral Health Conference

Friday, March 4

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Dean

University of Missouri Kansas City School of Dentistry





Missouri Dental Schools in Action

Presented by Dr. Steven Haas (UMKC), Dr. Dwight McLeod (ATSU), and Dr. Linda Niessen (KCU)

Course Description: Updates from the Deans of Missouri's three Dental Schools and the main challenges they see in dental education and the future of the profession.

Objectives: At the end of this presentation, participants will be able to:

- Express how dental education will change to meet the future needs of oral health
- Understanding the roles of Interprofessional Education in dentistry and in health care
- Describe the composition of future dental school classes



Students

Patients

Future Dentists

Table 3. Applicants and first-time enrollees by race/ethnicity, 2010.*

	Applicants		First-Time Enrollees		Enrollment Rate
	Number	Percent	Number	Percent	
2010					
American Indian or Alaska Native	38	0.3%	12	0.2%	31.6%
Asian	3,234	26.9%	1,139	23.0%	35.2%
Black or African American	694	5.8%	267	5.4%	38.5%
White	6,447	53.7%	2,887	58.4%	44.8%
Hispanic or Latino	859	7.2%	356	7.2%	41.4%
Native Hawaiian or Pacific Islander	12	0.1%	4	0.1%	33.3%
Two or More Races	323	2.7%	121	2.4%	37.5%
Do Not Wish to Report or Unknown	394	3.3%	161	3.3%	40.9%
Total	12,001	100.0%	4,947	100.0%	41.2%

Source: American Dental Education Association, U.S. Dental School Applicants and Enrollees, 2010 Entering Class

- Predicting the future by looking at the past and present:
 - White student numbers applying and entering will decrease
 - Hispanic student numbers will increase
 - Black student numbers will see a slight increase
 - Asian student numbers applying will decrease but acceptances will increase
 - Does this mirror predicted population changes?

Table 3. Applicants and First-time, First-year Enrollees by Race and Ethnicity, 2020*

Race and Ethnicity	Applicants		First-time, First-year Enrollees		Enrollment Rate
	Number	Percent	Number	Percent	
American Indian or Alaska Native	22	0.2%	9	0.1%	40.9%
Asian	2,561	23.4%	1,468	23.5%	57.3%
Black or African American	755	6.9%	367	5.9%	48.6%
Hispanic or Latino	1,204	11.0%	664	10.6%	55.1%
Native Hawaiian or Other Pacific Islander	11	0.1%	5	0.1%	45.5%
White	5,115	46.6%	3,087	49.3%	60.4%
Two or More Races	376	3.4%	207	3.3%	55.1%
Do Not Wish to Report or Unknown	341	3.1%	202	3.2%	59.2%
Nonresident Alien	580	5.3%	248	4.0%	42.8%
Total	10,965	100.0%	6,257	100.0%	57.1%

Source: American Dental Education Association, U.S. Dental School Applicants and Enrollees, 2020 Entering Class

Year	Total First-time, First-year Enrollees	Men		Women	
		Number	Percent	Number	Percent
2000	4,234	2,516	59.4%	1,656	39.1%
2001	4,267	2,445	57.3%	1,791	42.0%
2002	4,372	2,491	57.0%	1,869	42.7%
2003	4,528	2,530	55.9%	1,980	43.7%
2004	4,457	2,564	57.5%	1,891	42.4%
2005	4,558	2,544	55.8%	1,997	43.8%
2006	4,608	2,608	56.6%	1,991	43.2%
2007	4,618	2,609	56.5%	2,004	43.4%
2008	4,794	2,673	55.8%	2,120	44.2%
2009	4,871	2,599	53.4%	2,269	46.6%
2010	4,947	2,686	54.3%	2,260	45.7%
2011	5,311	2,854	53.7%	2,396	45.1%
2012	5,483	2,865	52.3%	2,579	47.0%
2013	5,769	3,045	52.8%	2,660	46.1%
2014	5,892	3,035	51.5%	2,818	47.8%
2015	5,943	3,011	50.7%	2,893	48.7%
2016	6,100	3,070	50.3%	2,970	48.7%
2017	6,122	3,071	50.2%	3,049	49.8%
2018	6,163	3,003	48.7%	3,115	50.5%
2019	6,231	2,952	47.4%	3,273	52.5%
2020	6,257	2,900	46.3%	3,356	53.6%

Source: American Dental Education Association, U.S. Dental School Applicants and Enrollees, 2020 Entering Class

Future Dentists

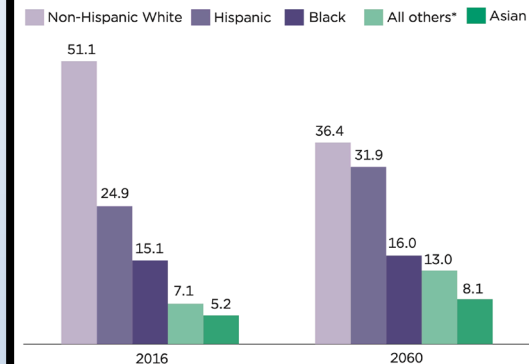
Population by Race and Ethnicity: Projections 2030 to 2060

The non-Hispanic White population is projected to shrink by nearly 19 million people by 2060. (In thousands)

Characteristics	Population					
	2016		2030		2060	
	Number	Percent	Number	Percent	Number	Percent
Total population	323,128	100.0	355,101	100.0	404,483	100.0
One race						
White	248,503	76.9	263,453	74.2	275,014	68.0
Non-Hispanic White.....	197,970	61.3	197,992	55.8	179,162	44.3
Black or African American	43,001	13.3	49,009	13.8	60,690	15.0
American Indian and Alaska Native.....	4,055	1.3	4,663	1.3	5,583	1.4
Asian.....	18,319	5.7	24,394	6.9	36,815	9.1
Native Hawaiian and Other Pacific Islander.....	771	0.2	913	0.3	1,125	0.3
Two or More Races	8,480	2.6	12,669	3.6	25,255	6.2
Hispanic.....	57,470	17.8	74,807	21.1	111,216	27.5

Racial and Ethnic Composition of Children Under Age 18

The share of children who are non-Hispanic White is projected to fall from one-half to about one-third by 2060. (In percent)



* The other race group includes children who are American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and Two or More Races. Note: Hispanic is considered an ethnicity, not a race. The percentages do not add to 100 because Hispanics may be any race. Source: U.S. Census Bureau, 2017 National Population Projections.

- Future population changes by race and ethnicity
 - Non-Hispanic white population will decrease by -9.5% in 2060
 - Hispanic population will increase from 17.8% to 27.5% of the population
 - Black population will increase 1.7%
 - Asian population will increase by 3.4%
- Children under age 18
 - Non-Hispanic white population: large decrease
 - Hispanic population: large increase
 - Black population: slight increase
 - Asian population: increases

Future Dentists



1981-1996
26-41 years old

- Characteristics: Millennial generation
 - Value a balance between work and family life
 - See rise of part-time dentist
 - See shortages of dentists in needed areas; especially in academia

Thank you for letting me share this information with you, as you know one never knows the path life may take you. I am very grateful for my training at UMKC back in the day. As I see things in dentistry in Rural Missouri, access to care is getting critical, in fact, very critical. It is so sad that my classmates and The dentists a few years older have not been able to pass their practices on to a younger person, having to lock the doors and let the patients scatter. That's a whole other issue that I will not address further.

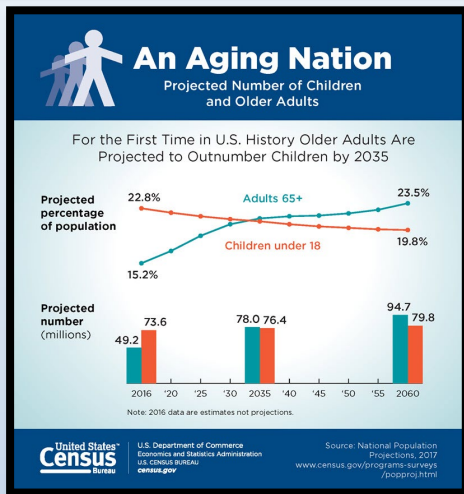
What identifies each generation?

Other things we could talk about for hours:

- Student debt
- Teaching methods
- Move towards digital dentistry
- Physical spaces: Desired vs. Required

- Digital natives
- Keen on labor mobility
- World citizens
- Ability to forge a career
- Loyalty to the company
- Self-taught online
- Highly aware and vocal about social issues
- Competitive
- Commitment
- Appreciate sacrifice

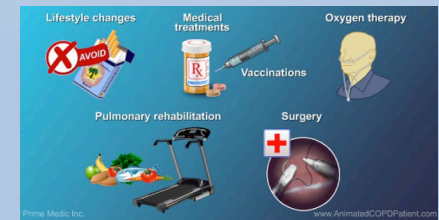
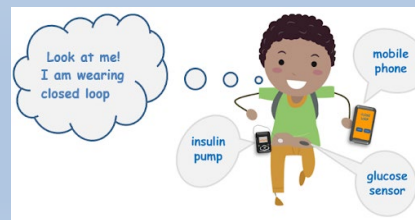
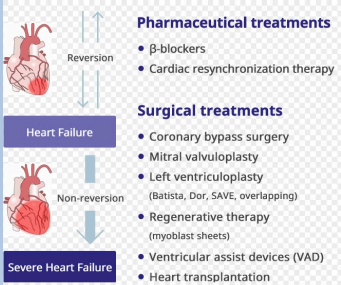
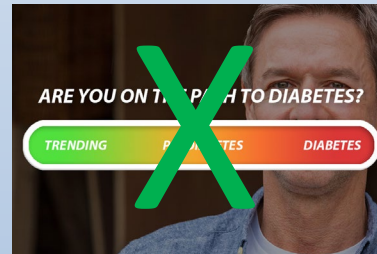
How will dental education change?



- Aging population

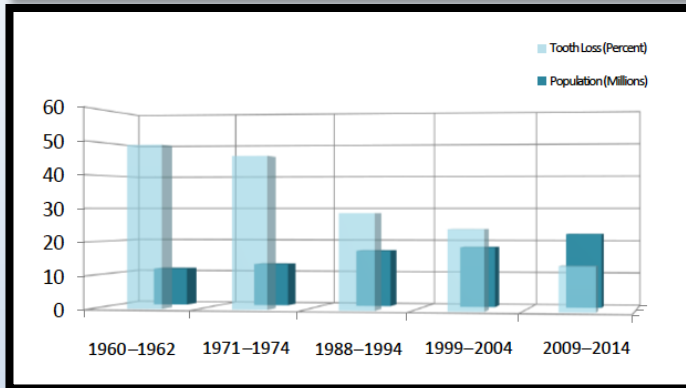
- Why? What does this mean for dentistry? For dental education?
- Diseases that used to kill people early in life now have treatments

Dental student of the future must learn how to treat the older patient population: what does that patient look like?

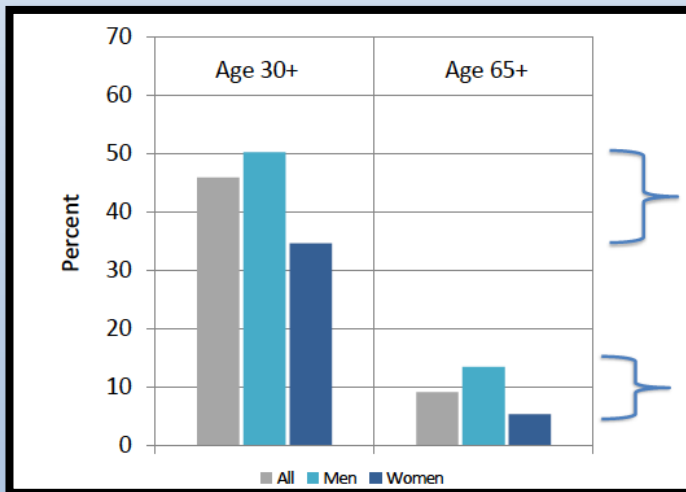


Retrieved from https://www.nidcr.nih.gov/sites/default/files/2019-08/SurgeonGeneralsReport-2020_IADR_June%202019-508.pdf

How will dental education change?



Edentulism

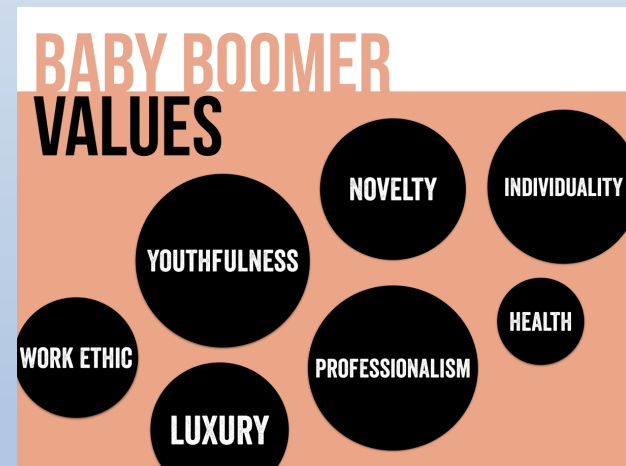


Total and severe periodontitis in the U.S. by gender, 2009-2014

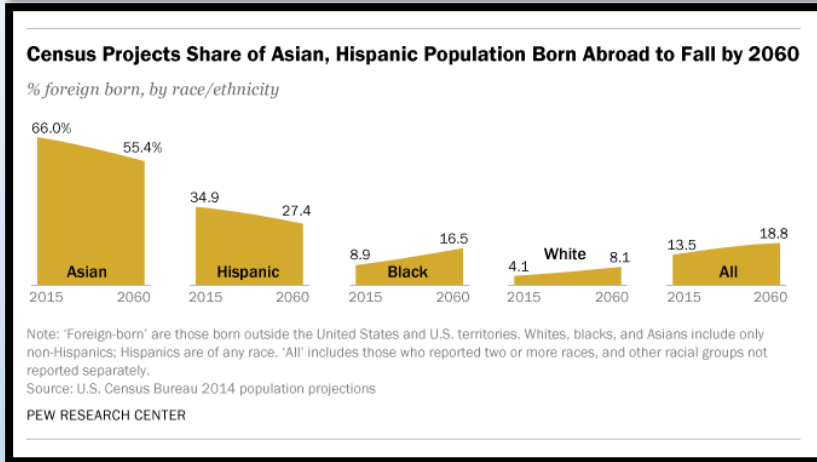
Eke PI, Thornton-Evans GO, Wei L, Borgnakke WS, Dye BA, Genco RJ. Periodontitis in US Adults: National Health and Nutrition Examination Survey 2009-2014. J Am Dent Assoc 2018;149(7):576-588.

Dye, BA, Weatherspoon DJ, Lopez Mitnik G. Tooth loss among older adults according to poverty status in the United States from 1999 through 2004 and 2009 through 2014. J Am Dent Assoc. 2019;150(1):9-23.

- Aging population (by 2030 all Baby Boomers will have moved into the “older population”) will:
 - have less edentulism
 - have less periodontal disease
 - be active consumers; place value on health
 - have issues with payment



How will dental education change?



- Gen X'ers and Millennials will soon follow:
 - Closer to a full complement of teeth
 - More tech savvy
 - Better consumers seeking lower costs
- Nature of population will shift:
 - Hispanic population will increase
 - Tend to have less dental coverage
 - Less likely to visit the dentist
 - Number of foreign-born Hispanics and Asians will decrease
 - Population shifts to parts of California, Arizona, Texas, Florida and the Carolinas

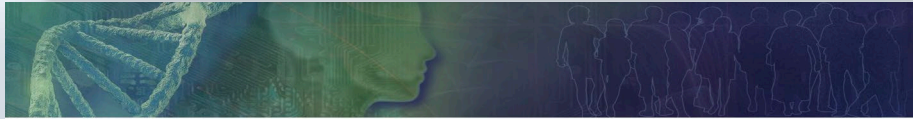
Will see the emergence of the true consumer:

- People move from “patients” to consumer
- This means they will be more active and want more information
- Quality and price will rule the day
- Comparison shopping → Social media
- Rise of dental tourism for high cost, non-reimbursed, and elective services



Retrieved from <http://www.forbes.com/sites/matthewherper/2013/02/05/forbes-healthcare-summit-using-big-data-to-make-patients-better/>


How will dental education change?



2020 Surgeon General's Report
Oral Health in America: Advances and Challenges

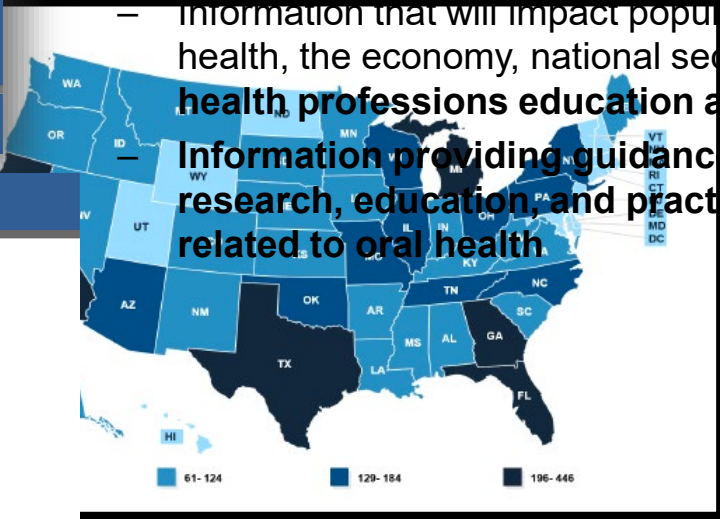
Judith Albino, PhD and Bruce A. Dye, DDS, MPH and Timothy Ricks, DMD, MPH

June 21, 2019
 International Association for Dental Research 97th General Session



First Surgeon General's Report on Oral Health

- **Cost is a major obstacle:** Dental schools will have to find ways to deliver more care with less costs
- **The Surgeon General's Report will provide:**
 - Promising approaches to achieving oral health equity for all
 - A road map to optimal oral health for all
 - Information that will impact population health, the economy, national security, health professions education and policy
 - Information providing guidance for research, education, and practice related to oral health
- **Access to care will be an issue:** Dental schools will have to find ways to get into underserved areas




Focus: The 2020 Report

“Big” questions to answer:

- Where we are now,
- Where we have made advances since 2000,
- What challenges persist since the last report,
- What new threats are emerging, and
- What are some promising new directions for research and improvement in oral health?

M Vujicic. Health Affairs 37(1):e20180011, 2018



Kaiser Family Foundation. Bureau of Health Workforce, Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services. Designated Health Professional Shortage Areas Statistics Designated HP20 Quarterly Summary as of December 31, 2018

Interprofessional Education

EDUCATION

Interprofessional education in dentistry

A. J. Coleman,^{*1} G. M. Finn² and B. R. Nattress³

Key points		
Highlights that interprofessional education is increasingly being promoted as a key aspect of undergraduate and postgraduate dental education.	Discusses the rationale for interprofessional education, effectiveness and challenges faced.	Provides practical advice to enable the reader to introduce and facilitate successful interprofessional education learning events.

A collaborative health workforce is required to respond to the increasing demands on healthcare resources. Various national and international bodies are promoting interprofessional education (IPE) as a method to provide this collaborative health workforce. IPE is therefore becoming increasingly prominent within healthcare training and will be an essential aspect of dental education. A literature search was completed to provide this narrative review which will introduce IPE, discuss the rationale for IPE within dentistry and the challenges faced. Based on current literature, it will provide practical advice on how to implement an effective IPE learning activity within dentistry.

Introduction

Present and future health workforces are facing increasing pressures in terms of the demand on health resources and increasingly complex health issues. The World Health Organisation (WHO) recognises that many health systems throughout the world are fragmented and struggling to manage health needs.¹ Interprofessional education (IPE) is an essential step towards a collaborative health workforce that is competent to work within interprofessional teams and is better prepared to respond to local health needs.¹ The Centre for the Advancement of Interprofessional Education (CAIPE) recognises IPE as 'occasions when members or students of two or more professions learn with, from and about each other to improve collaboration and the quality of care and services.'² This collaborative

practice can involve multiple health workers from different professional backgrounds working with patients, families, carers and communities.³ Figure 1 demonstrates how IPE and collaborative practice can lead to improved oral health outcomes.

'Learning from, with and about each other' implies collaboration, interactive and equitable learning.³ Many learning theories underpin IPE, in particular Wenger's communities of practice;⁴ groups of people with a shared concern, interacting regularly and ultimately learning how to improve what they do.⁵ IPE is not new to dental education but in recent years the incorporation of IPE within dental education has increased. Reflecting this, the General Dental Council (GDC) describes the opportunity for students to train and work with other dental professionals as a key responsibility of education and training providers.⁶

This narrative review aims to introduce IPE as an aspect of dental education. A literature search was carried out using the electronic database MEDLINE using the following terms 'interprofessional', 'multiprofessional', 'multi-disciplinary' in combination with 'learning', 'education' and 'dental'. Boolean operators and truncations were used to allow for variability of terms in the literature. Relevant papers were also identified from a hand search of the

Journal of Dental Education, European Journal of Dental Education and from the reference lists of relevant papers. The search focused on literature published between 2000 and 2018. This narrative review will discuss IPE, its rationale within dentistry and effectiveness. There are a number of challenges faced in delivering effective IPE and therefore the latter half of this paper will provide the reader with practical advice when developing an IPE learning session within dentistry, based on an example of medical emergencies training for the dental team.

Rationale for interprofessional education

The development of IPE has been linked to a desire to improve patient care through improvement in interprofessional collaboration (IPC) and teamwork.⁷ These drivers include government policy, professional regulators and at a local level, IPE champions and organisational support.⁷ Various international and national bodies within healthcare now promote and support IPC. The underlying rationale for IPC is to address the increasing demands on healthcare, the complexity of health issues within the population and the change in focus on health promotion.⁸ IPE has

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1250 BRITISH DENTAL JOURNAL | VOLUME 225 NO. 3 | AUGUST 10 2018 257
Official journal of the British Dental Association.

- ADEA studied IPE in US and Canadian Dental Schools
- Definition: “occasions when members or students of two or more professions learn with, from and about each other to improve collaboration and the quality of care and services”
- Selected six schools that were doing it well
- Prepared recommendations for other schools
- Reasons to engage in IPE:
 - Dentistry is a critical part of the primary care system
 - Management of diseases has consequences in the oral cavity and diseases in the oral cavity have direct shared consequences in the same room.
 - Dentists can deliver efficient and quality oral health care when working collaboratively with other members of health professions
- Challenges
 - Dentistry plays a key role in public health systems to improve access to care and must work with other health professions to implement community-wide preventive measures
 - Learners’ preconceived beliefs and attitudes towards IPE
 - Designing interactive learning experiences rather than passive
 - Professional stereotypes and hierarchies: barrier to communication and interaction
 - Mutual and shared respect and shared values
 - Faculty attitudes: resist change, lack interest and perceived lack of credibility
 - Understanding of professional roles to address patient needs
 - Planning is difficult when dealing with multiple disciplines:
 - Communication
 - Schedules, space, timing in the curriculum
 - Positive team dynamics
- Recommendations:
 - First need to work on intra-professional relationships, i.e. dentists, dental hygienists
 - Need support from main university
 - Objective is to improve quality of patient care through multidisciplinary teamwork so include a full range of fields
 - Evaluate whether the IPE education is working
 - Train faculty

Coleman, A. J., Finn, G. M., & Nattress, B. R. (2018). Interprofessional Education in Dentistry: ADEA Team Study Group report. *Journal of dental education*, 76(9), 1250–1268. <https://doi.org/10.1016/j.jdent.2018.05.014>

