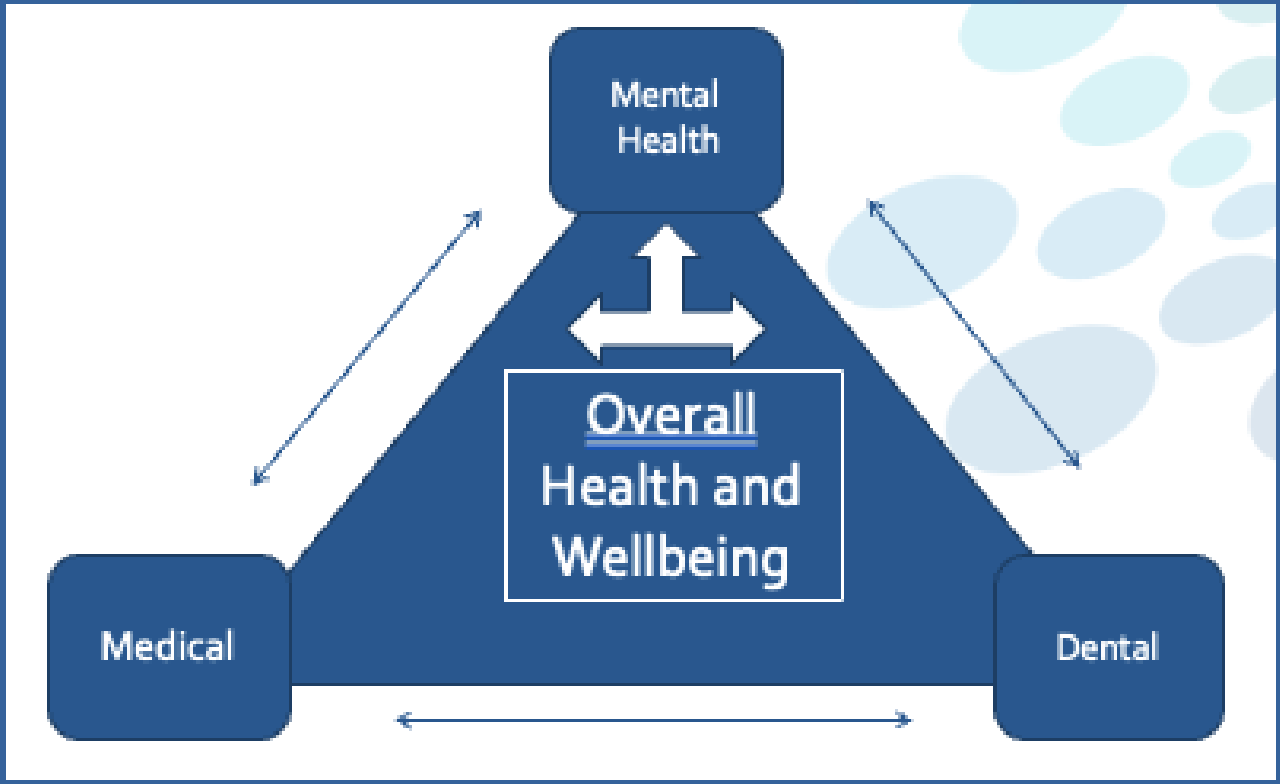
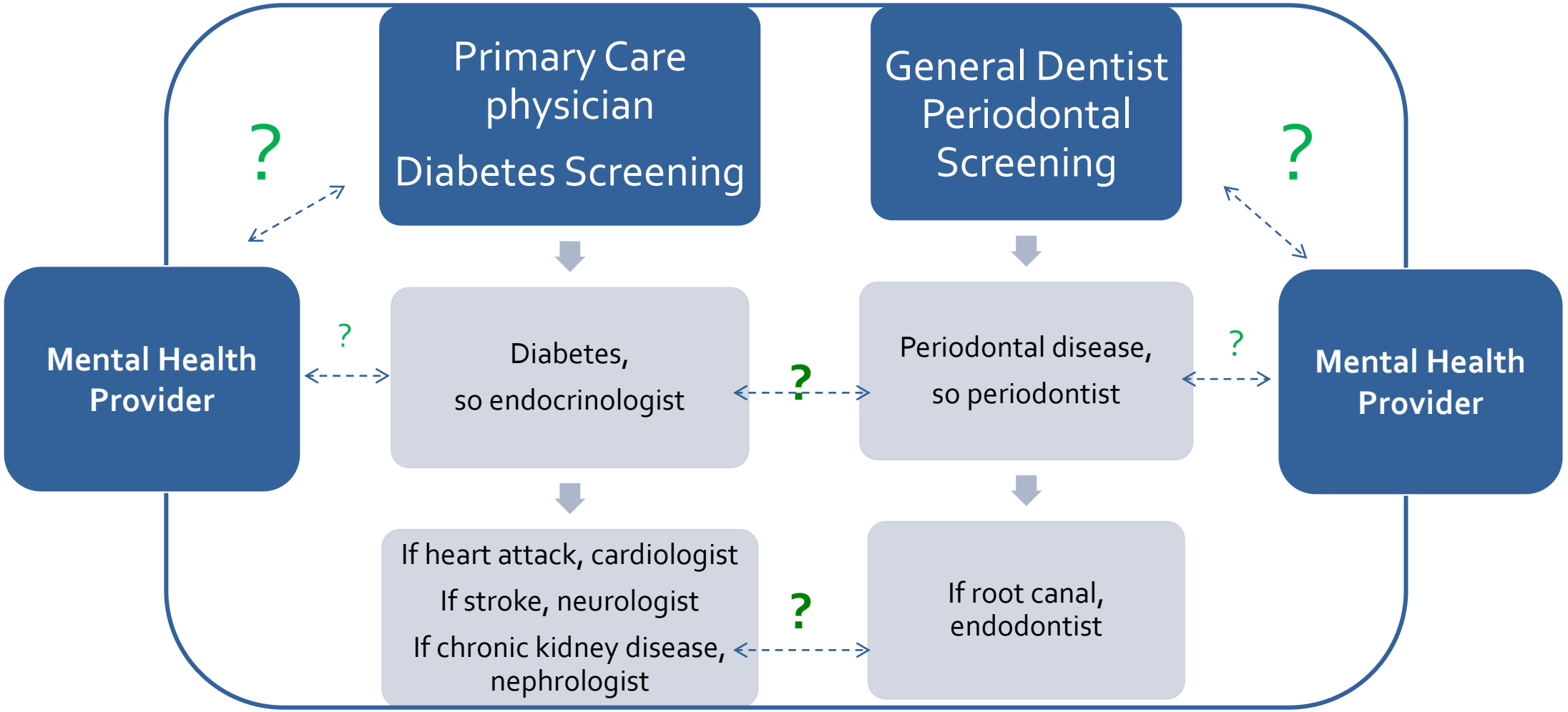
Accelerating Systems Change Through Integrated Whole Person Care From Education To Practice



Flow of Information



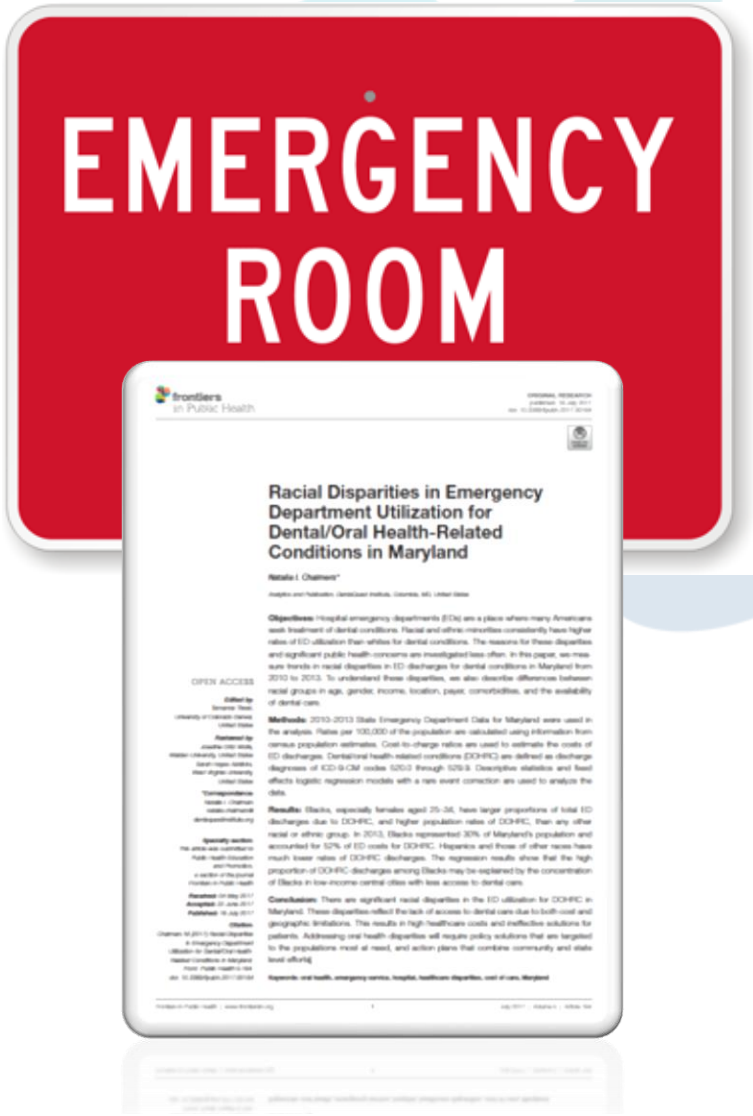
Communication is tenuous,
usually carried out by patient, if at all.

Adapted from Powell and Din 2008

Health Professional Shortage Areas

>75

million Americans live in dental health professional shortage areas



Emergency Department Visits for Nontraumatic Dental Problems National Institutes of Health (.gov)https://www.ncbi.nlm.nih.gov

U.S Department of Health and Human Services September,2023 Bureau of Health Workforce HRSA

Who, What and Why – 2009

Consortium:	*Funders, health professionals +national organizations*
Vision:	*Eradicate dental disease*
Mission:	*Engage primary care team and dental colleagues*
Focus:	*Integrate oral health into primary care education + practice*

The Short Answer

NIIOH is a systems change initiative that provides "Backbone Support" and facilitates interprofessional agreement and alignment to ready an interprofessional oral health workforce for whole person care

The Opportunity for Change

FIELD

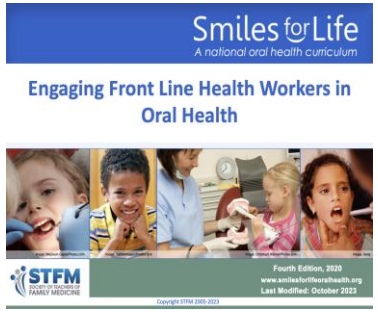
Interprofessional Competencies
The "What" and
"How"

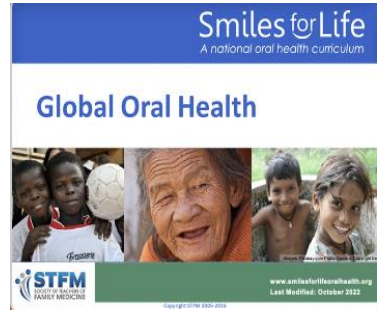
NIDCR
2021

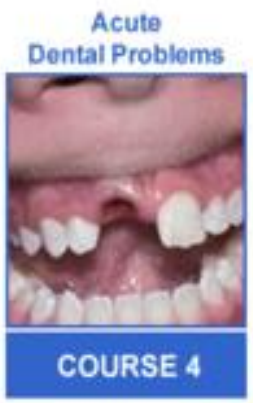
NiiOH National Interprofessional Initiative on Oral Health

MOVEMENT

Collective Impact







22

Endorsing organizations representing

Medicine
PA's
Nursing
Dentistry
Dental Hygiene
Pharmacy
Community Health Centers
And More!

Educate. . Transform.

What Have We Learned?

The organizational change process requires **system-wide intervention**

Having the **right people, right place, right reason** can change ideas and practice

A key is having the **right tools and strategies** to impact knowledge, skills and attitudes of providers

We cannot achieve our vision of **"oral health for all"** unless we change our approach to oral health care

Integration and collaboration is key, we can't do this alone!

Many Thanks to Our Legacy Funders

ARCORA Foundation of Delta Dental of Washington

CareQuest Institute for Oral Health

Where Do We Go From Here?

We need to move beyond symptoms of health disparities to aiming policy, funding, and workforce development at changing the structure that creates those disparities

We need to continue to work together across health professions to create a shared vision for whole person care to bridge medical, dental, and mental health silos and define shared performance measures with a focus on prevention, value and population health.

NiiOH National Interprofessional Initiative on Oral Health

Educate. Integrate. Transform.

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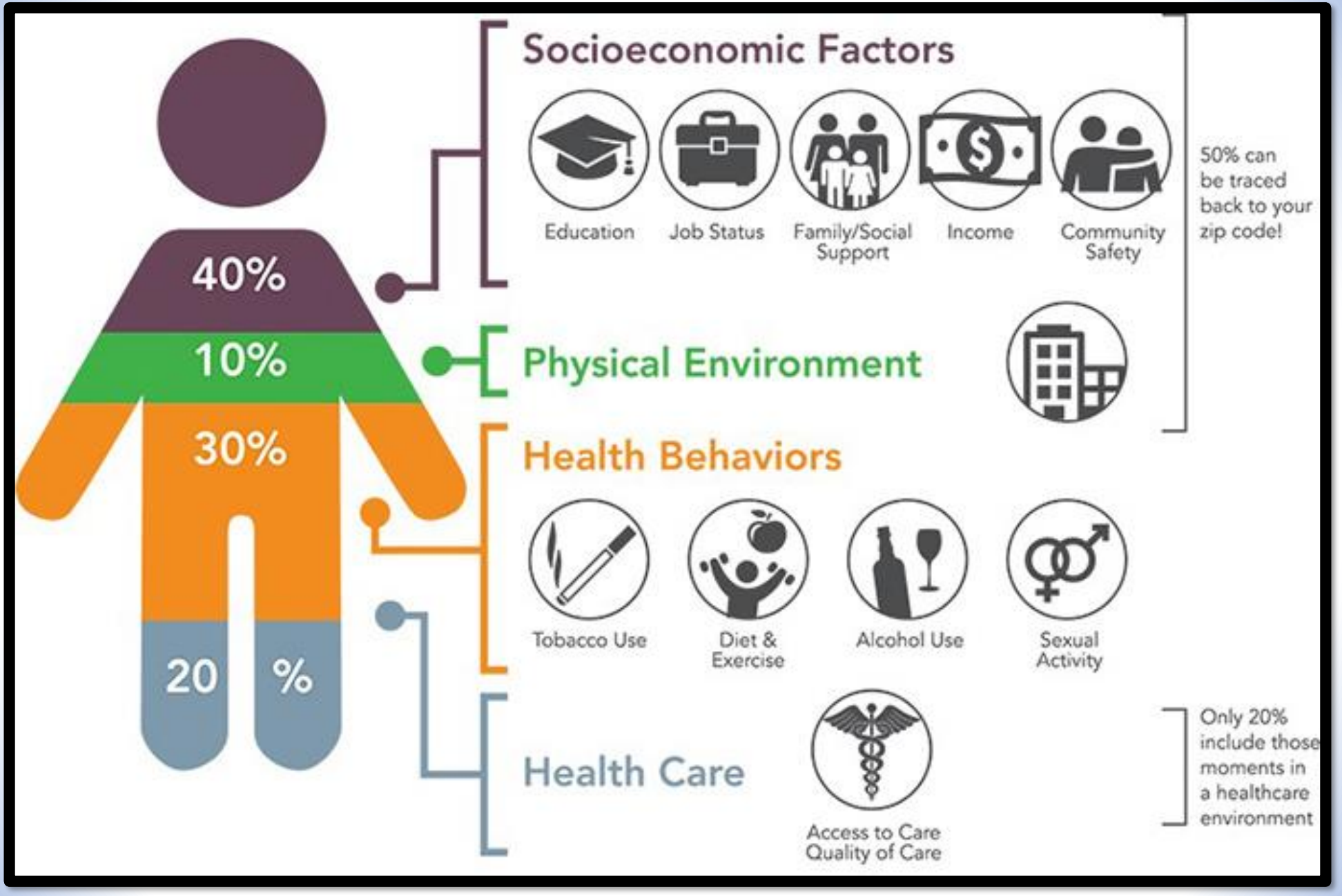
The Value of Oral Health Promotion & Disease Prevention to Limit the Need for Costly/Invasive Intervention

Helen H. Lee MD, MPH
University of Illinois Chicago
Exploring Holistic Oral Health Value Proposition Frameworks
Embedded Within A Whole Health Home
National Academies Sciences, Engineering, Medicine
February 15, 2024

Disclosures

- Funding:
  - Co-PI “Testing a Multi-behavioral intervention to Improve Oral Health Behaviors in the Pediatric Dental Surgery Population.” NIH/NIDCR UG3DE032003
  - co-I, “Coordinated Oral Health Promotion (CO-OP) Chicago Cohort Study.” NIH/NIDCR U01 DE030067



https://coveragetoolkit.org/health-equity/defining-health-equity/

My Journey: Disease, Treatment, Health Care

- ED visits for toothache
- Variability in dental surgeries
- ↑ preventive dental visits ≠ ⩓dental surgeries
- Prevention (water fluoridation) ≠ ⩓dental surgeries

- Lee HH, Lewis CW, Saltzman B, Starks H. Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008. Am J Public Health. 2012 Nov;102(11):e77-83. doi: 10.2105/AJPH.2012.300965. Epub 2012 Sep 20. PMID: 22994252; PMCID: PMC3477981.
- Lee HH, Lewis CW, McKinney CM. Disparities in Emergency Department Pain Treatment for Toothache. JDR Clin Trans Res. 2016 Oct;1(3):226-233. doi: 10.1177/2380084416655745. Epub 2016 Jun 27. PMID: 28879242; PMCID: PMC5576301.
- Lee HH, Faundez L, Yarbrough C, Lewis CW, LoSasso AT. Patterns in Pediatric Dental Surgery under General Anesthesia across 7 State Medicaid Programs. JDR Clin Trans Res. 2020 Oct;5(4):358-365. doi: 10.1177/2380084420906114. Epub 2020 Feb 10. PMID: 32040927.
- Lee HH, Faundez L, Nasseh K, LoSasso AT. Does Preventive Care Reduce Severe Pediatric Dental Caries? Prev Chronic Dis. 2020 Oct 29;17:E136. doi: 10.5888/pcd17.200003. PMID: 33119483; PMCID: PMC7665577.
- Lee HH, Faundez L, LoSasso AT. A Cross-Sectional Analysis of Community Water Fluoridation and Prevalence of Pediatric Dental Surgery Among Medicaid Enrollees. JAMA Netw Open. 2020 Aug 3;3(8):e205882. doi: 10.1001/jamanetworkopen.2020.5882. PMID: 32785633; PMCID: PMC7424407.

Table 2.
Characterizing Caries Disease Burden, Surgical Prevalence, and Related Spending across State Medicaid Programs.

				DGA		Total Expenditures,[a] $	
					Place of		
FL	200	1,073,339	8.7	6.0	77.7, 17.1, 5.2	33.48	8.60
TX	200	1,989,198	24.7	6.6	58.2, 25.6, 16.2	262.19	42.29

ASC, ambulatory surgery center; DGA, dental general anesthesia; FPL, federal poverty level.
[a]Costs are inflation adjusted to December 2012 and based on the Consumer Price Index (shown in millions). All figures are averages for 2011 and 2012.
[b]Highest Medicaid income eligibility level as a percentage of FPL in January 2011 (Kaiser Family Foundation 2018).
[c]Medicaid claims data for children enrolled in either a fee-for-service or managed care plan who submitted individual claims data.
[d]The prevalence of DGA events was calculated among children who had a caries-related claim. DGA events were billed in 3 facilities: hospital, ASC, or an office. Total caries expenditures were based on claims for caries-related procedures or visits. Total DGA expenditures were based on claims for caries-related procedures associated with general anesthesia claims.

Table 2. Association Between Proportion of County Population With Access to Community Water Fluoridation and Pediatric Oral Health Outcomes

	Prevalence of caries-related visits		Prevalence of DGA visits[a]	
Characteristics of regression model	Unadjusted	Adjusted	Unadjusted	Adjusted
Proportion with community water fluoridation (range, 0-1), percentage points, mean (95% CI)[b]	-0.31 (-0.47 to -0.15)	-0.45 (-0.59 to -0.31)	-0.39 (-0.67 to -0.12)	-0.23 (-0.49 to 0.02)
P value	<.001	<.001	.006	.07
Observations, No.	872	872	872	872
Demographic controls[c]	No	Yes	No	Yes

- Lee HH, Lewis CW, Saltzman B, Starks H. Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008. Am J Public Health. 2012 Nov;102(11):e77-83. doi: 10.2105/AJPH.2012.300965. Epub 2012 Sep 20. PMID: 22994252; PMCID: PMC3477981.
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- Lee HH, Faundez L, LoSasso AT. A Cross-Sectional Analysis of Community Water Fluoridation and Prevalence of Pediatric Dental Surgery Among Medicaid Enrollees. JAMA Netw Open. 2020 Aug 3;3(8):e205882. doi: 10.1001/jamanetworkopen.2020.5882. PMID: 32785633; PMCID: PMC7424407.

Severe Disease and Health Care=$$$

- Emergency Department Visits
  - Number=>4 million visits
  - Cost/visit= $760
  - Total cost=$2.7 Billion charged over 3 years
- Dental Surgery (2011)
  - Number=0.5% children enrolled in Medicaid
  - Cost/case = $2581
  - Total cost >$450 M **(<u>underestimation!</u>)**

- *Lewis C, Lynch H, Johnston B. Dental complaints in emergency departments: a national perspective. Ann Emerg Med. 2003;42(1):93-99.*
- *Allareddy V, Rampa S, Lee MK, Allareddy V, Nalliah RP. Hospital-based emergency department visits involving dental conditions: profile and predictors*
- *of poor outcomes and resource utilization. JADA. 2014;145(4):331-337.*
- *Davis EE, Deinard AS, Maïga EW. Doctor, my tooth hurts: the costs of incomplete dental care in the emergency room. J Public Health Dent. 2010;*
- *70(3):205-210.*
- Bruen BK, Steinmetz E, Bysshe T, Glassman P, Ku L. Potentially preventable dental care in operating rooms for children enrolled in Medicaid. J Am Dent Assoc. 2016 Sep;147(9):702-8. doi: 10.1016/j.adaj.2016.03.019. Epub 2016 May 6. PMID: 27158078.

Disease Focus ↔ Publication

- Costs of treating caries
- Who, when and where
  - <3 years
  - Highest care utilizers
  - Most expensive services
- Disease persists, even with preventive dental care

http://dx.doi.org/10.5888/pcd9.110219
https://doi.org/10.3389/fpubh.2020.599187
10.1177/2380084418793410

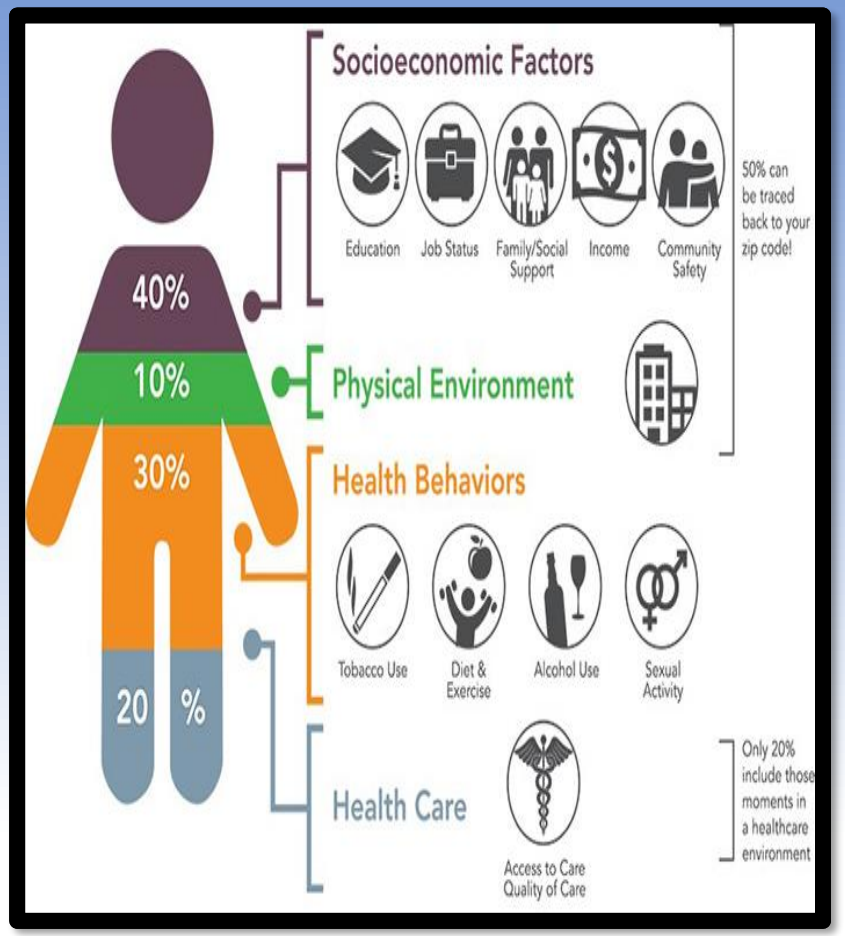
Health-Focused Interprofessional Collaborations: Barriers

- Reimbursement & coding
- Electronic records
- Funding
  - College/Department/Individual Credit
  - Indirects
- Health Professions
  - Theory and Practice

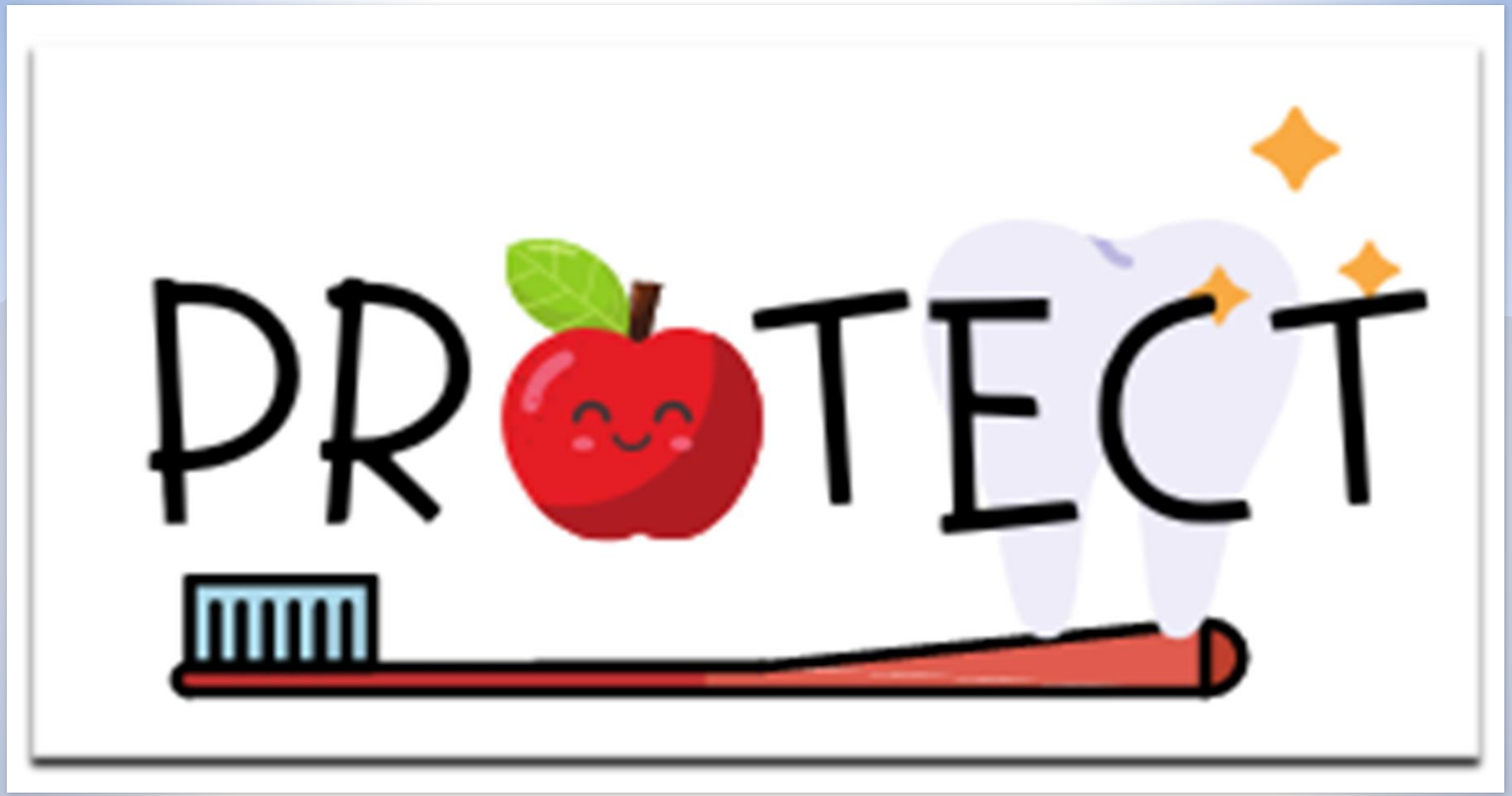
Changing Culture Towards Whole Health

- General Public
  - Community based
- Future Workforce
  - undergraduate
  - graduate
  - clinical training
- Health Delivery
  - Integration in clinical practice

Focusing on Health



- Promoting health in early childhood (CO-OP)
- Promoting health in pre-natal period



Moving From Healthcare to Health

Contact

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University of Illinois Chicago College of Medicine

leehelen@uic.edu

Creating Value in Oral Health Care for People with Disabilities Through Community-Engaged Oral Health Systems

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CALIFORNIA NORTHSTATE UNIVERSITY
COLLEGE of DENTAL MEDICINE

SACRAMENTO COUNTY

SACRAMENTO COUNTY PUBLIC HEALTH
Promote • Prevent • Protect

PAINFUL REALITIES: GENERAL ANESTHESIA ACCESS IN SACRAMENTO GMC DENTAL MANAGED CARE



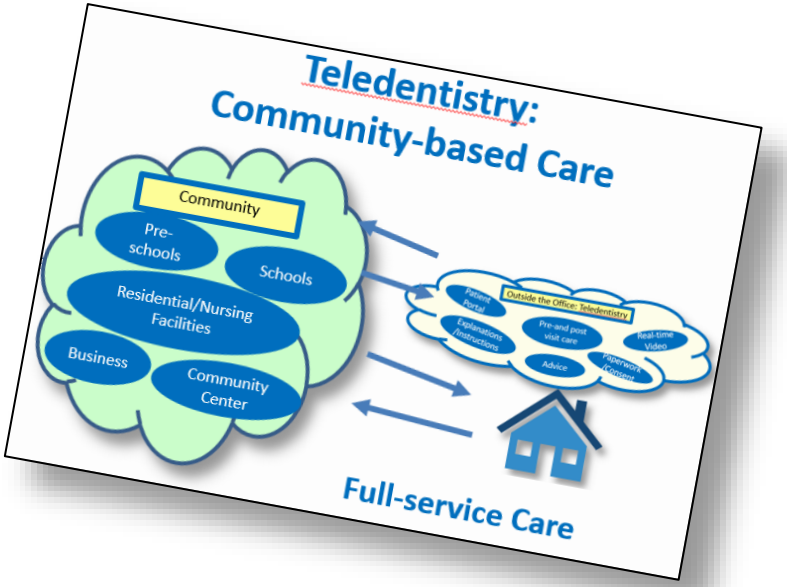
ARTICLE

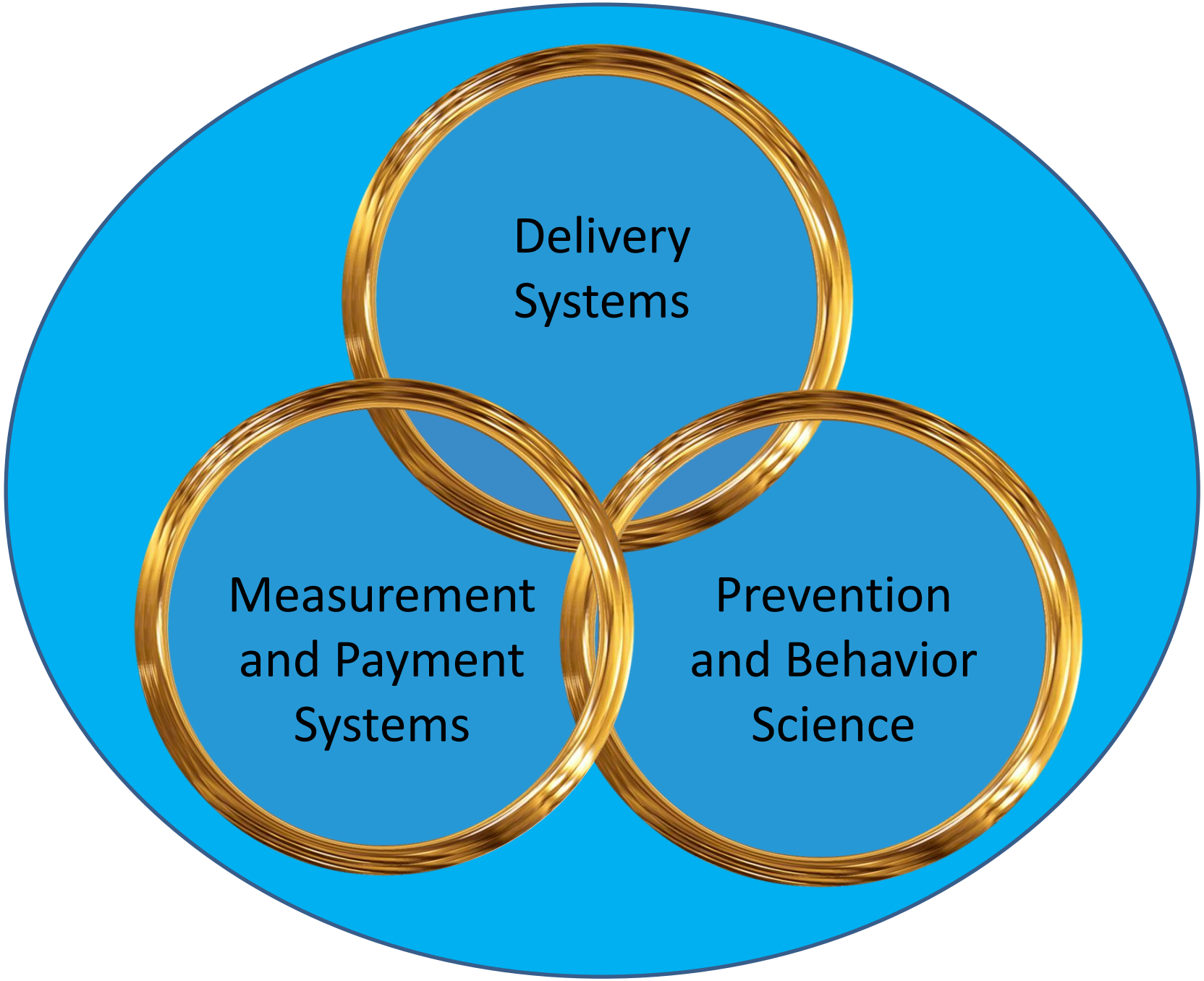
Special Care Dentistry Association consensus statement on sedation, anesthesia, and alternative techniques for people with special needs

Paul Glassman, DDS, MA, MBA;[1*] Anthony Caputo, DDS;[2] Nancy Dougherty, DMD;[3] Ray Lyons, DDS;[4] Zakaria Messieha, DDS;[5] Christine Miller, RDH, MHA, MA;[6] Bruce Peltier, PhD;[7] Maureen Romer, DDS[8]

Spec Care Dentist 29(1): 2-8, 2009

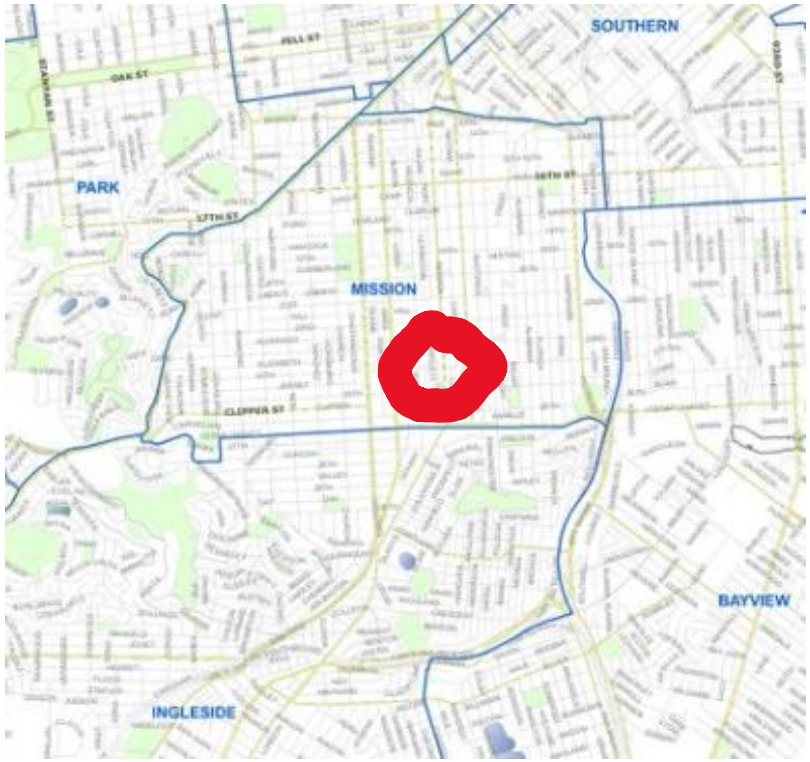
Community Engaged Oral Health Systems

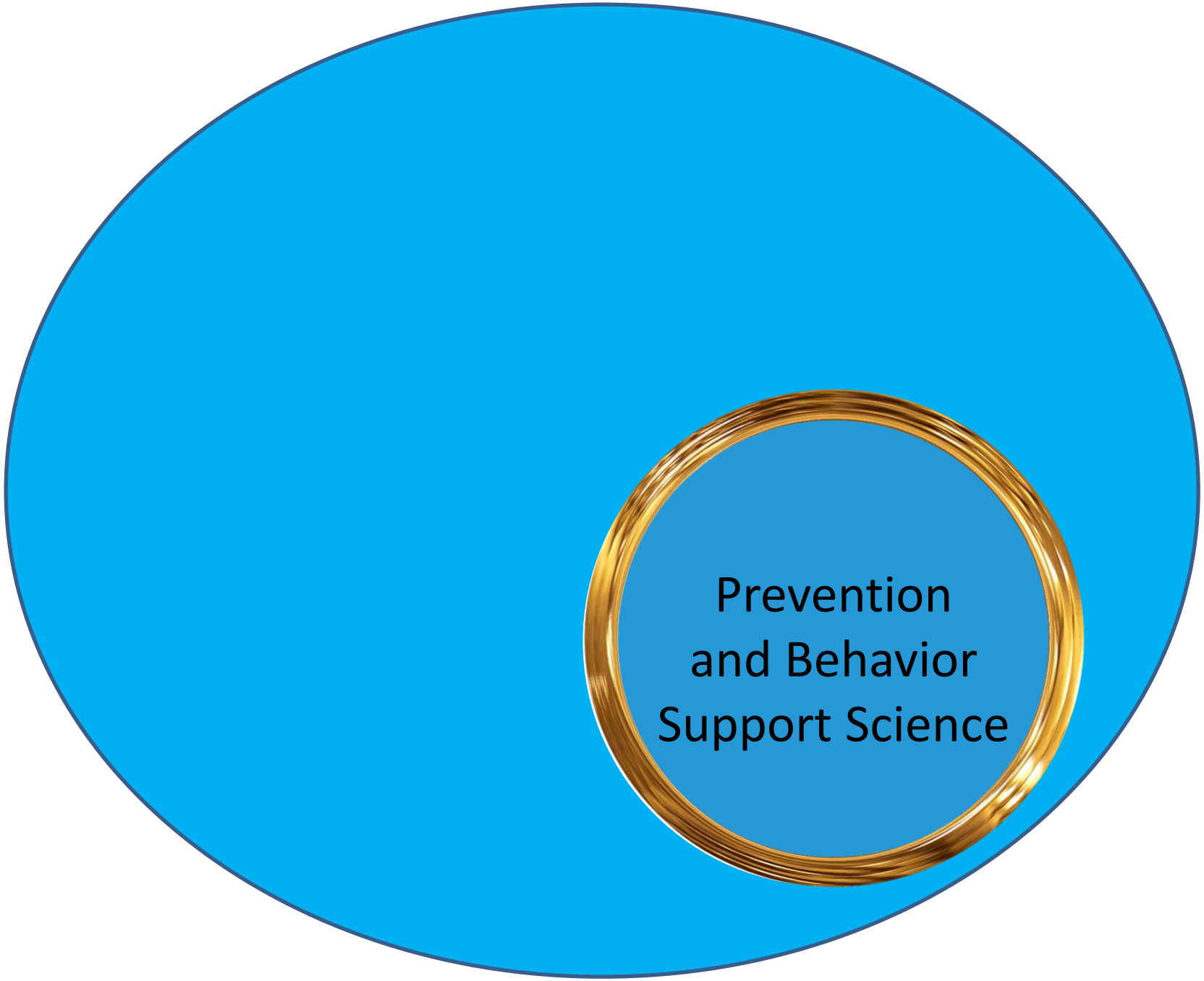



Delivery Systems
Measurement and Payment Systems
Prevention and Behavior Science

Oral Health Outcomes

Clinic vs Community

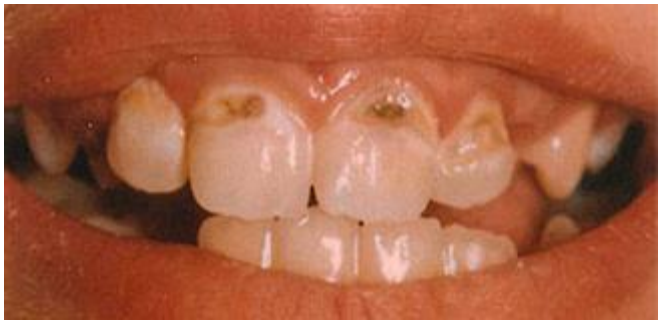



Prevention
and Behavior
Support Science

Medical Management:
The Declining Role for the Dental Drill

Remineralization

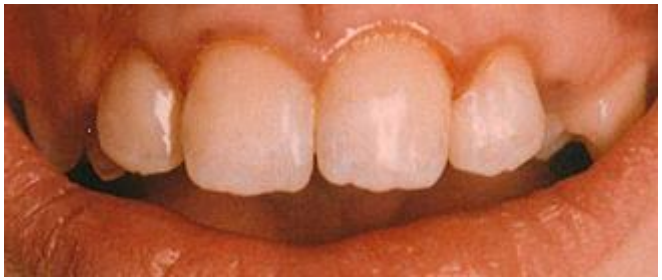
CAMBRA



Buffering Agents

Caries Arresting Medications

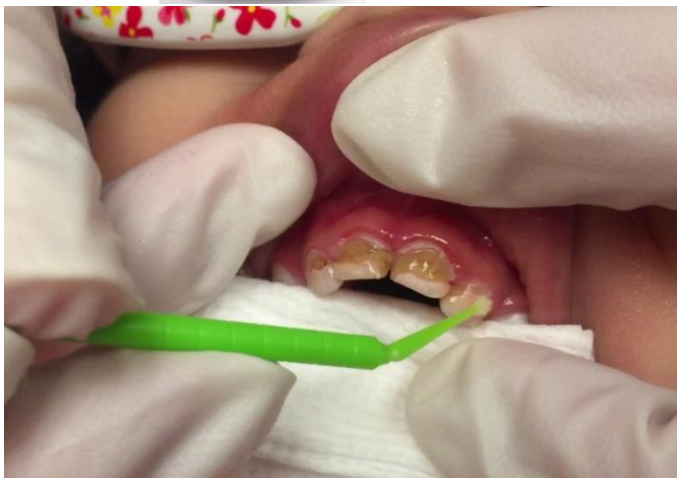
Sealing Caries



Toothpaste, School brushing, Iodine, Argenine,

Fluoride Varnish

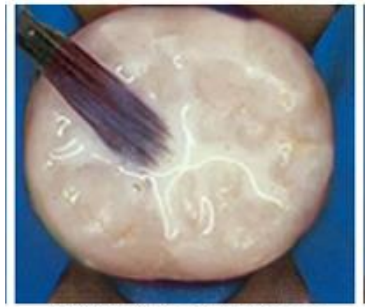
Silver Diamine Fluoride



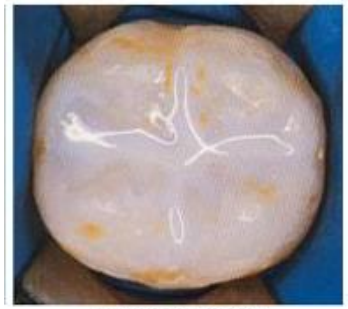
Sealing Caries

Dental Sealants

Deep Grooves in Tooth Surface

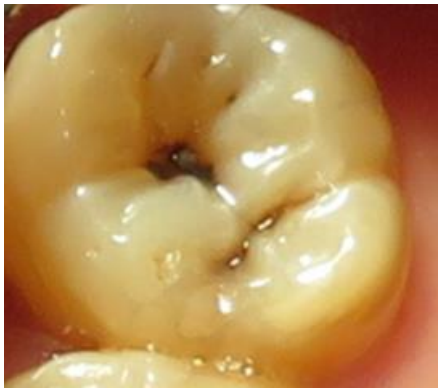


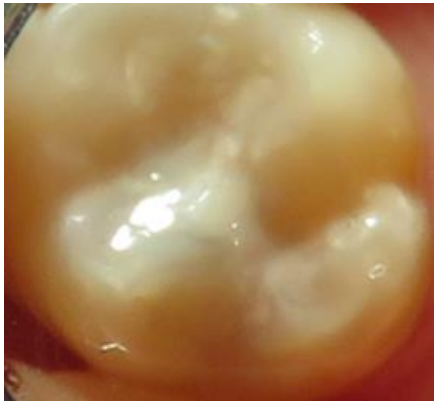
Painting Sealant into Grooves



Hardened Sealant

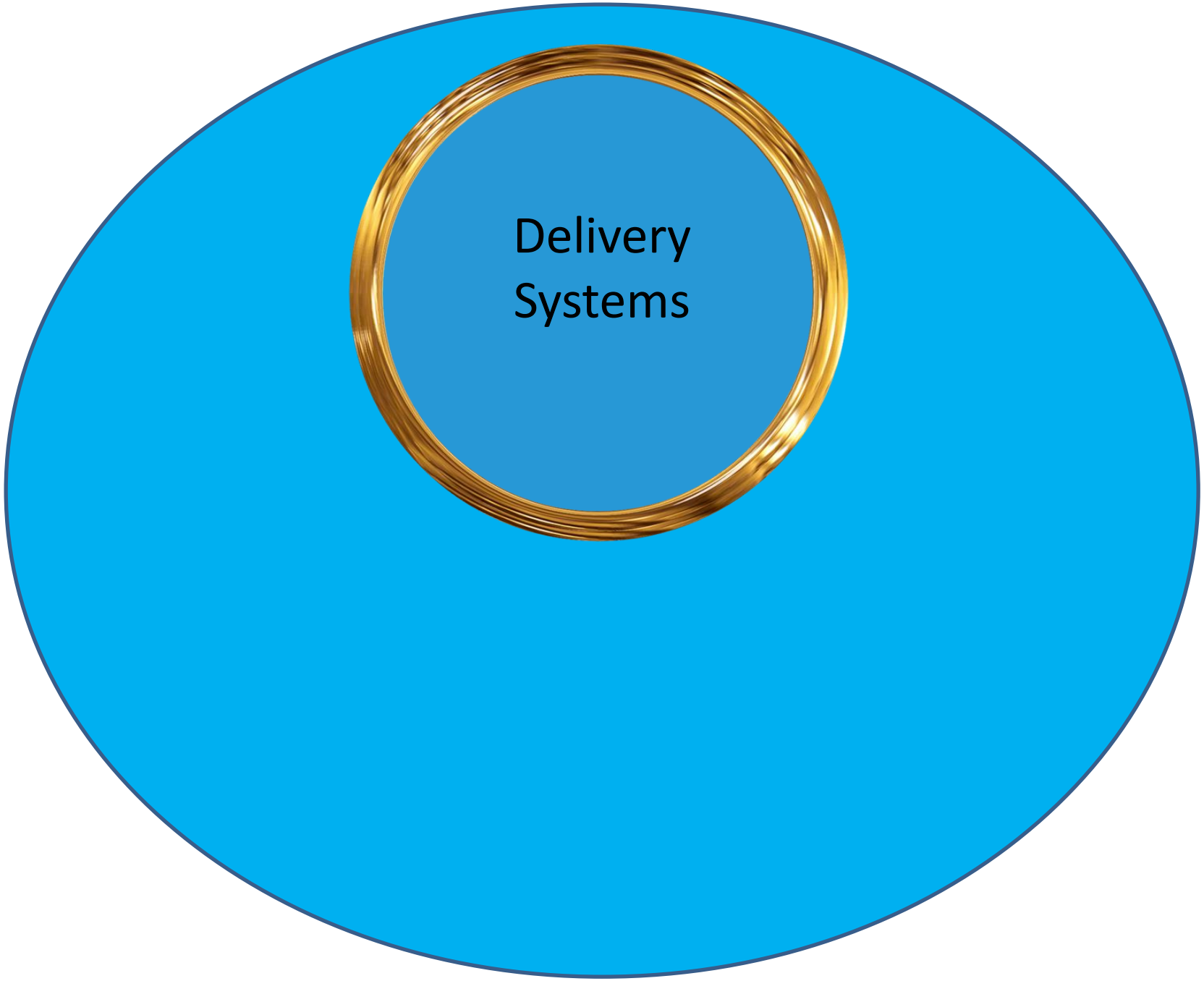
Interim Therapeutic Restorations





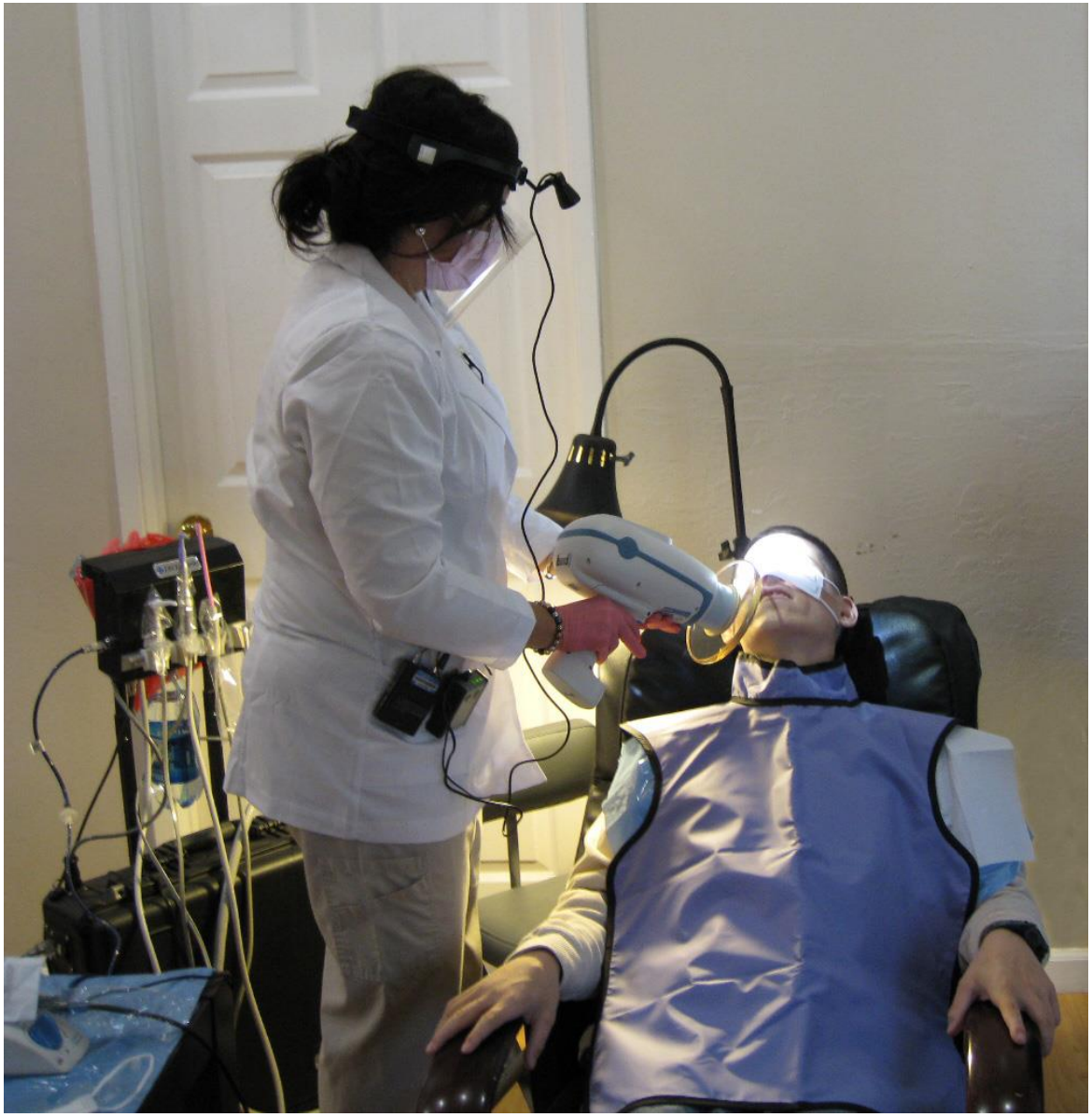
Behavior Change Principles: Supporting Adoption of "Mouth Health Habits"

- Messages delivered by trusted (culturally congruent) members of the community
- Multiple people delivering the same message
- Small incremental behavior changes
- Ongoing reinforcement, coaching
- Peer support
- -> Integration with community organizations


Delivery
Systems

The Virtual Dental Home

Community Engaged Oral Health Systems



California Northstate University College of Dental Medicine

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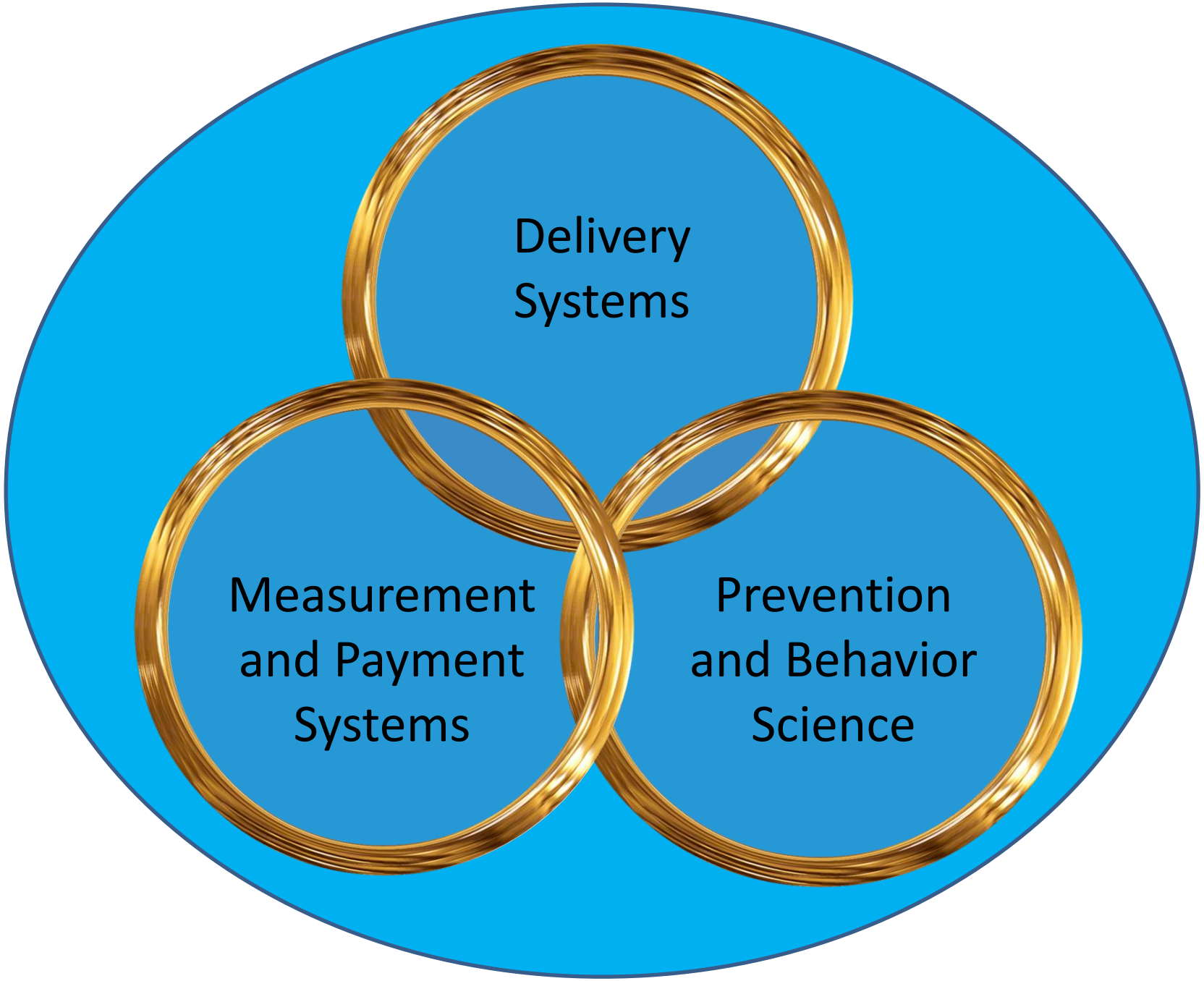
Delivery Systems
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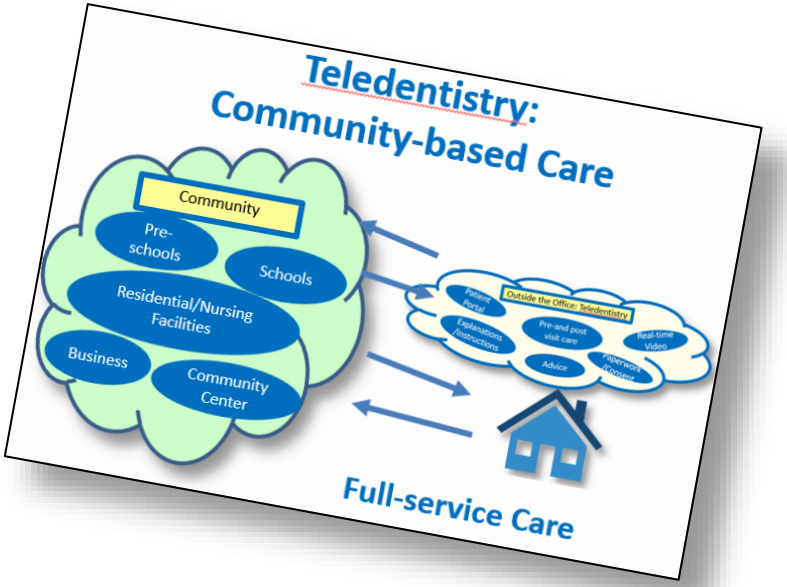
The Road to Value in Oral Health

- Population focus
  - Improve the health of communities
- Measure outcomes
  - Population outcomes, not just clinic attenders
- Delivery systems
  - Reach people who do not come to the clinic
  - Integrate: medical, educational, social systems
- Prevention and behavior science
  - Follow, understand, and use best evidence-based approaches

Community Engaged Oral Health Systems



Addressing Barriers to Adoption

- Awareness
- Policy
  - Can it be done
    - Licensure/scope of practice?
  - Is it paid for?
- Implementation challenges
  - even if people are aware, and it is allowed, and it is paid for, there are still numerous implementation challenges in doing something different than what is now the mainstream approach to oral health.

Creating Value in Oral Health Care for People with Disabilities Through Community-Engaged Oral Health Systems

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NATIONAL ACADEMIES Sciences Engineering Medicine

Richard Berman

Associate Vice President for Strategic Initiatives for Innovation and Research

The University of South Florida

Understanding A Value Proposition

NOVEMBER 2022 UPDATE

The Business Model Canvas

Designed for:	Designed by	Date:	Version:

Key Partnerships	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		**Channels**	

Cost Structure	Revenue Streams

Strategyzer
strategyzer.com

ey Activities

Customer Relationships

Customer Segments

ey Resourc

The Business Model Canvas

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	Key Resources		Channels	

Cost Structure	Revenue Streams

Strategyzer
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ctivities

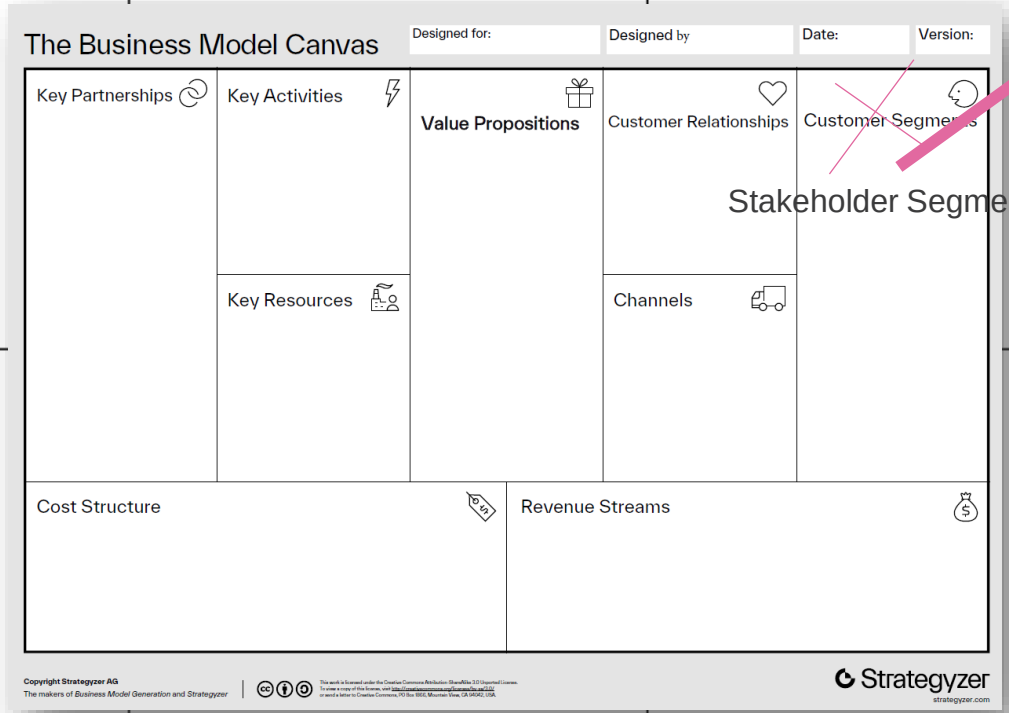
Value Propositions

Customer Relationships

Stakeholder Segments

- Persons/Communities
- Providers/Educators
- Payers/Policymakers

esources



Stakeholder Segments

Who is the audience for holistic oral health professional education?

Patients/Clients/Communities

- Persons with cognitive disabilities & mental health conditions
- Persons with physical disabilities
- Low income & traditionally minoritized populations
- Persons with fear, anxiety, and other mental health conditions

Providers/Educators

Interprofessional teams learning from and with each other

- Social Workers
- Psychologists
- Nutritionists
- Physical Therapists
- Occupational Therapists
- Speech/Language Pathology
- Pharmacists
- Medical Doctors
- Nurses
- Physician Assistants
- Dental Hygienists
- Dentists
- Community Health Workers
- Others as well

Payers

- Medicare
- Medicaid
- Governments
- HMOs
- Commercial Insurance
- Foundations

Pains & Gains

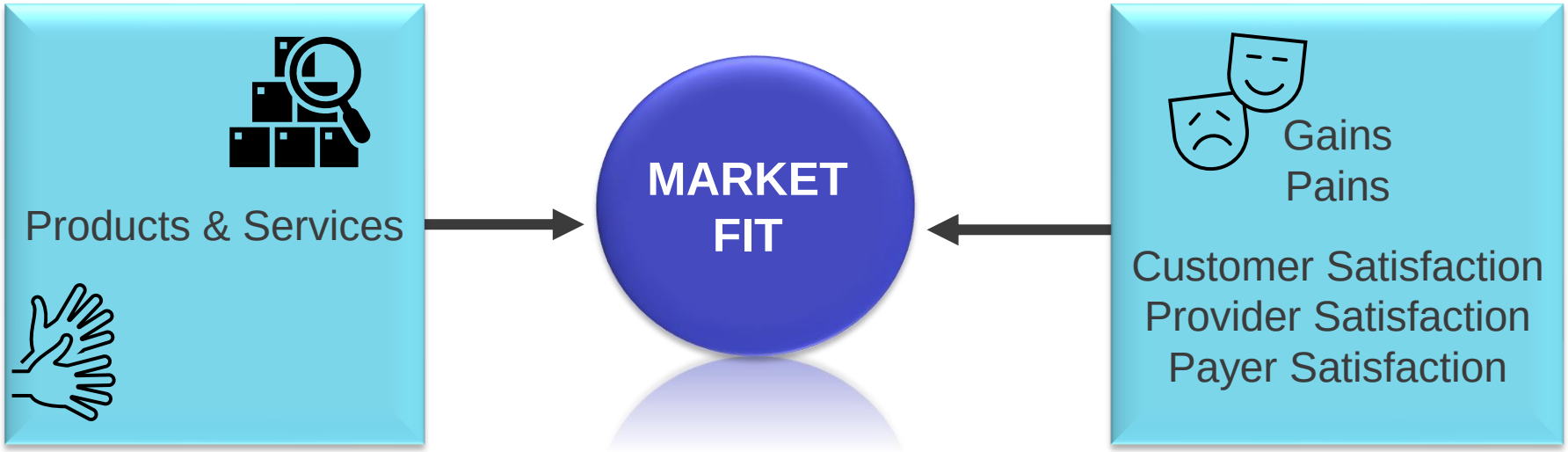
Pains – Understand the pain

- Patients - Transportation, Financial, Language, Fear/Anxiety
- Providers - Payment structures, Respect in the hierarchy, Communication
- Payers - Cost:Value

Gains – Target the gain

- Patients – prevent mouth pain, able to eat, avoid tooth decay
- Providers – work and educate together for better use of time, greater satisfaction, improved patient care
- Payers – reduced cost, better ROI, improved public image, competitive advantage, medical claims costs, the person's health

The **Value Proposition** is solving pains and enhancing gains for each of the stakeholder segments



Oral Health and Value-Based Care

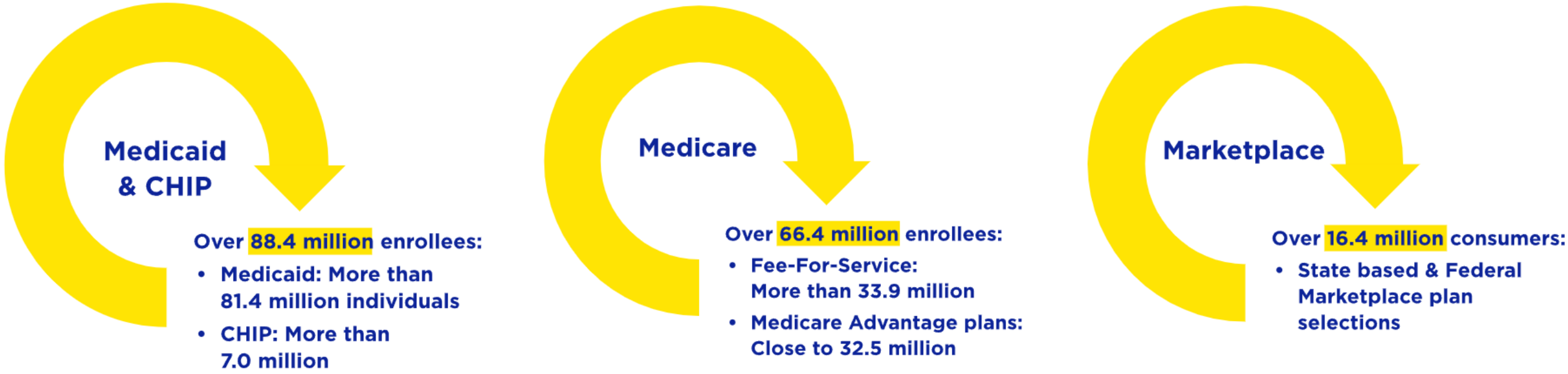
Natalia I. Chalmers DDS, MHSc, PhD

Chief Dental Officer, Office of the Administrator

Centers For Medicare & Medicaid Services

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Every day, CMS ensures that 159.2 million* people in the U.S. have health coverage that works



*Subtotal: 171.2 million. Adjust for Medicare/Medicaid dual eligibles (-12 million).

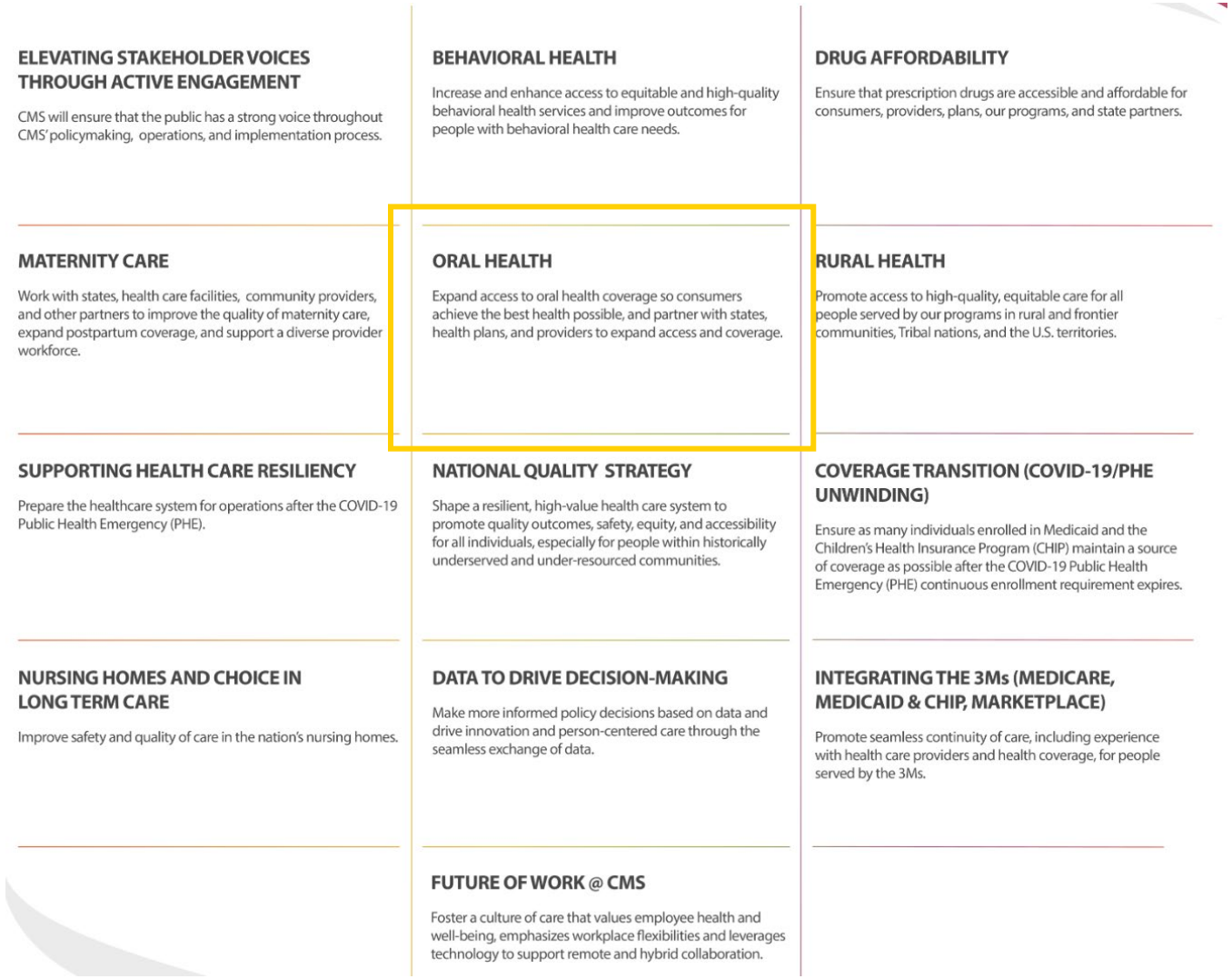
Source: https://www.cms.gov/pillar/expand-access as of 01/26/2024

CMS Vision Statement and Strategic Pillars

CMS serves the public as a trusted partner and steward, dedicated to advancing health equity, expanding coverage, and improving health outcomes

 Source: https://www.cms.gov/cms-strategic-plan updated May 16, 2023

CMS Cross-Cutting Initiatives



ELEVATING STAKEHOLDER VOICES THROUGH ACTIVE ENGAGEMENT

CMS will ensure that the public has a strong voice throughout CMS' policymaking, operations, and implementation process.

BEHAVIORAL HEALTH

Increase and enhance access to equitable and high-quality behavioral health services and improve outcomes for people with behavioral health care needs.

DRUG AFFORDABILITY

Ensure that prescription drugs are accessible and affordable for consumers, providers, plans, our programs, and state partners.

MATERNITY CARE

Work with states, health care facilities, community providers, and other partners to improve the quality of maternity care, expand postpartum coverage, and support a diverse provider workforce.

ORAL HEALTH

Expand access to oral health coverage so consumers achieve the best health possible, and partner with states, health plans, and providers to expand access and coverage.

RURAL HEALTH

Promote access to high-quality, equitable care for all people served by our programs in rural and frontier communities, Tribal nations, and the U.S. territories.

SUPPORTING HEALTH CARE RESILIENCY

Prepare the healthcare system for operations after the COVID-19 Public Health Emergency (PHE).

NATIONAL QUALITY STRATEGY

Shape a resilient, high-value health care system to promote quality outcomes, safety, equity, and accessibility for all individuals, especially for people within historically underserved and under-resourced communities.

COVERAGE TRANSITION (COVID-19/PHE UNWINDING)

Ensure as many individuals enrolled in Medicaid and the Children's Health Insurance Program (CHIP) maintain a source of coverage as possible after the COVID-19 Public Health Emergency (PHE) continuous enrollment requirement expires.

NURSING HOMES AND CHOICE IN LONG TERM CARE

Improve safety and quality of care in the nation's nursing homes.

DATA TO DRIVE DECISION-MAKING

Make more informed policy decisions based on data and drive innovation and person-centered care through the seamless exchange of data.

INTEGRATING THE 3Ms (MEDICARE, MEDICAID & CHIP, MARKETPLACE)

Promote seamless continuity of care, including experience with health care providers and health coverage, for people served by the 3Ms.

FUTURE OF WORK @ CMS

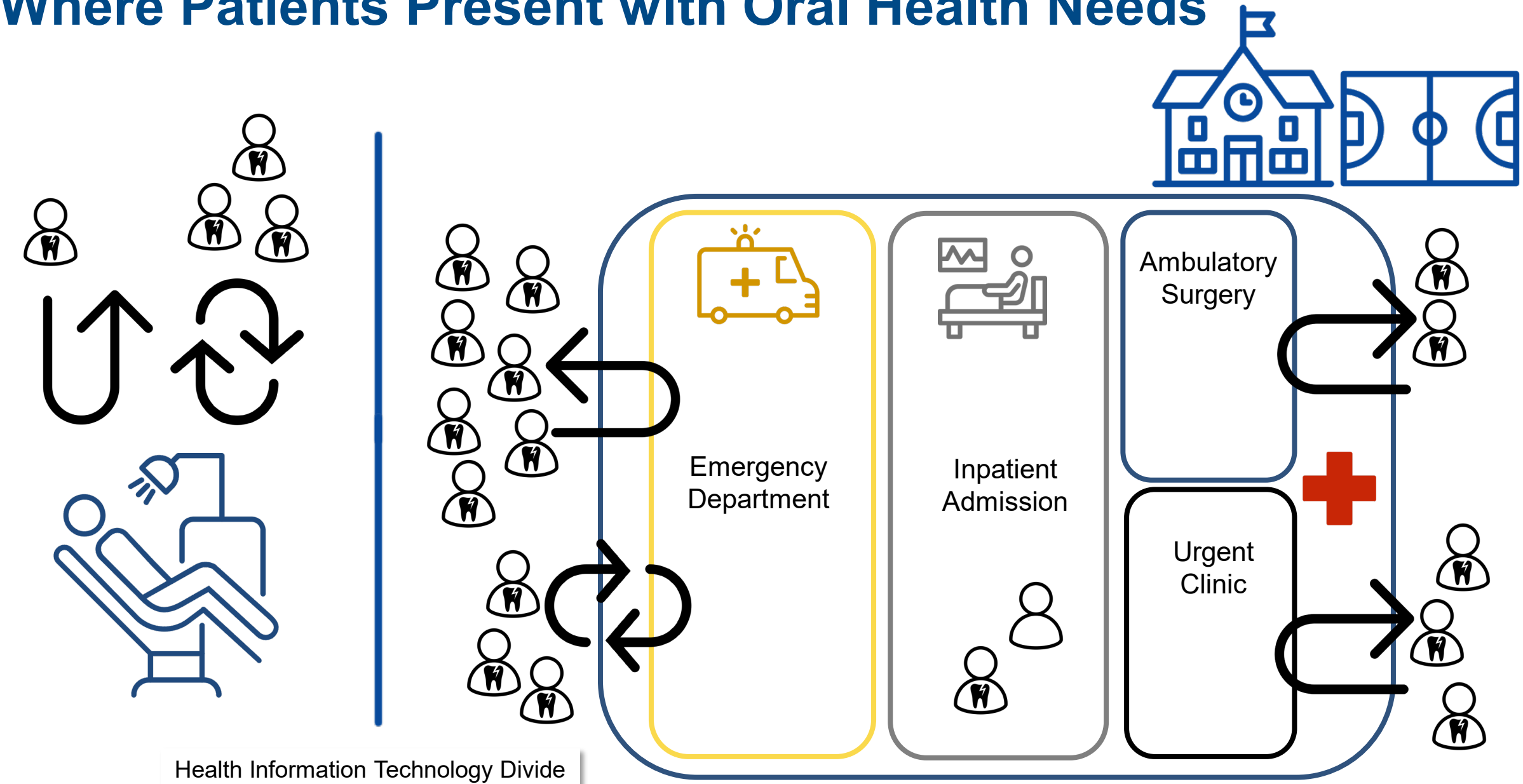
Foster a culture of care that values employee health and well-being, emphasizes workplace flexibilities and leverages technology to support remote and hybrid collaboration.

ORAL HEALTH

CMS will consider opportunities to expand access to oral health coverage using existing authorities and health plan flexibilities. Access to oral health services that promote health and wellness is critical to allow beneficiaries and consumers to achieve the best health possible, consistent with the current program authorities for Medicare, Medicaid/CHIP, and the Marketplace. Therefore, CMS plans to partner with states, health plans, and healthcare providers to find opportunities to expand coverage, improve access to oral health services and consider options to use our authorities creatively to expand access to care.

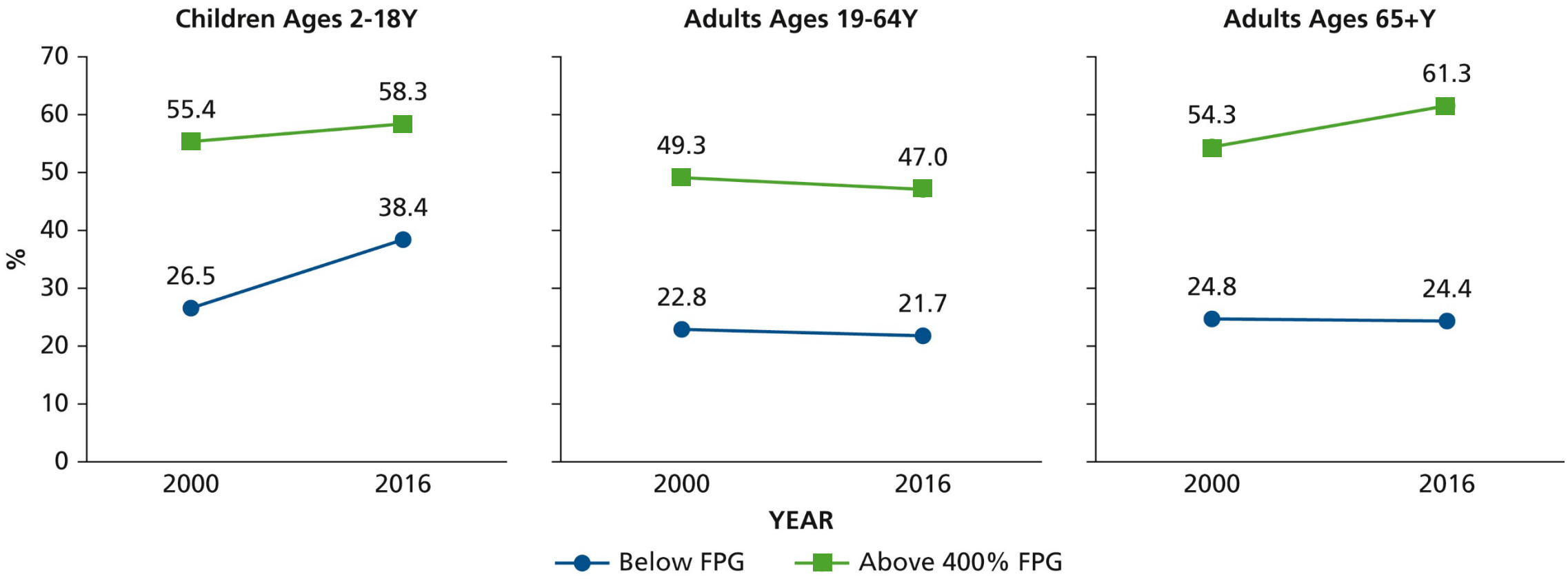
Source: https://www.cms.gov/files/document/strategic-plan-overview-fact-sheet.pdf

Where Patients Present with Oral Health Needs



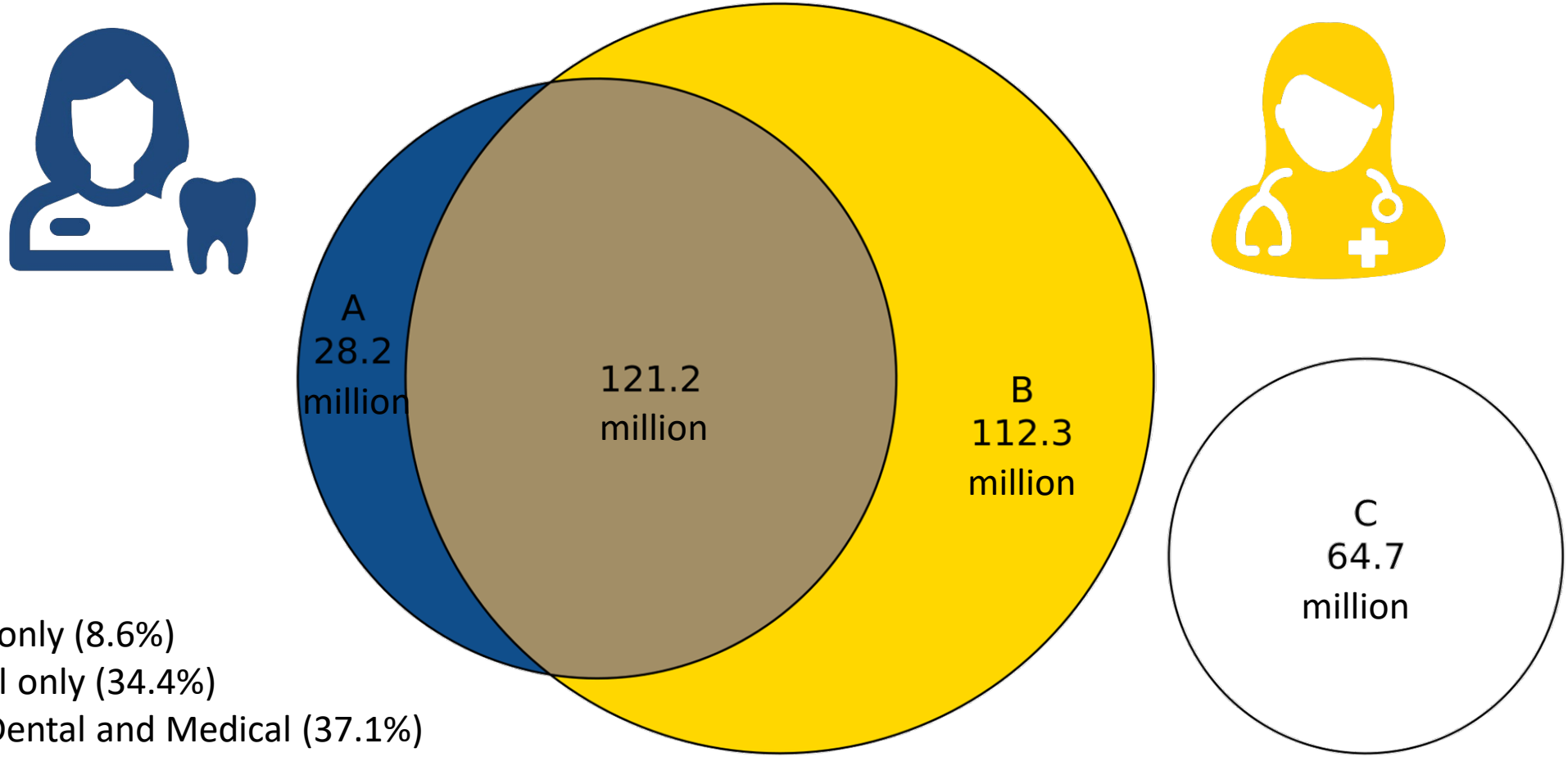
Health Information Technology Divide
Diagnostic Coding
Integration and Coordination of Care

Dental Visit in the Past Year By Poverty



Source: Yarbrough and Vujicic Oral health trends for older Americans JADA 2019

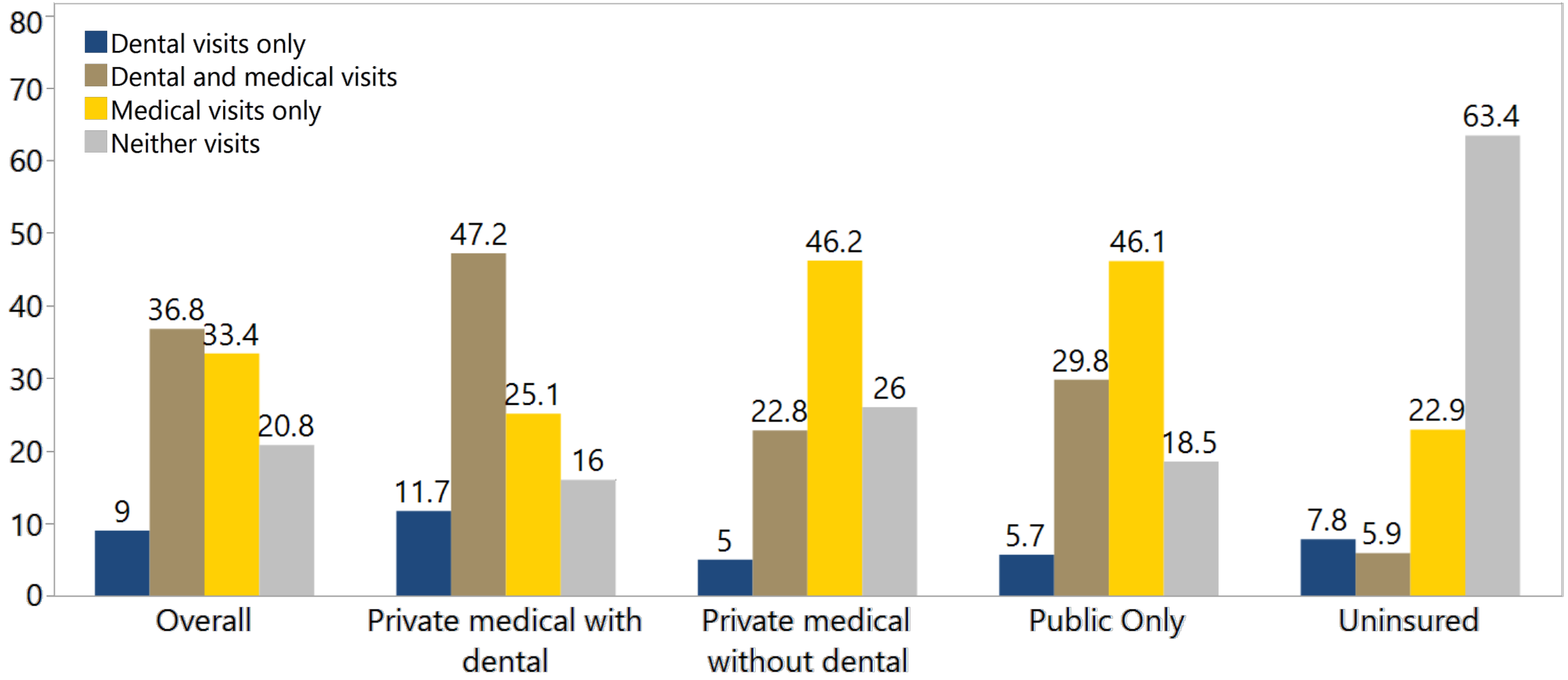
Population with Any Dental and Medical Visits, 2018



A: Dental only (8.6%)
B: Medical only (34.4%)
A and B: Dental and Medical (37.1%)
C: Neither dental nor medical (19.8%)

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2018.

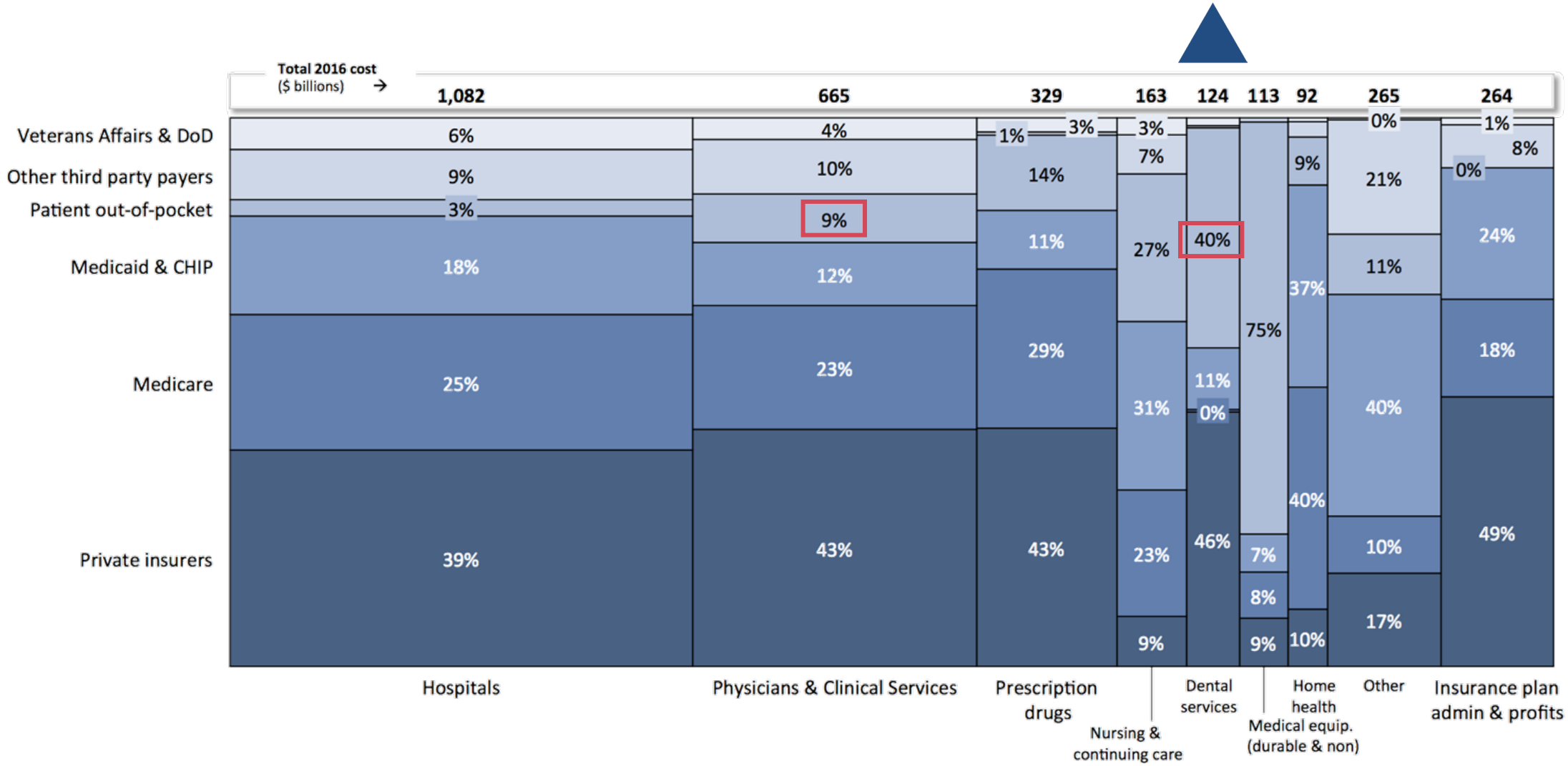
Overall Proportion of the Population with Any Dental or Medical Visits by Insurance Coverage, 2019



Source: Manski, R., Rohde, F., Ricks T., and Chalmers, N. Trends in the Number and Percentage of the Population with Any Dental or Medical Visits, 2019. Statistical Brief #544. October 2022. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data_files/publications/st544/stat544.shtml

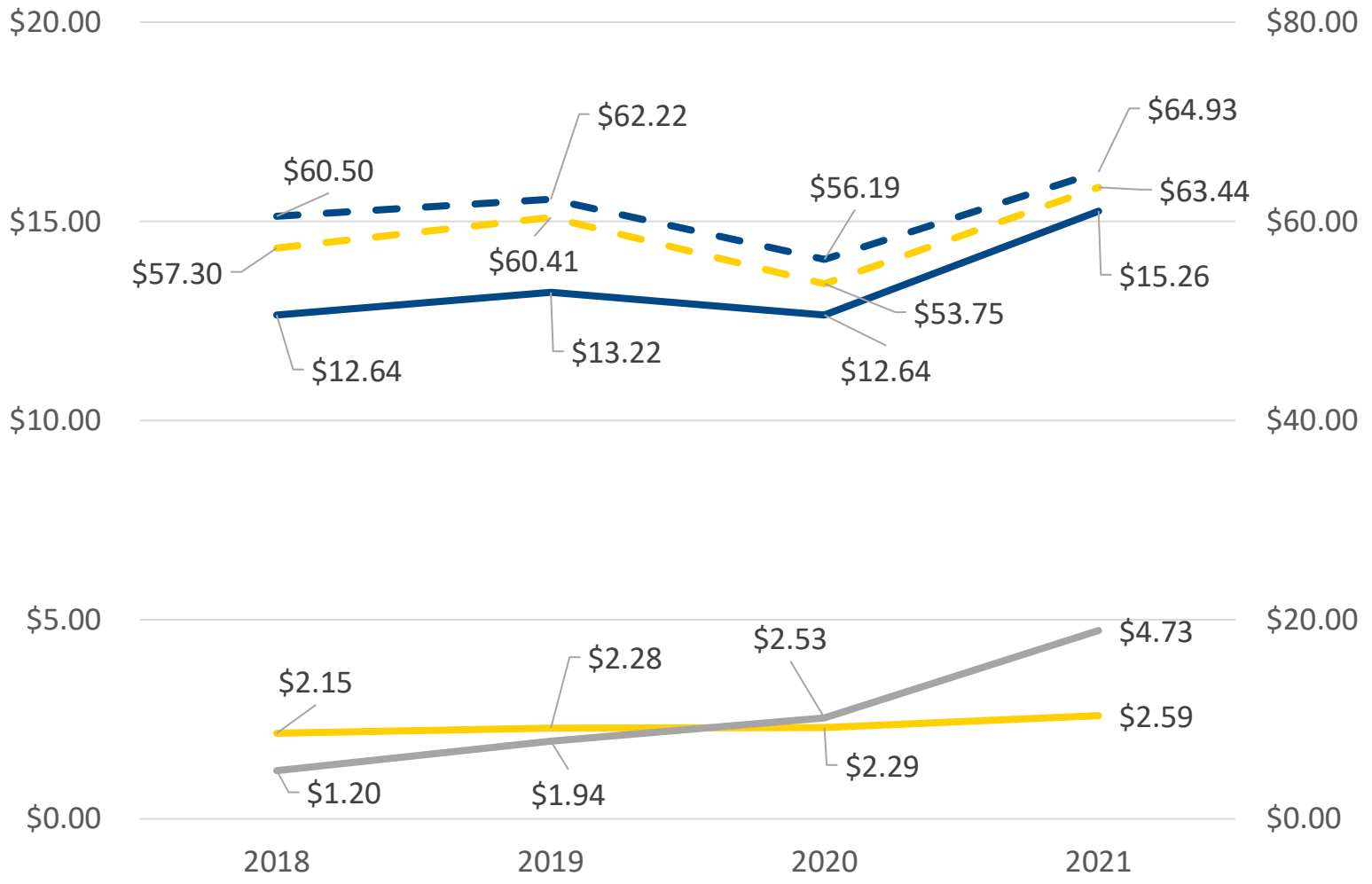
National Health Expenditure

Dental is 4% of all Health Expenditures, $124 Billion



Source: National Health Expenditure, Centers for Medicare and Medicaid Services, 2016

Dental National Health Expenditures By Payer, 2021

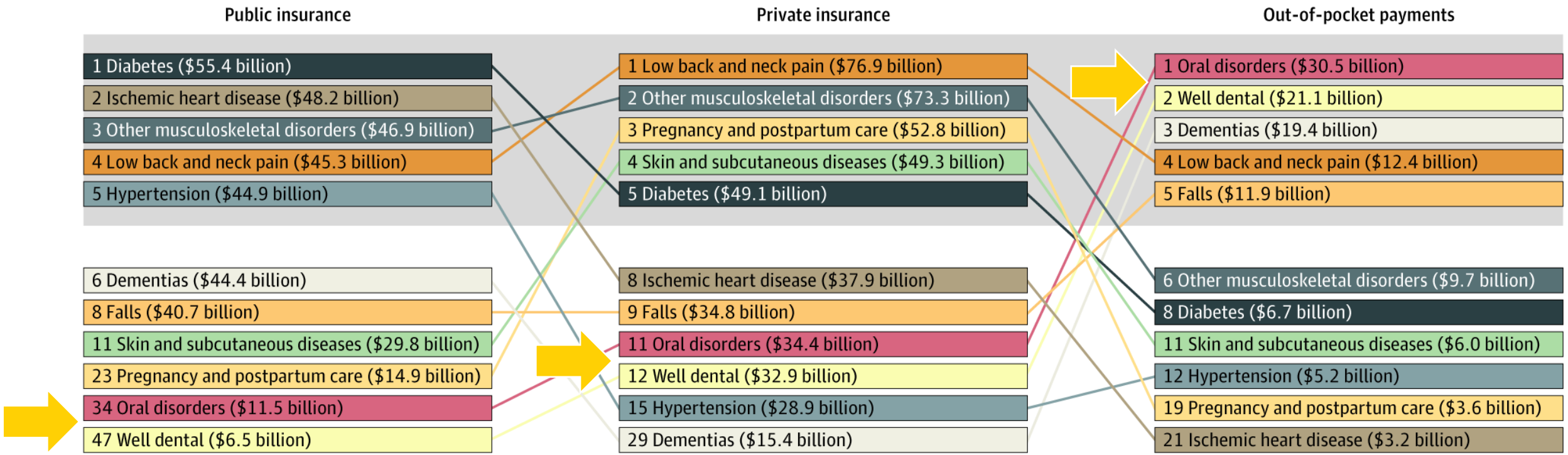


Dental Services (4 percent share): Spending for dental services rose 16.1 percent in 2021 to $161.8 billion, following a decline of 3.0 percent in 2020.

In 2021 CMS spending on dental services was **$ 22.58 billion.**

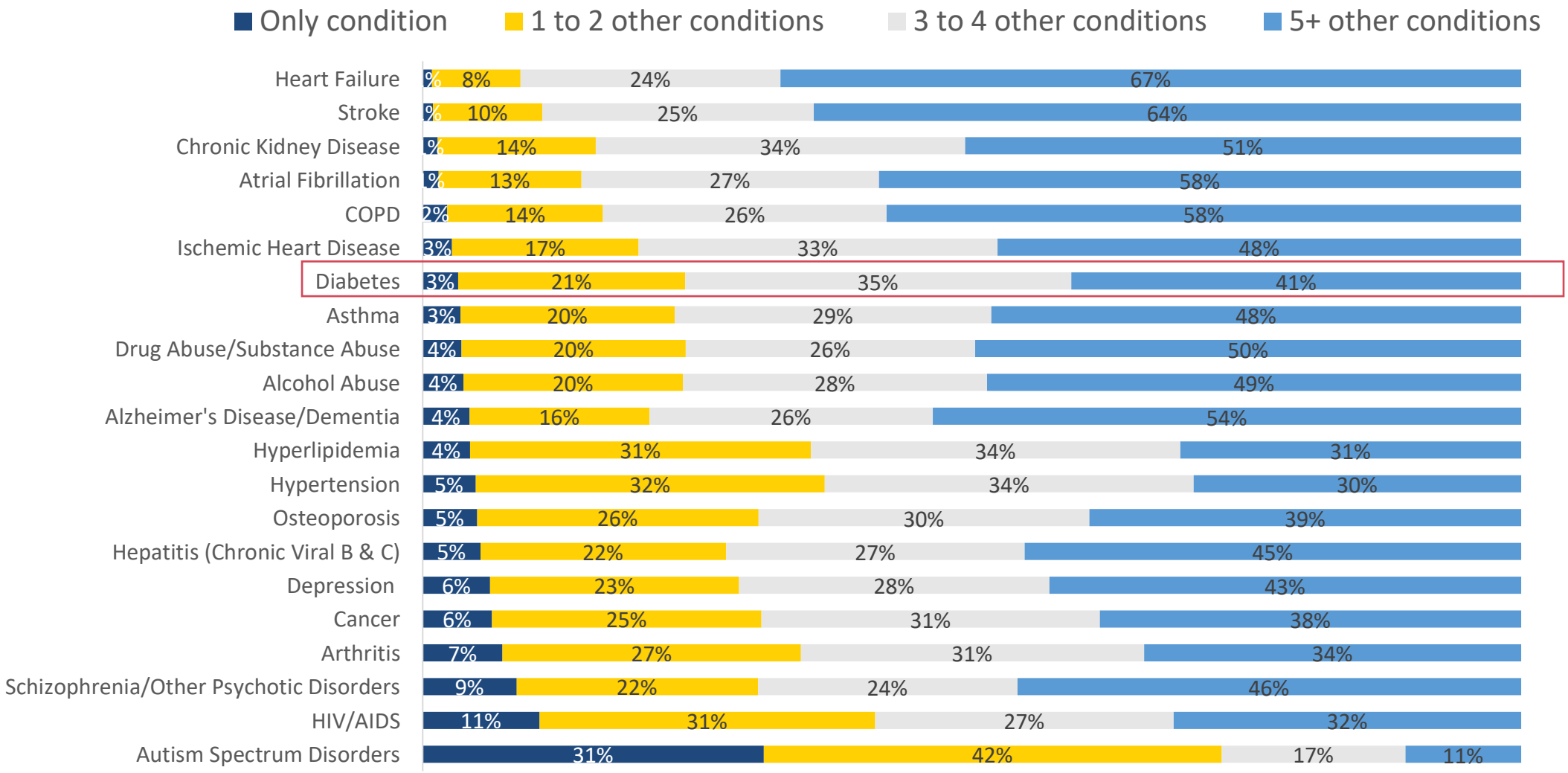
Source: https://www.cms.gov/files/document/highlights.pdf

2016 Health Care Spending



Source: Dieleman *et al.* JAMA 2020 US Health Care Spending by Payer and Health Condition, 1996-2016

Percentage of Medicare FFS Beneficiaries with the 21 Selected Chronic Conditions: 2018



Source: CMS Chronic Conditions Chartbook 2018

Value-Based Care Defining Key Terms

•**Accountable Care:** A person-centered care team takes responsibility for improving quality of care, care coordination and health outcomes for a defined group of individuals, to reduce care fragmentation and avoid unnecessary costs for individuals and the health system.

•**Care Coordination:** The organization of an individual's care across multiple health care providers.

•**Integrated Care:** An approach to coordinate health care services to better address an individual's' physical, mental, behavioral and social needs.

•**Person-Centered Care:** Integrated health care services delivered in a setting and manner that is responsive to individuals and their goals, values and preferences, in a system that supports good provider–patient communication and empowers individuals receiving care and providers to make effective care plans together.

•**Value-Based Care:** Designing care so that it focuses on quality, provider performance and the patient experience.

 Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

What is Value-Based Care?

Value-based care is a term that Medicare, doctors, and other health care professionals sometimes use to describe health care designed **to focus on quality of care, provider performance, and the patient experience**. The "value" in value-based care refers to **what an individual values most**.

In value-based care, doctors and other healthcare providers work together to manage a person's overall health, while considering an individual's personal health goals. For example, doctors might coordinate an individual's blood work so that they only need to go into the clinic once. This approach to care also can help people avoid the emergency department and keep them out of the hospital.

The CMS Innovation Center runs pilot programs called "models" to determine the most effective approaches to this type of care. These models may improve health care, for example, by prompting doctors to:

- Talk to each other and coordinate care across practices and appointments.
- Focus on an individual receiving care as a whole person by helping them address their medical and nonmedical needs.

 Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

What Does Value-based Care Look Like For The Patient?

In value-based care, healthcare providers recognize that each person is unique and can experience improved health outcomes through person-centered, coordinated care.

Individuals who receive value-based care — such as through an Innovation Center model or through another program in Medicare or Medicaid — may notice **enhancements to their healthcare experience**. For example, they might have:

- An easier time navigating their care with the help of an assigned care coordinator who will contact them between medical visits to see how they are doing following a procedure, answer their questions, or problem-solve any issues they encounter following treatment.
- Access to training or other educational resources about their health issue(s).
- More options in how they receive care or how to communicate with their providers.
- An opportunity to participate in a disease prevention program, such as for diabetes or heart disease.

And most importantly, individuals keep all their current Medicare benefits and continue to see any doctor who accepts Medicare.

Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

How Does Value-based Care Help to Treat The Patient as a Whole Person?

Value-based care puts greater emphasis on **integrated care**, meaning healthcare providers work together to address a person's physical, mental, behavioral, and social needs. In this way, providers treat an individual as a whole person, rather than focusing on a specific health issue or disease.

Healthcare teams spend time with individuals receiving value-based care to fully understand:

- **Potential obstacles or barriers to their care**. Individuals might be asked about nonmedical factors that could have a direct impact on their well-being, such as access to reliable transportation or healthy food, relationships with family, and general living conditions.
- **Their health goals**, so their treatment matches up with what they hope to achieve from their health care.

Providers practicing value-based care help make it more convenient and manageable for people to get care. Providers link individuals to additional resources to best support their health needs and goals, such as through referrals to local social services and programs.

 Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

What Is The Patient's Role In Value-based Care?

It is important that individuals are active partners with their doctors and other healthcare providers in their care. That means people receiving value-based care **collaborate with their providers** to design their treatment plans, and they let their providers know if they have any questions or concerns.

What Is The Provider's Role In Value-based Care?

In value-based care, organizations of doctors, hospitals, and other healthcare providers **commit to delivering a high standard of care**. As part of their participation in Innovation Center models, health providers aim to reduce healthcare fragmentation and are evaluated on their quality of care and individual health outcomes. The Innovation Center provides them tools to support delivery of high-quality, coordinated, efficient care to help them succeed.

Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

Does Value-based Care Address Health Equity?

Health equity is achieved when everyone has a fair and just opportunity to attain their optimal health. Value-based care advances health equity by:

- **Putting focus** — and having a measurable impact — on the health outcomes of every person, including those from underserved populations.
- Encouraging health care providers to **screen for social needs** and work with individuals to develop personalized treatment plans that can address each person's unique needs — such as connecting them to a local food bank, engaging with interpreter services, or arranging transportation or other accommodations.
- Requiring health care providers **to monitor and track outcomes across populations** to assess for disparities and intervene as necessary to help close gaps in access or care.
- **Engaging with providers who have historically worked in underserved communities** and providing necessary resources and support to meet this health equity goal.

Source: https://www.cms.gov/priorities/innovation/key-concepts/value-based-care

Questions

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Demonstrating the Value Proposition

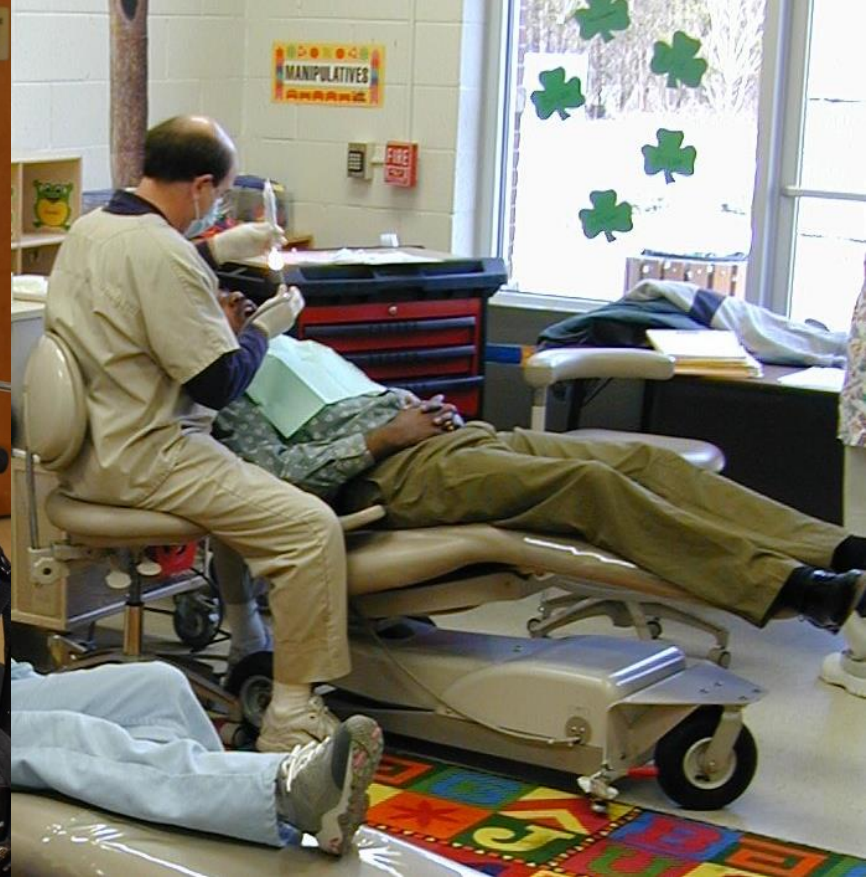
Betsy Lee White, RDH, BS, FSCDH

Chief Operating Officer

Access Dental Care

Access Dental Care

- 501c3
- NC Dental Society Support
- Skilled Nursing Homes
- Group Homes for those with IDD
- PACE
- Qualifying Community Dwelling Individuals



On-Site, Comprehensive Care

It takes a village – An African Proverb

72%

Caries Risk Assessment

4x

$652

Pay for Prevention

$10,000

The ADA and Dentistry

USC Chan Division of Occupational Science and Occupational Therapy

Sensory Adapted Dental Environments for Children with Autism Spectrum Disorder: A Value Proposition Case Example

Leah Stein Duker, PhD, OTR/L

Assistant Professor

USC Chan Division of Occupational Science & Therapy

February 15, 2024

USC Chan Division of Occupational Science and Occupational Therapy

Outline

- Pain Points
- Overview of the sensory adapted dental environment (SADE)
- Potential Gains

Identifying Pain Points

Survey

- *Parents of children with special healthcare needs (n=206)*
- *Parents of children with ASD (n=198)*
- Parents of typically developing children (n=279)
- Parents of children with Down syndrome (n=372)

Focus Groups

- *Autism:*
  - *Parents (2 groups; n=9)*
  - *Dentists (2 groups; n=8)*
- Down Syndrome
  - Parents (n=14)
  - Dentists (n=8)

(e.g., Stein et al., 2011; 2012; 2013; Stein Duker et al., 2017; 2019; 2020; 2022)

Pain Points: Sensory Sensitivities

- Responses to incoming sensory stimuli are not graded appropriately, leading to an over-reaction to stimulation.
  - Examples of possible noxious stimuli: visual, auditory, tactile, olfactory, gustatory, vestibular
  - Hypersensitivities can lead to: fight or flight reactions (e.g., physical withdrawal, vocal outbursts, meltdowns, attempts to block the stimuli)
- DSM-5: hyper- or hypo-reactivity to sensory input

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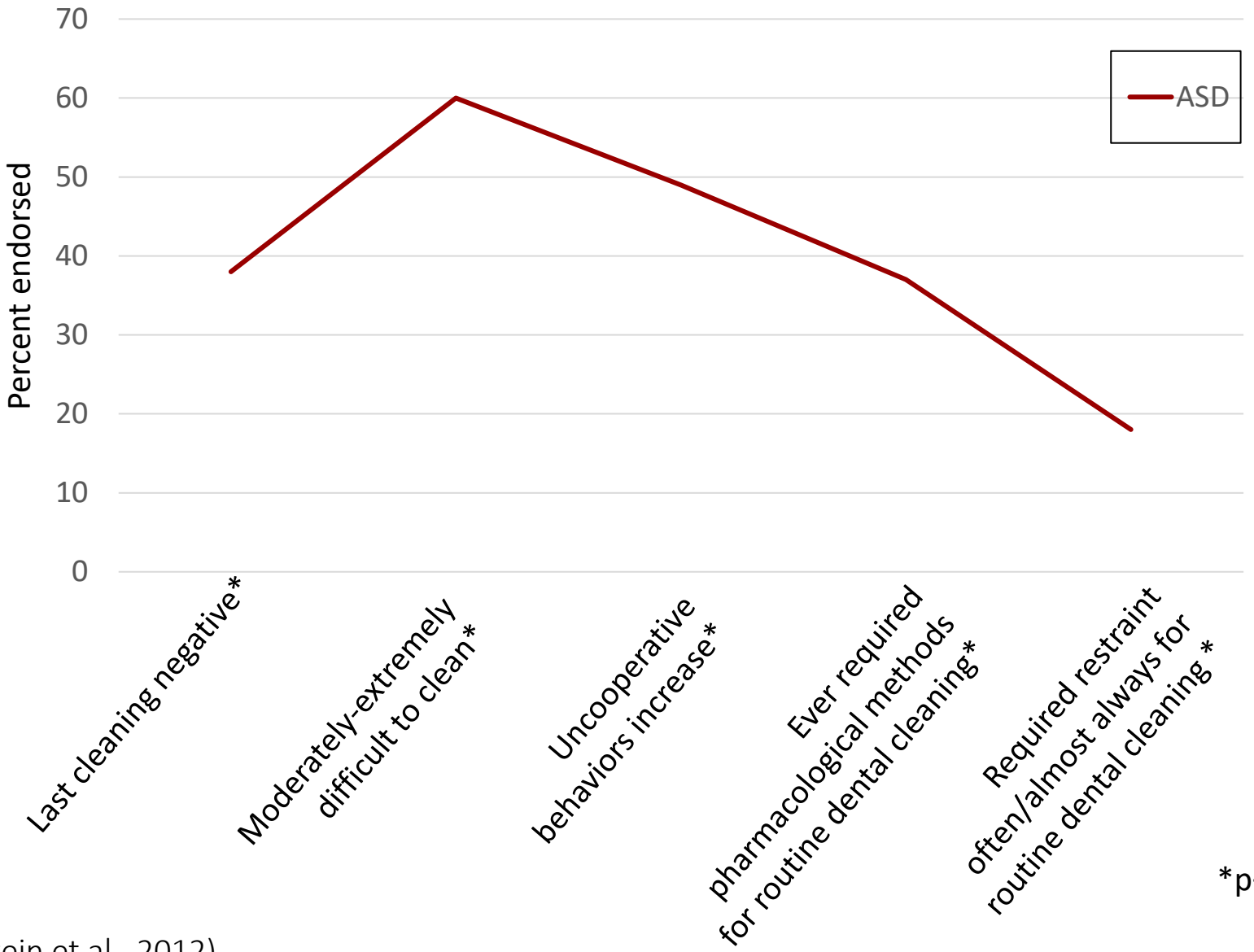
Pain Points: Sensory Sensitivity



*p<0.001

(Stein et al., 2012)

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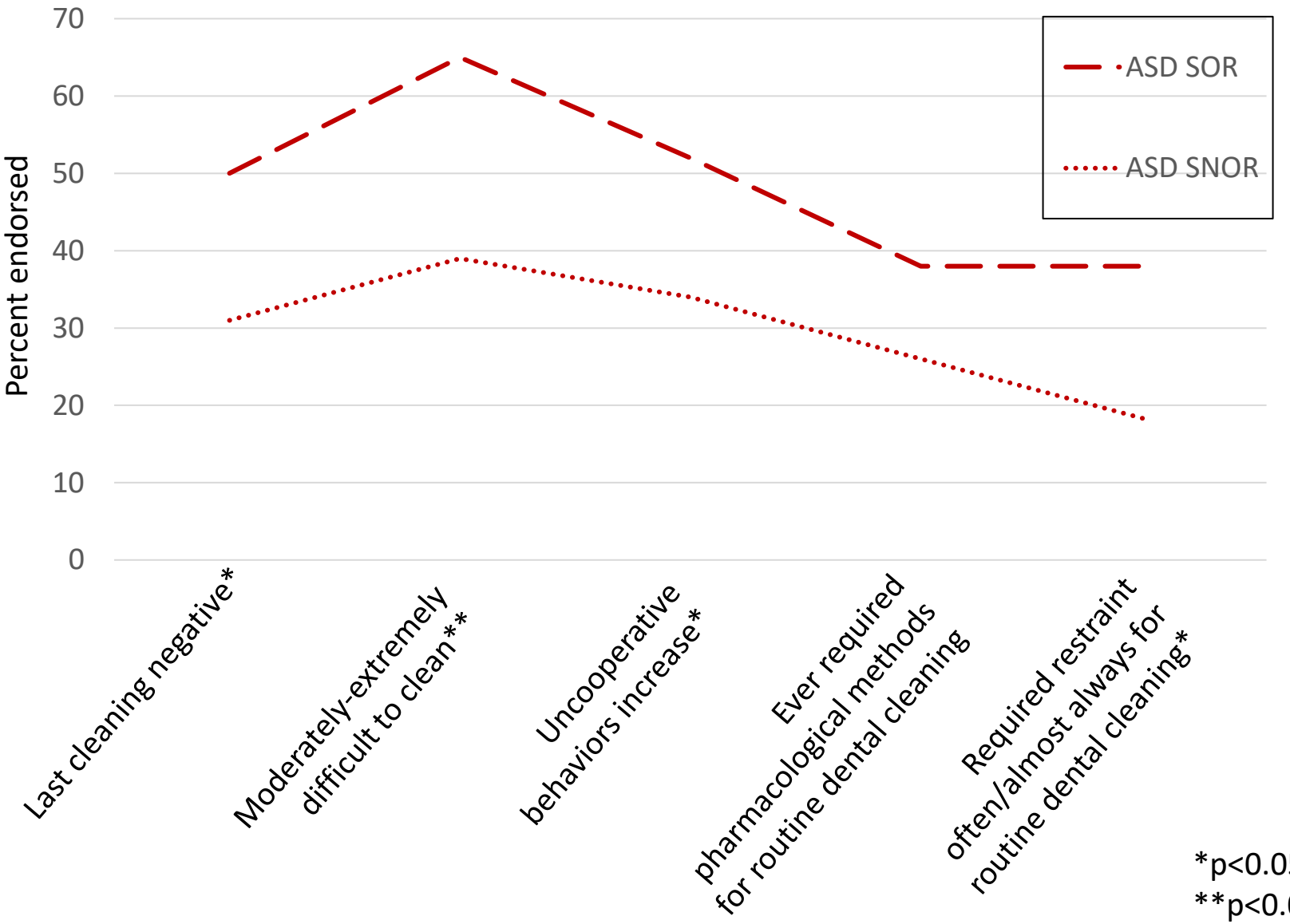
Pain Points: Sensory Sensitivity



*p<0.05
**p<0.01

(Stein et al., 2013)

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Pain Points: Sensory Sensitivity

- Auditory
- Tactile
- Gustatory
- Olfactory
- Vestibular
- Visual

Pain Points: Sensory Sensitivity

"...it's hard to get a toothbrush in his mouth, and when we do...he will only let us brush the side, like the outer sides, but you can't do the inner sides. So anything that would include touching his tongue or that inside area is nearly impossible to do."

(Stein Duker et al., 2017)

Identifying Pain Points

Survey

- *Parents of children with special healthcare needs (n=206)*
- *Parents of children with ASD (n=198)*
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  - *Parents (2 grps; n=9)*
  - *Dentists (2 grps; n=8)*
- Down Syndrome
  - Parents (n=14)
  - Dentists (n=8)

Intervention

- *Sensory adapted dental environment: Autism*
- Sensory adapted dental environment + VBM: DFA

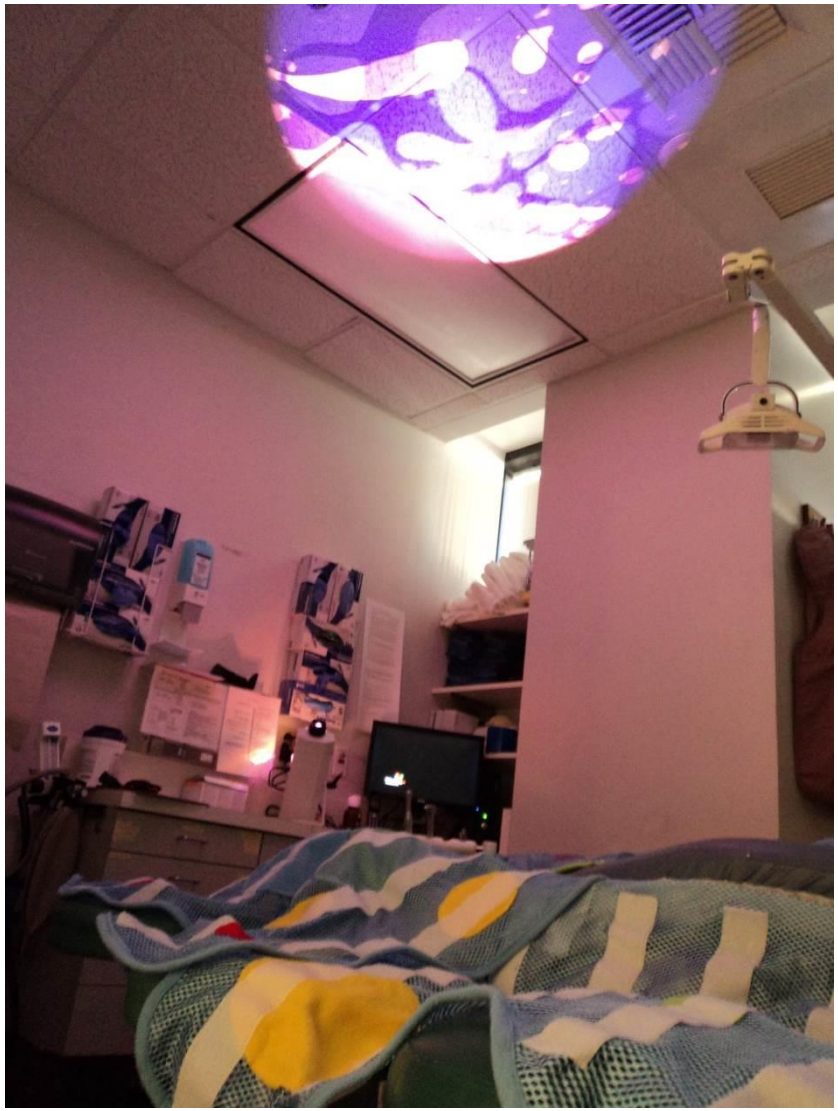
Intervention Development

- Guided by stakeholder input
- Multidisciplinary Team
  - Occupational therapy (OT)
  - Dentistry
  - Psychology
- Funded by the National Institute of Dental and Craniofacial Research (R34 DE022263; U01 DE024978)

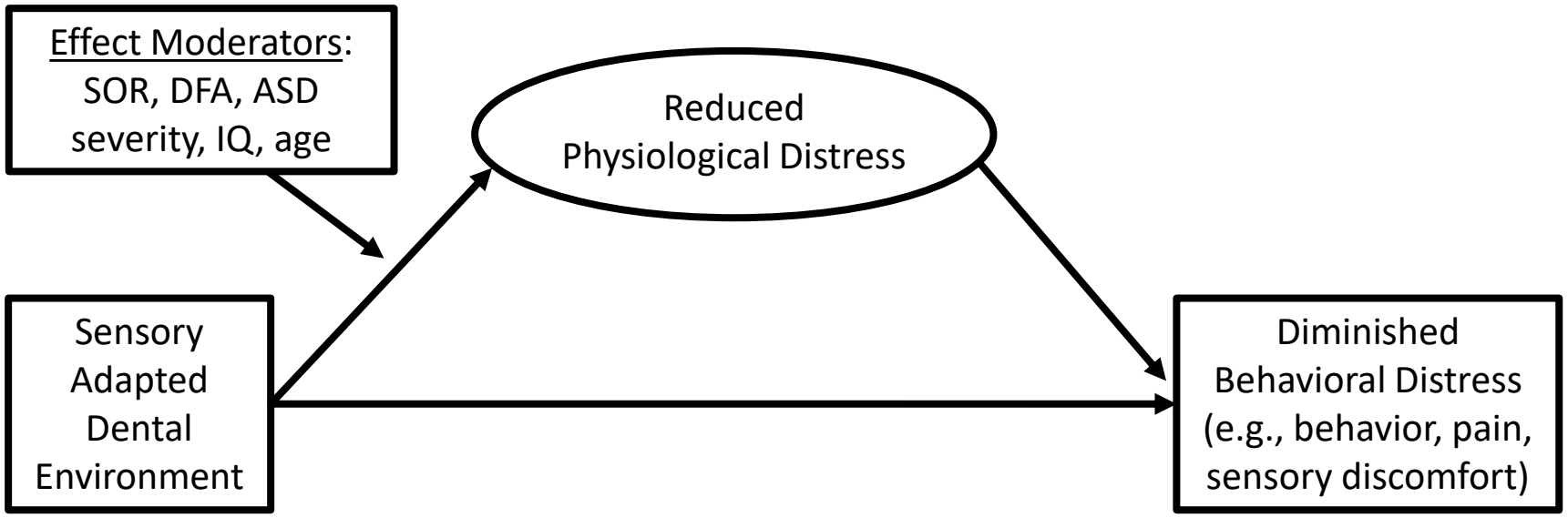
(Stein Duker et al., 2023; Cermak et al., 2015)

Sensory Adapted Dental Environment (SADE)

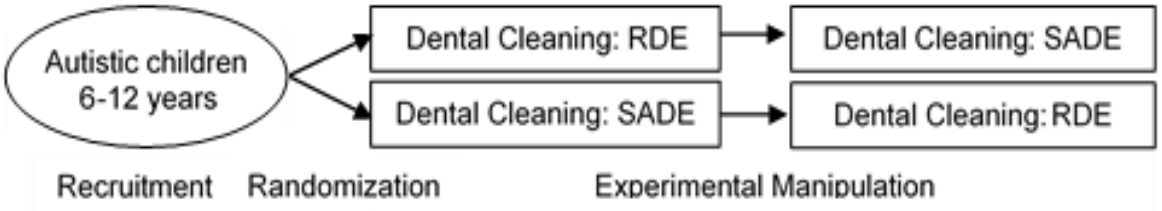
- Visual
  - No fluorescent lights
  - Use of headlamp directed into child's mouth
  - Moving projection on ceiling
- Auditory
  - Soothing nature & piano music
- Tactile
  - Weighted vest (X-ray vest)
  - Deep pressure (butterfly)



Intervention



Intervention



- Physiological distress
  - Electrodermal activity
- Overt distress behavior
  - Children's Dental Behavior Rating Scale
  - No. and duration of behavior
  - Frankl Scale
  - Anxiety & Cooperation Scale
- Pain intensity
- Sensory discomfort

Key Outcome Variables

Note. RDE = regular dental environment; SADE = sensory adapted dental environment.

(n=220 children with ASD)

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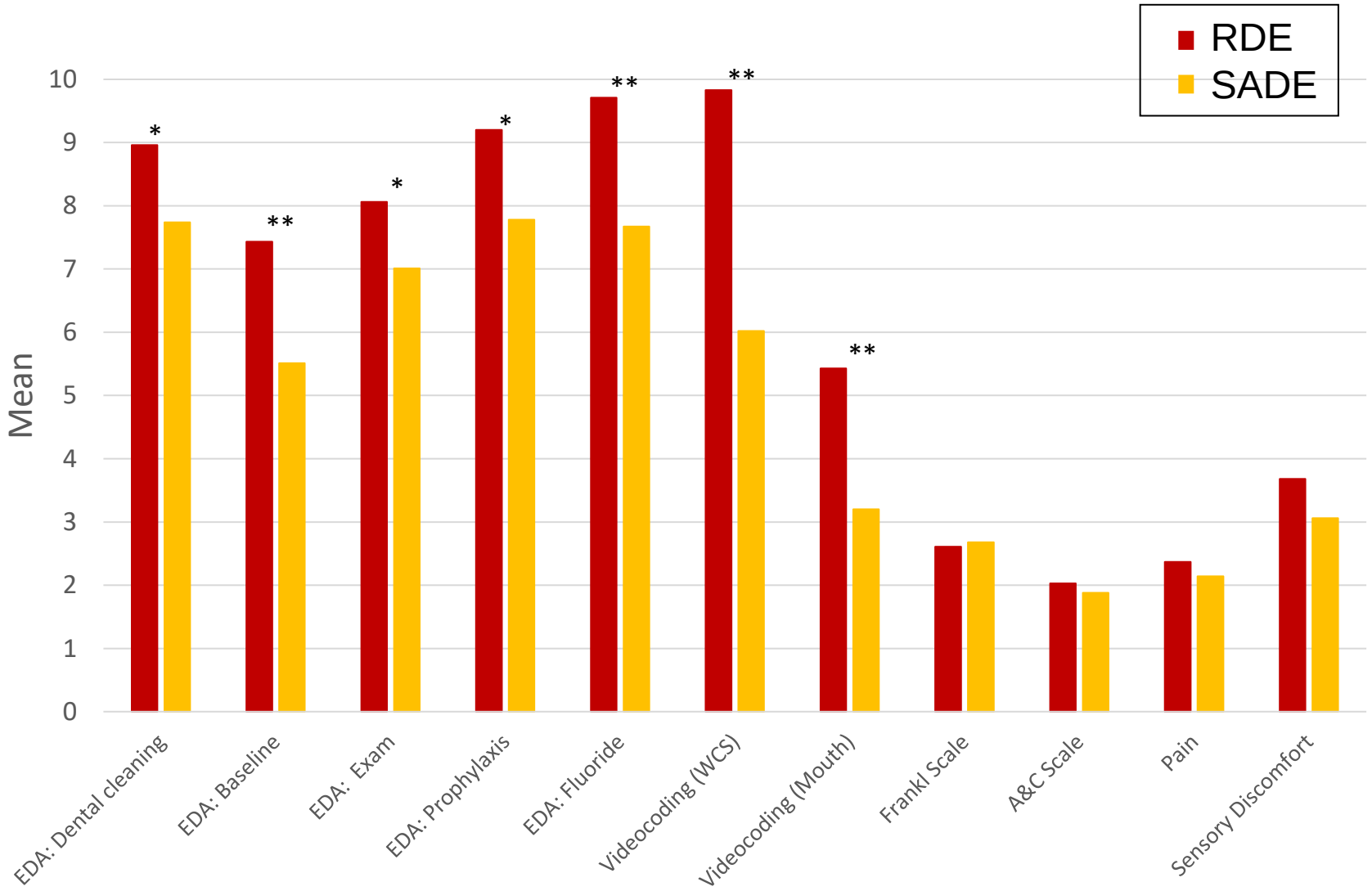
SADE-Related Gains



(Stein Duker et al., 2023)

Physiological and Behavioral Outcomes

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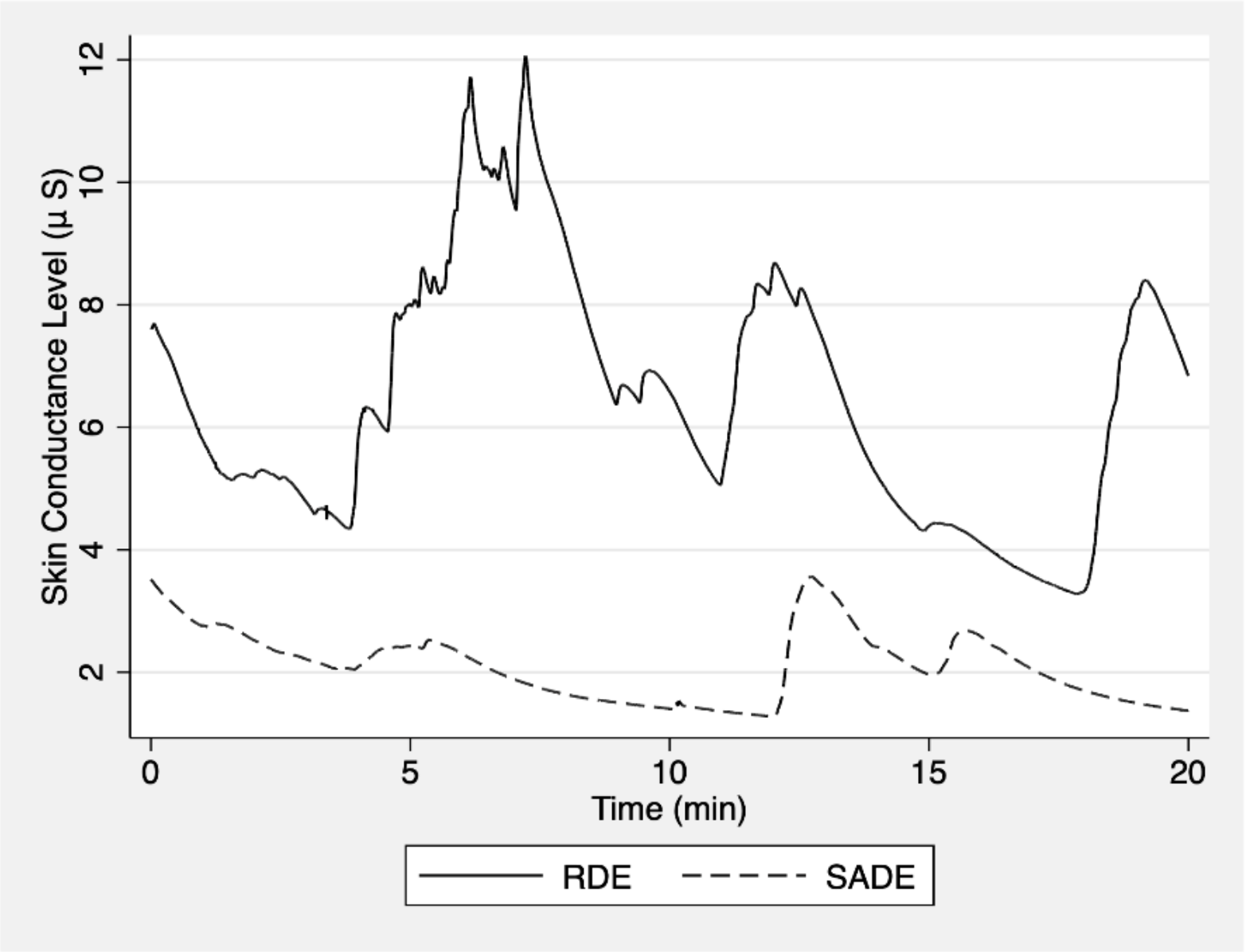
SADE-Related Gains



(Stein Duker et al., 2023)

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SADE-Related Gains

- Decreased behavioral distress
- Decreased physiological distress
- No decrease in quality of care
- No increase in cost of cleaning (time)
- High satisfaction
- Feasibility

(Stein Duker et al., in preparation)

SADE-Related Gains

"I liked it a lot…it was relaxing with all the stuff in there."

"My daughter cannot even hear the word 'dentist'. But after being in the [SADE] room for a bit she was able to have her teeth looked at for the first time in over a year."

"Because he was relaxed, I was relaxed. At previous visits when he was uncomfortable, it made it hard for me. This time, I had total confidence in what was happening."

SADE-Related Gains

- Feasibility:
  - Minimal training
  - Easily portable
  - 1-time cost (<$6,000)

- Now included in the AAPD's list of Best Practices for Behavioral Guidance (AAPD 2023 Behavior Guidance for the Pediatric Dental Patient)!

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Acknowledgements & Disclosure

- NIH / National Institute of Dental and Craniofacial Research (R34 DE022263; U01 DE024978)
- University of Southern California Ostrow School of Dentistry
  - Chan Division of Occupational Science & Occupational Therapy
  - Division of Dental Public Health and Pediatric Dentistry
- Children's Hospital Los Angeles
- Our research team and participants!
- I have no disclosures to report.

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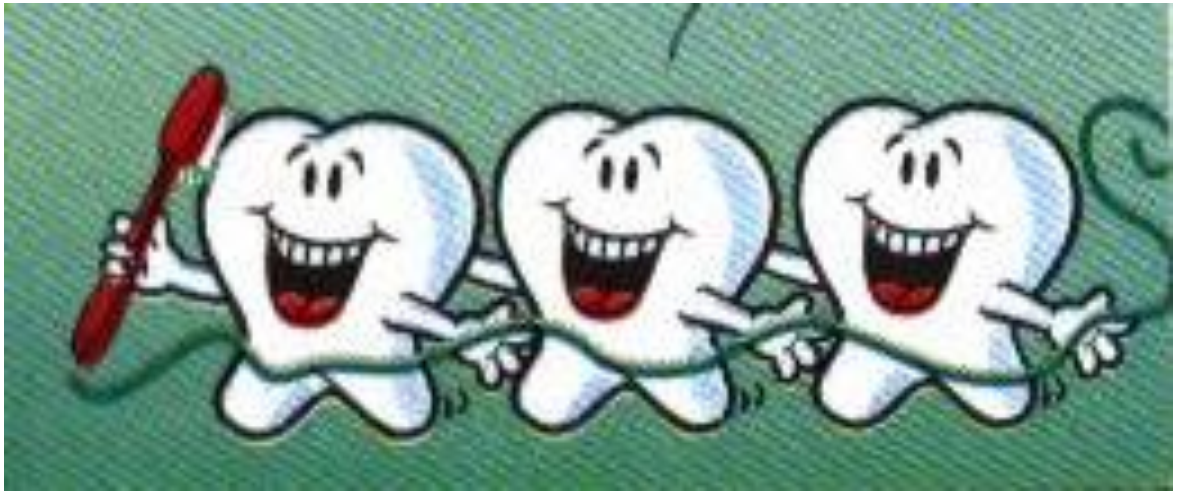
Thank you!



Questions?

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