Utilizing Caries Management by Risk Assessment to Deliver Person-Centered Care

CareQuest Institute Continuing Education Webinar

March 21, 2024





Housekeeping

- We will keep all lines muted to avoid background noise.
- We will send a copy of the slides and a link to the recording via email after the live program.
- We'll also make the slides and recording available on carequest.org.

To receive CE Credits:

- Look for the evaluation form, which we'll send via email within 24 hours.
- Complete the evaluation by Friday, March 29.
- Eligible participants will receive a certificate soon after via email.

We appreciate your feedback to help us improve future programs!



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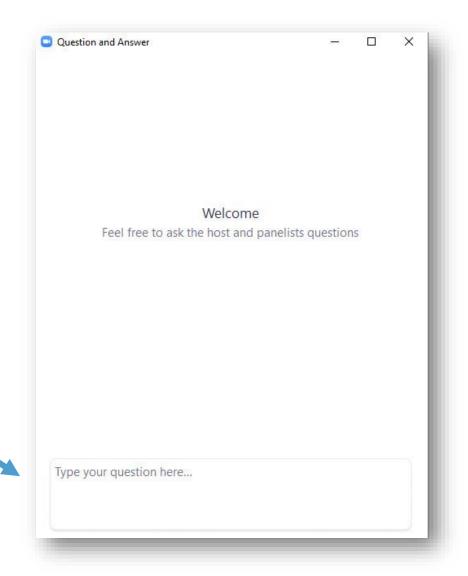
*Full disclosures available upon request





Question & Answer Logistics

- Feel free to enter your questions into the Question & Answer box throughout the presentations.
- We will turn to your questions and comments toward the end of the hour.







Thank You!





Learning Objectives

At the end of this webinar, you'll be able to:

- Define caries management by risk assessment (CAMBRA).
- Discuss how dental teams use CAMBRA in their daily practice with various patient populations.
- Explain why CAMBRA is critical to delivering person-centered care for both children and adults.



Utilizing Caries Management by Risk Assessment to Deliver Person-Centered Care





WEBINAR | Thursday, March 21, 2024 | 7-8 p.m. ET | ADA CERP Credits: 1

MODERATOR



Erinne Kennedy,
DMD, MPH, MMSc
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Integrated Learning, College of Dental
Medicine, Kansas City University

PRESENTER



Kari Ann Kuntzelman
Dental Health Aide Specialist and Dental
Therapist, Northwest Portland Area Indian
Health Board, President, American Dental
Therapy Association





Future/Current Practice



Person-Centered Care (Shared decision making, co-cariologists)



Cost Containment



Point-of-Service Screening



Value-Based Care (Bonus structure)



Evidence-Based Dentistry (ADA resources, current literature, decision trees)



Technology and In-House Focus



Oral Health Focus (Disease management, technology assist, minimally invasive dentistry)



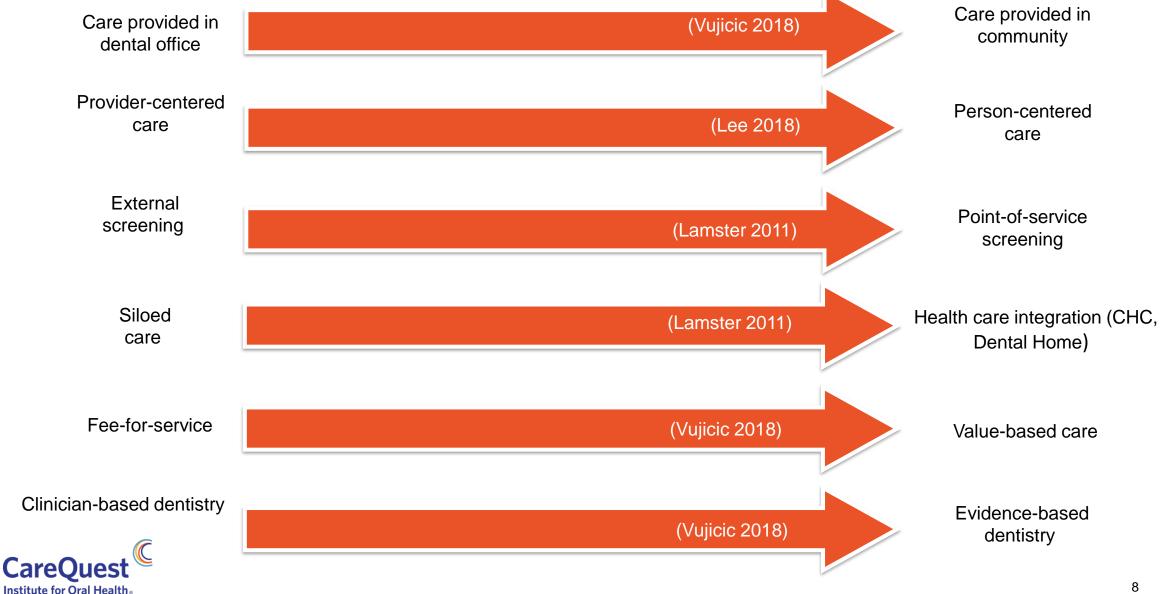
Whole Person Health (Patient advocacy, address barriers/SDH)



Innovation
(New products and materials)

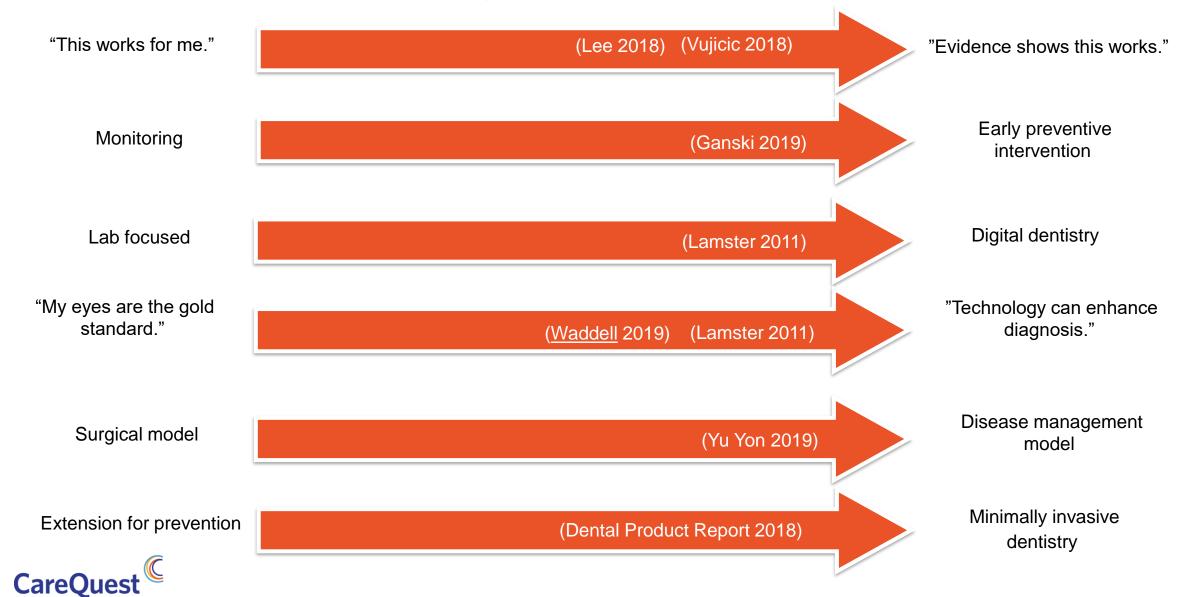


Mindset Shifts in Dentistry



Mindset Shifts in Dentistry

Institute for Oral Health



Keystone Readings

DePaola et al. 2004	Pyle 2012	Dragan et al. 2020	Kennedy et al. 2021
Current - Web-based learning - Competency evaluations - Early pt. experiences - Decompression - Community-based care Future: - Curriculum around	Major Changes in 40 Years - Comprehensive patient care - Competency-based education - Small-group learning - Patient-centered care - Community models for clinical education	 Pre-clinical education "In the Classroom" learning Telehealth Patient care 	 Collaborative multisite course Shared materials, faculty, and responsibilities Hybrid courses with synchronous and asynchronous learning
themes - Use of PBL and cases - EBD	- Tracks of themed curricula		



How do we keep up with the speed of change?



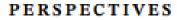


COLLABORATE

Received: 27 January 2021

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DOI: 10.1002/idd.12650



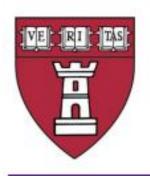


Collaborating and teaching a synchronous, multi-university, virtual course: Health policy and access to dental care

```
Erinne N. Kennedy DMD, MMSc<sup>1</sup> Benjamin Alex White DDS, DrPH<sup>2</sup>
Jane A. Weintraub DDS, MPH<sup>3</sup> | Mark E. Moss DDS, PhD<sup>4</sup> |
Samantha L. Jordan DMD, MPH<sup>5,7,8</sup> | Karin K. Quick DDS, PhD<sup>6</sup> | Shenam Ticku BDS,
           Boyen Huang DDS, PhD<sup>6</sup> O Chester Douglass DMD, PhD<sup>2,8</sup>
```



Collaborating Programs



























Key Components of Course Structure

Elective course

Reviewed by each pre-doctoral programs Curriculum Management Committee (CMC)

Pre-doctoral dental students, master's students (hygiene, education etc.), post-doctoral students (residents)

No cost to participate

Shared responsibility

Focused contribution

Shared learning management system



2 2 0	5000 DENESSON	W 1923 W	Asynchronous (pre-class)	Synchronous class	Session type Core Session 7	Title/Subject	S
ssion type	Title/Subject	Session speaker	activity	activity	Core Session /	Participatory Learning Experience	S
	ne health policy process at					Presentations – Student Interviews	
	10 miles 10	**	the demand, or reduce the need for denta re, and oral across health services deliver		Core Session 8	Supply Side Policies: Midlevel Oral Heal	K
legislative proc of supply side/ influence cons health; trends	ess; the role of data and ac workforce policies; integra umer demand; trends in th in cost, price, and expendit	lvocacy in the health po- ting dental services into the demand for dental car tures for dental services;	nealth policy process, policy documents, a licy process; access to care for high risk p public health programs and medical care re; how insurance companies and provide ; value-based care; and the passage and fu Addressed: 1.1, 1.3, 3.1, 3.3, 4.1, 4.3, 5.2, 5.6	opulations; the development e services; factors that er groups can influence public ture implementation of the		Providers	Ji C R M
NC/ECU	Present Course Syllabus,	Chester W. Douglass	Read:	Introduction Students and	Comp Secretor 0	Comple Cide Belinian	C
Session 1	Introduce Lead	Jane Weintraub	Text: Ch. 1*	Faculty	Core Session 9	Supply Side Policies: Integrating Oral and	C
	Instructors, Student Introductions, and	Alex White Mark Moss	Assignment: Bring a quote to class	Students presented their		Systemic Health and	
	Grading Criteria	Erinne Kennedy	that inspires you.	inspirational quote Large Group Discussion		Primary Care	M
NC/ECU	What is dental public	Alex White	Read:	Word Cloud	Core Session 10	Prevention in the 21st	E
Session 2	health?		Text: Chapter 1*	Interactive Lecture		Century: From the	
			Articles: Altman et al, Kennedy 2017 Assignment: Pre-Quiz	Career Panel		Individual to the Community	
C/ECU	Dental Public Health as	Jane Weintraub	Read:	Small Group Work		Community	
ession 3	a Specialty		Articles: Weintraub et al		Core Session 11	Future Trends in Oral	S
			Assignment: Review and Answer questions for AAPHD Renewal of			Health Systems	
			Specialty Application				
Session 1	The Public Policy	Chester W. Douglass	Read:	Interactive polls on the			
	Process and Health Care Reform		Articles: Douglass et al, Community Toolbox, Dzau et al, Additional State Policy Briefs.	policy process Interactive Discussion		Group Presentations Dental Public Health	St
			Assignment: Pre-Quiz			Career Options	C
e Session 2	The Market for Dental	Chester W. Douglass	Read:	Interactive polls on market			
	Services		Text: Chapters 5, 14, 15, 16, 17.* Articles: Leake, Lipscomb et al, Crall	trends Interactive discussion			
			and Edelstein 2001, Vujicik 2018.	incractive discussion	IIMN Session 2	Global Health:	В
			Assignment: Pre-Quiz, Assigned to		OWIN SESSION 2	Compare and	W
			Questions for Discussion			Contrast the Dental	
ore Session 3	What does public health advocacy look like?	Zachary Brian	Read: Articles: Koppelman, Brian and	Presentation Group discussion		Care Delivery System in the USA and	
	aurocacy took tike?		Weintraub, ASTDD Best Practice	Group discussion		Australia	A
			Reports.				
			Assignment: Pre-Quiz				
re Session 4	Disparities and Trends	Mary Otto	Prepare 2 Questions for Class Read:	Virtual Book Club			M
	in Demand		Text: Chapter 3*				
			"Teeth" Mary Otto** prepare 2		UMN Session 3	Debate: Integration of	Е
ra Caerlan F	Increasing Domand	Alex White	questions for class discussion	Interactive Lecture	CMIN Session 3	Medicine and	В
ore Session 5	Increasing Demand: Private Insurance	Alex Wille	Read: Text: Chapter 7*	Interactive Lecture Small Group Discussion		Dentistry	C
	and Trends in Types		Articles: Walton			mal antidea material	K
	of Delivery Systems		Assignment: Pre-Quiz		-	rnal articles, web resources, a MER ASSOC OF PUBLIC H	
Core Session 6	Increasing Demand: Public Dental	Catherine Hayes	Read: Text: Chapter 7*	Interactive Lecture Small Group Discussion	St. Louis, Missouri, E		

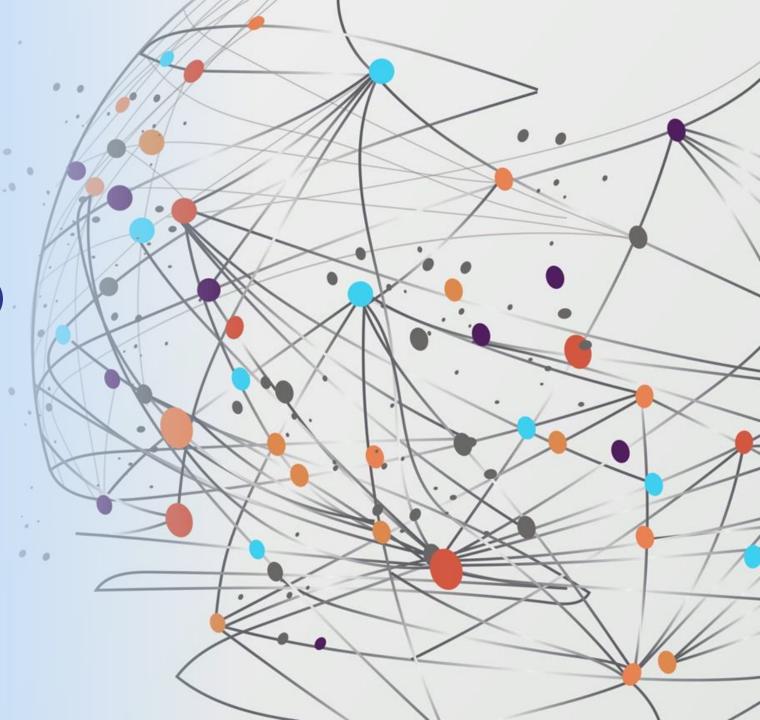
Session type	Title/Subject	Session speaker	Asynchronous (pre-class) activity	Synchronous class activity
Core Session 7	Participatory Learning Experience Presentations – Student Interviews	Students present summaries of interviews.	Assignment: Conduct interview with dental policy leaders.	Student lead presentation
Core Session 8	Supply Side Policies: Midlevel Oral Health Providers	Karl Self, DDS Danae Seyffer, MDT Julie Bonham, ADT Cheyanne Warren, DDS Rachael Hogan, DDS Mary Williard, DDS Moderator: Karin Quick	Read: Text: Chapter 8* Assignment: Prepare 2 Questions for World Café Discussion	Panel Discussion World Café Small Group Exercise
Core Session 9	Supply Side Policies: Integrating Oral and Systemic Health and Primary Care	Christine Riedy, Jane Weintraub, Kathryn Atchison Moderator: Erinne Kennedy	Read: Articles: Atchison et al, Silk, Beil et al, Rozier, Brame et al, and Mertz. Assignment: Group Mind Map	Panel Discussion Group Q&A
Core Session 10	Prevention in the 21st Century: From the Individual to the Community	Erinne Kennedy	Read: Articles: Lamster et al, Novy et al, Slayton et al, Yon et al, Lee et al. Assignment: Group Exercise via Google Slides	Interactive lecture Polls on preventive research Small Group Work on Final Project
Core Session 11	Future Trends in Oral Health Systems	Sheila Riggs	Read: Articles: Health People 3030, Douglass et al, Garcia et al, Lamster et al. Assignment: Final Group Project	Interactive Lecture Small Group Work on Final Project
Core Session 12	Group Presentations	Students	Assignment: Final Group Project	Group Presentation
UMN Session 1	Dental Public Health Career Options	Erinne Kennedy Chester Douglass	Reading: Text: Chapter 1° Articles: Altman et al 2016, Kennedy Assignment: Review and analyze de-identified personal learning experience summaries.	Small Group Work Google Document Sharing
UMN Session 2	Global Health: Compare and Contrast the Dental Care Delivery System in the USA and Australia	Boyen Huang Winthrop Professor Marc Tennant, University of Western Australia Associate Professor Matthew Hopcraft, Australian Dental Association Miss Libby Warlow, Charles Sturt University	Read: Articles: Graham et al, Nguyen et al, Putri et al Assignment: Prepare 2 Questions for World Café Discussion	Panel Discussion World Café Small Group Exercise
	Debate: Integration of Medicine and Dentistry	Erinne Kennedy Boyen Huang Chester Douglass Karin Quick	Read: <u>Articles</u> : MacNeil Case 1-5, Shimpi et al	Class Debate • For Integration • Opposed to Integration

I the course textbook were assigned based on the topic.

ALTH DENTISTRY. (2021) Burt and Eklund's Dentistry, Dental Practice, and the Community. 7th Edition.

^{**}Additional print resource: Otto, Mary. Teeth: The Story of Beauty, Inequality, and the Struggle for Oral Health in America. The New Press, 2017.

How could this apply to clinical practices?



Caries Management by Risk Assessment (CAMBRA)









CAMBRA

An evidence-based strategy to assess risk factors and protective factors for developing caries.

Risk and Protective Factors

CAMBRA considers various health and lifestyle factors.

Individual Level

CAMBRA assesses caries risk and tailors strategies, advocating lifestyle changes.

Community Level

Considers factors such as water fluoridation and encourages strategies that promote oral health within populations.



Evidence for CAMBRA

- Featherstone JDB, and Chaffee BW. The evidence for caries management by risk assessment (CAMBRA(R)). Adv Dent Res. (2018) 29:9-14. doi: 10.1177/0022034517736500.
- Christian B, Armstrong R, Calache H, Carpenter L, Gibbs L, and Gussy M. A systematic review to assess the methodological quality of studies on measurement properties for caries risk assessment tools for young children. Int J Paediatr Dent. (2019) 29:106–16. doi: 10.1111/ipd.12446.
- Featherstone JDB, Crystal YO, Alston P, Chaffee BW, Doméjean S, Rechmann P, Zhan L, Ramos-Gomez F. A Comparison of Four Caries Risk Assessment Methods. Front Oral Health. 2021 Apr 28;2:656558. doi: 10.3389/froh.2021.656558. PMID: 35048004; PMCID: PMC8757708.



We are called to implement CAMBRA into practice and into our educational settings!







Shared Cariology Kit



CareQuest Kit for Dental Education on Caries

Session 6: CAMBRA Protocol

SESSION DETAILS

Pedagogy:

Lecture: Interactive Presentation In-Class Activity:

1. Prevention Timeline Activity

Length: 50 mins

Description:

Learners will explore prevention levels in this session, covering public health strategies and individual/community clinical interventions. The aim is to provide learners with insights into preventive dentistry, emphasizing the pivotal role of early intervention and a comprehensive understanding of risk factors.

Learning Objectives:

- Define primary, secondary, and tertiary prevention.
- Discuss the CAMBRA protocol and the evidence for CAMBRA.
- Examine the evidence for the protocols listed within the CAMBRA Framework.

Lesson Plan:

- Session type
- Session length
- Description
- Learning objectives
- Outline
- References
- Session plan
- Slide breakdown
- Test questions

PowerPoint:

- Content
- Learning exercises
- Speaker notes
- References



Shared Cariology Kit

- Understanding Caries
- Caries Disease Process
- Caries Risk and Caries Balance
- Caries Risk and Caries Balance
 Case Activity

- CAMBRA Protocol
- CAMBRA Protocol Case Activity
- Saliva in Health
- Saliva in Disease: Stroke and Heart Disease
- Saliva in Disease: Asthma and Allergic Rhinitis
- More?



Sample Exercise

Word Bank

Primordial Prevention

Public Health

Upstream

Health Promotion

Biological Onset of Disease

Clinical Prevention

Downstream

Post-Clinical Phase

Primary Prevention

on Risk

Tertiary Prevention

Symptoms

Symptoms Appear

Diagnosis and Therapy

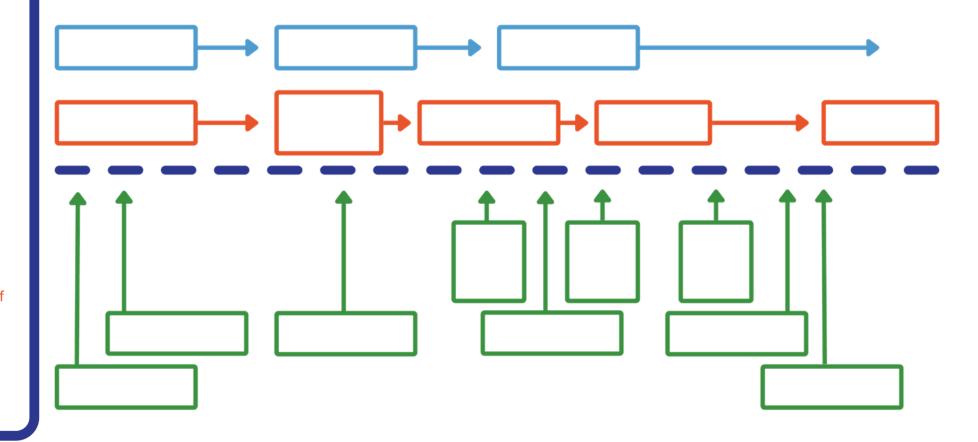
Secondary Prevention Risk and Protective Factors

Social

Determinants of Health

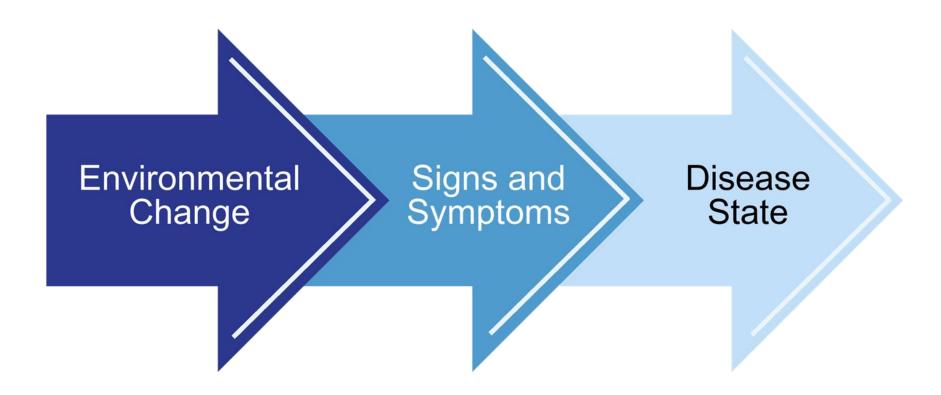
Clinical Phase

Preclinical Phase



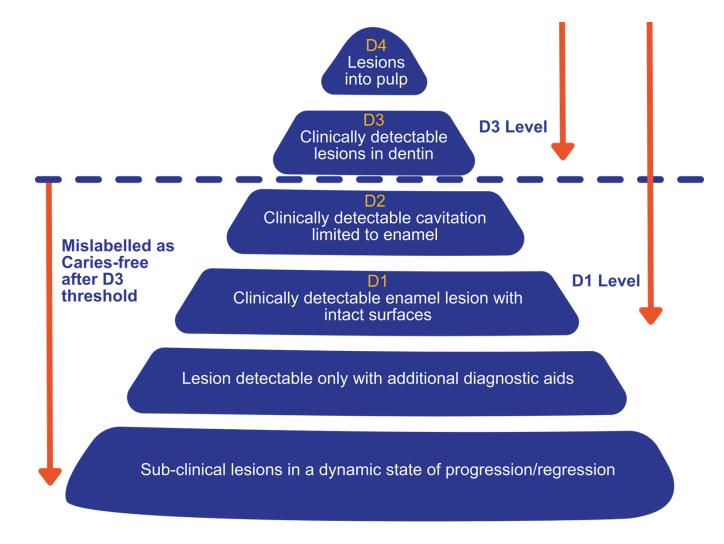


Sample Slides of Graphics: Environmental Change vs. Disease State





Sample Slides of Graphics: Environmental Change vs. Disease State





How can these curricular resources be used?



- Dental office/clinic team trainings
- Study clubs
- ECHO groups
- Clinical case reviews
- Health profession education
 Trainings and programs
- More?



Collaborating Around CAMBRA



CAMBRA Coalition (https://www.cambracoalition.org/about/about-cambra-coalition)



ADEA Section on Cariology (<u>adea-</u> <u>SECCariology@ConnectedCommunity.org</u>)



More?





Erinne Kennedy, DMD, MPH, MMSc
Assistant Dean for Curriculum and Integrated Learning
College of Dental Medicine
Kansas City University
erkennedy@kansascity.edu



















Why CAMBRA?

- Patient-centered approach to managing caries
- Focuses on disrupting the disease process
- Patients benefit from receiving evidence-based dental care
- We have an opportunity to do better!







Benefits of CAMBRA

- 1. Reduces overall disease rate
- 1. Behavior modification
 - Diet
 - Oral hygiene
- 2. Builds trust between provider and patient
 - Addresses generational trauma





What Tools Are Needed?

- 1. Standardized processes (medical history form, note template)
- 2. Caries risk assessment form (including codes and documentation process)
- 3. Patient education materials
- 4. Nutrition and habit coaching
- 5. Management of the microbiome
 - Antimicrobials
 - PH balancing products
- 6. Calibration exercise







Standardized Processes

- Medical History Form
- Note template



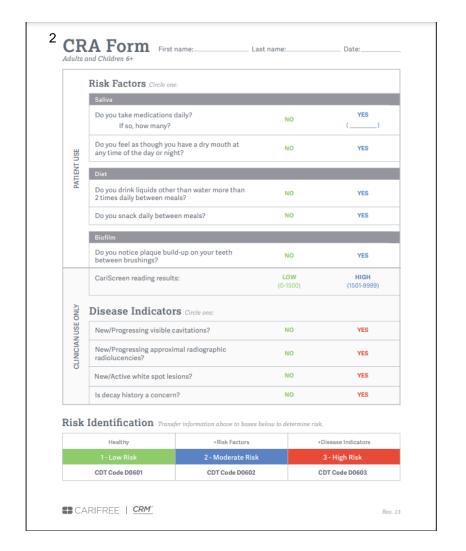




Caries Risk Assessment

1

	ent Name:			
Birt	h Date:		Date:	
Age	:		Initials:	
		Low Risk	Moderate Risk	High Risk
	Contributing Conditions	Check o	r Circle the conditions t	hat apply
I.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	□Yes	□No	
II.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealtimes	Frequent or prolonged between meal exposures/day	Bottle or sippy cup with anything other than water at bed tin
III.	Eligible for Government Programs (WIC, Head Start, Medicaid or SCHIP)	□No		□Yes
IV.	Caries Experience of Mother, Caregiver and/or other Siblings	No carious lesions in last 24 months	Carious lesions in last 7-23 months	Carious lesions in last 6 months
V.	Dental Home: established patient of record in a dental office	□Yes	□No	
				hat apply
l.	Special Health Care Needs (developmental, physical, medi- cal or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	□No		□Yes
	Clinical Conditions	Check o	r Circle the conditions t	hat apply
I.	Visual or Radiographically Evident Restorations/ Cavitated Carious Lesions	No new carious lesions or restorations in last 24 months		Carious lesions or restorations in last 24 months
II.	Non-cavitated (incipient) Carious Lesions	No new lesions in last 24 months		New lesions in last 24 months
III.	Teeth Missing Due to Caries	□No		□Yes
IV.	Visible Plaque	□No	□Yes	
V.	Dental/Orthodontic Appliances Present (fixed or removable)	□No	□Yes	
VI.	Salivary Flow	Visually adequate		Visually inadequate
Ov	erall assessment of dental caries risk:	Low	☐ Moderate	☐ High
Inst	ructions for Caregiver:			



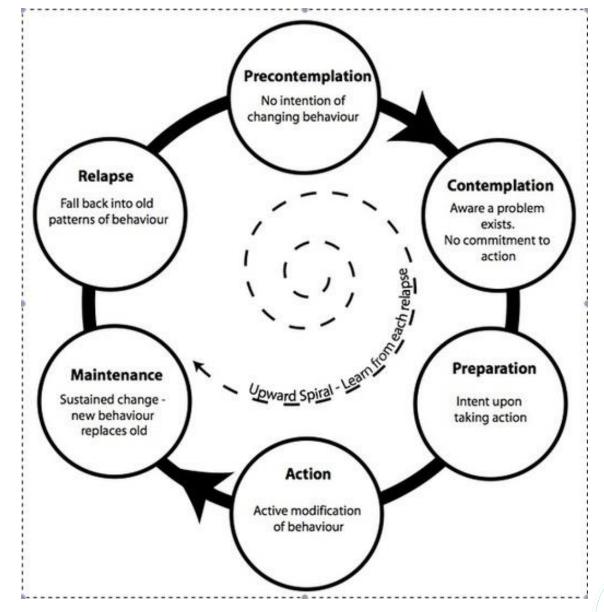






Motivational Interviewing

- Open-ended questions
- Ask <u>your patient</u> to pick a reasonable goal; don't tell them what they need to do.
- How important is that goal to them?







TCHPP

Patient Education



Bacteria / Germs



Food, Drink, Sugars, Sweets



ACID Produced

Healthy Tooth



-



Cavity

Risk Factors Circle one: Do you take medications daily? If so, how many? Do you feel as though you have a dry mouth at YES any time of the day or night? Do you drink liquids other than water more than YES 2 times daily between meals? Do you snack daily between meals? NO YES Do you notice plaque build-up on your teeth between brushings? NO YES LOW HIGH CariScreen reading results: (1501-9999) Disease Indicators Circle one: New/Progressing visible cavitations? NO YES New/Progressing approximal radiographic NO YES radiolucencies? NO YES New/Active white spot lesions?

Risk Identification Transfer information above to boxes below to determine risk.

Healthy	+Risk Factors	+Disease Indicators
1 - Low Risk	2 - Moderate Risk	3 - High Risk
CDT Code D0601	CDT Code D0602	CDT Code D0603

CARIFREE | CRM

Is decay history a concern?

CRA Form First name:

Rev. 13

YES





NO



Nutrition and Habit Coaching











Management of the Microbiome

- pH modification
 - Baking soda
 - Xylitol to increase salivary flow
 - Water with high pH
 - Other
- Antimicrobials
 - Povidone Iodine
 - Silver Diamine Fluoride
 - Hypochlorite Rinses
 - Chlorohexidine





Calibration Exercise

The Effect of Calibration on Caries Risk Assessment Performance by Students and Clinical Faculty

Douglas A. Young, DDS, EdD, MBA, MS; Bernadette Alvear Fa, DDS; Nicholas Rogers; Peter Rechmann, DMD, PhD

Abstract: Caries management requires a complete oral examination and an accurate caries risk assessment (CRA). Performing Caries Management by Risk Assessment (CAMBRA) is inefficient when the caries risk level assignment is incorrect. The aim of this study was to evaluate the ability of faculty members and students at one U.S. dental school to correctly assign caries risk levels for 22 CRA cases, followed by calibration with guidelines on how to use the CRA form and a post-calibration test two months after calibration. Inter-examiner reliability to a gold standard (consensus of three experts) was assessed as poor, fair, moderate, good, and very good. Of the 162 students and 125 faculty members invited to participate, 13 students and 20 faculty members returned pre-calibration tests, for response rates of 8% and 16%, respectively. On the post-calibration test, eight students and 13 faculty members participated for response rates of 5% and 10%, respectively. Without guidelines and calibration, both faculty members and students when evaluated as one group performed only poor to fair in assigning correct caries risk levels. After calibration, levels improved to good and very good agreements with the gold standard. When faculty and students were evaluated separately, in the pre-calibration test they correctly assigned the caries risk level on average in only one-quarter of the cases (students 24.1%±13.3%; faculty 23.6%±17.5%). After calibration, both groups significantly improved their correct assignment rate. Faculty members (73.8% correct assignments) showed even significantly higher correct assignment rates than students (47.7% correct assignments). These findings suggest that calibration with a specific set of guidelines improved CRA outcomes for both the faculty members and students. Improved guidelines on how to use a CRA form should lead to improved caries risk assessment and proper treatment strategy for patients.

Dr. Young is Professor, Department of Dental Practice, Arthur A. Dugoni School of Dentistry, University of the Pacific; Dr. Fa is Assistant Professor, Department of Integrated Reconstructive Dental Sciences, Arthur A. Dugoni School of Dentistry, University of the Pacific; Mr. Rogers is Administrative Lead for Personalized Instructional Programs, Department of Academic Affairs, Arthur A. Dugoni School of Dentistry, University of the Pacific; and Dr. Rechmann is Professor and Director of Clinical Sciences Research Group, Department of Preventive and Restorative Dental Sciences, School of Dentistry, University of California, San Francisco. Direct correspondence and requests for reprints to Dr. Douglas A. Young, Department of Dental Practice, Arthur A. Dugoni School of Dentistry, University of the Pacific, 155 5th Street, San Francisco, CA 94103; dyoung@pacific.edu.

Keywords: dental education, caries, dental caries, calibration, caries risk assessment, CRA, CAMBRA

Submitted for publication 12/21/16; accepted 2/9/17

- 22 Caries Risk Assessment cases were utilized
- Out of 162 students and 125 faculty, 13 students and 20 faculty members responded; 8% for students, 16% response rate in returning a pre-calibration test.
- Pre-calibration response for both groups showed only poor to fair in assigning correct caries risk level.
- After calibration: Faculty showed 73.8% correct assignments
 - Students showed 47.7% correct assignments



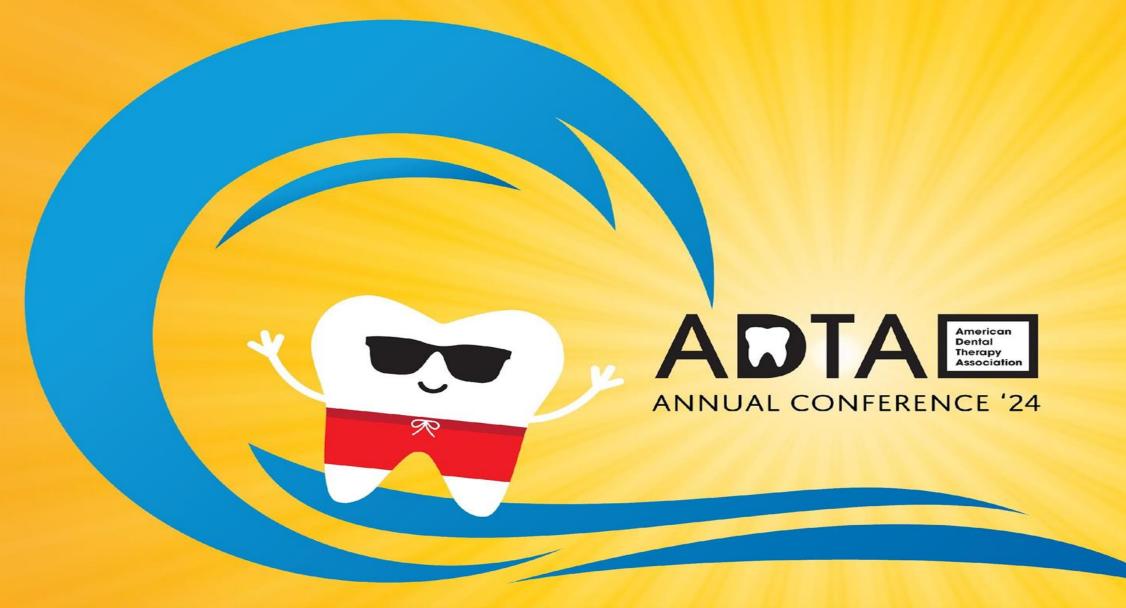


"We cannot drill and fill our way out of cavities. We have to treat the disease at the patient level."

- Dr. Douglas Young







EDUCATE & ELEVATE: RIDING THE DENTAL THERAPY WAVE

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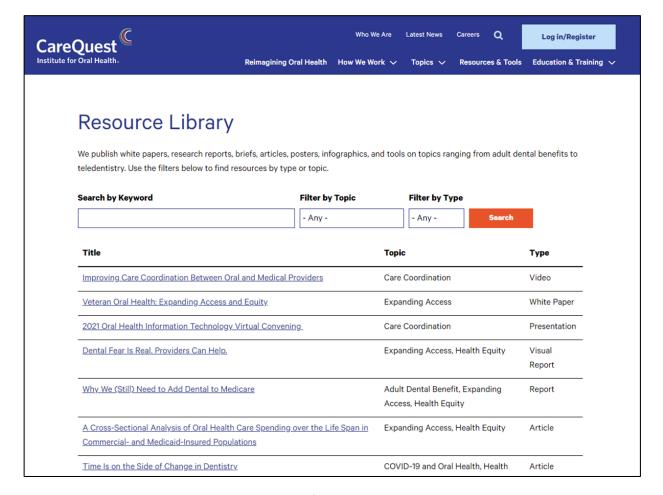
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Question and Answer

To Explore More Industry-Leading Research





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Next Webinar:

Exploring the New Recommendations for Patient Shielding During Imaging on March 28 at 7 p.m. ET

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